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Government of India



भारतीय वन्यजीव संस्थान
Wildlife Institute of India

Consolidated Site Evaluation Report

Fourth Cycle of
Management Effectiveness Evaluation (MEE) of
Tiger Reserves in India, 2018



March, 2019

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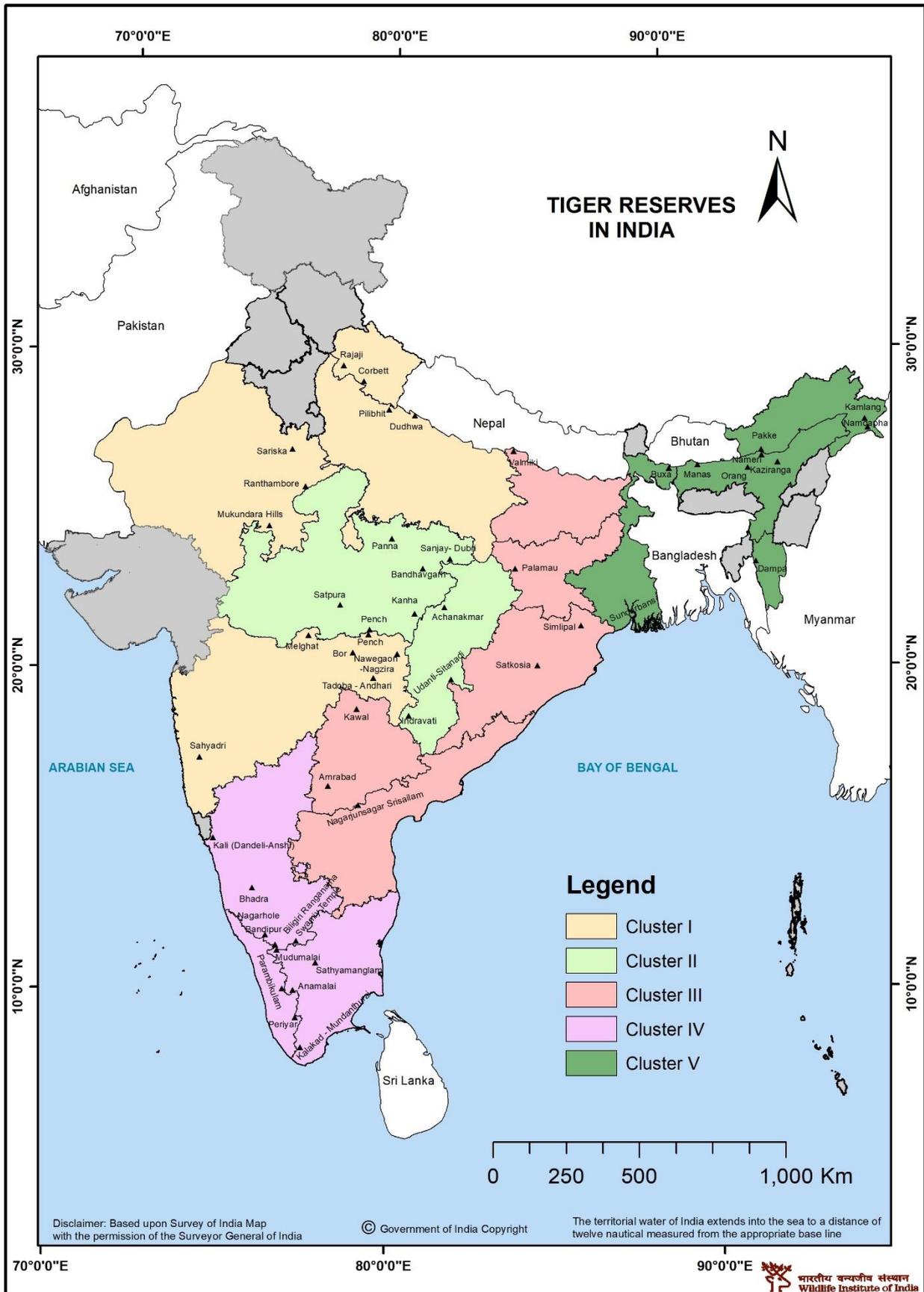
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Map of 50 Tiger Reserves in India



CLUSTER ONE

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

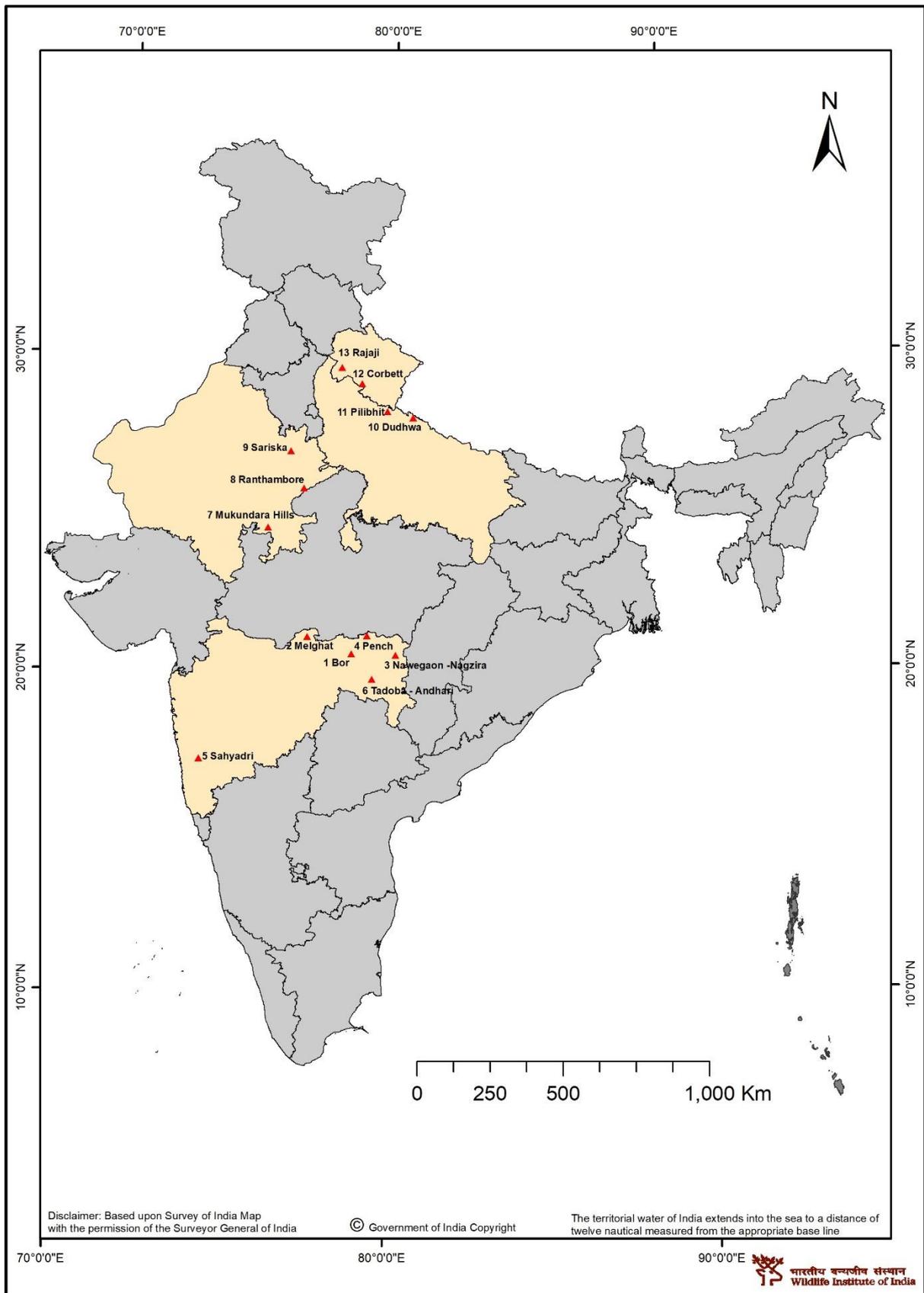
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* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

::2::



* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1. Bor Tiger Reserve, Maharashtra

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Draft TCP of Core Area	The ecological, botanical, zoological, Geological, cultural, recreational and watershed values have been generally identified. The management plan also mentions that Bor Tiger Reserve is important for the dispersing tigers in the landscape.
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Draft TCP of Core Zone; Working Plan of Wardha Division (2017-18 to 2025-26)	Poaching and revenge killing, disease transmission, loss of habitat productivity due to lack of water, fire and spread of weeds have been identified as high threats to the tiger reserve. However, the threats are not identified on the basis of data and the areas of the tiger reserve sensitive to different kinds of threats have not been documented. The Working Plan of other forest divisions from which buffer has been carved out enlists poaching as a major threat. The most common way of poaching was identified as mixing urea in water holes, electrocution and trapping of birds. Human-wildlife conflict and fishing contract in the Bordharan reservoir are also important threats, but have not been identified as key threats to the TR.
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.3 Is the 'Core Area' of TR free from human and biotic interference* ?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Draft TCP of Core; Field visit.	There was only one village Nawargaon in the CTH, which has been relocated in 2017. Altogether 218 ha land has been made available for WL management due to the relocation. There are 20 villages in the close periphery of the core area. These villages are dependent on the core for grazing, water and minor forest produce. Pressure of illicit felling and grazing was not observed in the places visited by the team. This indicates good efforts towards protection of habitats. There are 2211 families residing within 2 km from the core area. These villages are having 15879 human population and 6878 cattle.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Documents provided by the TR. Interaction with Field Director and staff.	Core (138.12 sq km) and buffer (678.15 sq km) notified in 16 th August 2014 and 4 th December 2015 respectively. TCP is under preparation. Tiger Conservation Foundation of the reserve is notified on 19.8.2014 jointly with Pench tiger Reserve (Pench-Bor Tiger Conservation Foundation) State Level Steering Committee has been constituted but meeting has not taken place. SoPs have been translated in local language but team's observation is that the investigation and reporting are not being done according to the SoP. Recently, a tigress strayed out from Brahmpuri was captured and released in Bor TR, but the tigress did not stay in the area and currently occupying Wadala area in Wardha Div (north side outside Bor TR). In case of cattle depredation by tiger, camera traps are installed and constant vigil is ensured by the teams. While the Committee was on tour another tiger, probably a weaned off young tiger, strayed out from CTH into a nearby village in the buffer and attacked an
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				old cow herder when he was attempting to save his cattle from the tiger. The man was seriously injured. The agitated villagers gheraoed the Wildlife range office and a very tense situation prevailed for the entire day. The FD diligently handled the situation. But this incidence exposed the poor response of territorial staff that still manages the buffer area, to a sensitive issue. It also revealed that the relevant SoP was not at all followed in that case.
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***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor	✓	Interaction with the TR managers	The buffer zone of the tiger reserve is notified but it is not under the control of Field Director.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good			

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) *?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Draft TCP	A draft version of the Tiger Conservation Plan is produced and its finalization is under progress.
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Documents provided by the TR management.	Important threatened fauna in the TR are leopard, tiger, sloth bear and hyena. The buffer area of the TR is not under the control of the Field Director. In Core Zone, there are 14 protection camps, 12 watch towers and 8 check posts to ensure protection of the TR and its biodiversity. There are two forest ranges four rounds and 17 beats in the TR. A Forest Fire Management Plan has been prepared and control measures have been taken. Total length of fire line in the reserve is 302 km. In 2014-15 no fire incidences took place while in 2015-16 26 ha area was burnt. In 2017-18 there was no incidence of fire. Cattle vaccination in the adjoining villages is done by veterinary department. But, there is no co-ordination with the TR Management. There is no strategy in place for wildlife health management and vaccination. There is only one case of poaching since notification of the tiger reserve. Special habitats such as dens, caves have not been mapped and are not under specific protection regime. A huge reservoir (15 sq.km.) of the centrally located Bordharan dam is maintained by the water resources department. This reservoir has been deliberately kept outside the notified CTH despite the fact that it is embedded within the CTH. Fishing contracts are given annually and large number of fisherman get access to the interior areas of the CTH through this route. This free access into the core exposes the parks to unscrupulous elements and poachers and may pose a serious threat.
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Documents provided by the TR Management. Field visits.	During the preparation of TCP, village level meetings were conducted in few villages. EDC micro-plans have been prepared involving villagers and EDC members. The micro-plans were modified after consultations with EDCs.
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Documents provided by the TR and Field Visit by the MEE Team.	Under habitat management programmes weed eradication, grassland management and water management activities are undertaken. Systematic monitoring of water holes is done. Weed infested areas are identified and Annual Action Plan for eradication of weeds is prepared. During 2014-17, Lantana was removed in 151 ha, Parthenium was removed in 68 ha area during the period. In the evacuated village site 190 ha area was treated to create grassland. However, there is no systematic long-term plan for management and monitoring. The draft management plan is sketchy on this aspect and not based on detailed analysis of the ground information. Except for certain interventions for restoration of grasslands around the reservoir no other interventions have been suggested and there is no prescription for identification, protection and restoration of special and unique habitats.
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.5 Does the TR has an effective Protection Strategy (PS)+ and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Draft TCP of Core; Documents provided by TR Management	There tiger reserve is prone to various inimical factors, with overarching threats of possible revenge killings. In Core Zone, there are 14 protection camps, 12 watch towers and 8 check posts to ensure stringent protection by the frontline staff. M-STRiPES protocol is followed and a minimum foot patrolling of 45 km every week is prescribed. The Patrol data is collected from the camps in weekly basis and analyzed by WCT within a week or so. The Protection Plan is under preparation as a part of the TCP (Core). The draft TCP has prescribed several measures to ensure surveillance and field protection. A good amount of time of the field staff is diverted to follow the movement of Brahmipuri tigress that has strayed out of the CTH soon after its release. We were informed by the Field director that after release into the wild the tigress was chased by a pack of wild dogs and the tigress left the CTH. Special Teams are constituted for Monsoon Patrolling in the tiger reserve. Security Audit has not been conducted. In the last three years there were five cases of forest fire. One case of poaching of chital has occurred in 2011. There were 2 offences related to wildlife during 2014-17. There are roads passing through the borders of Core and Buffer Zones, however, there is no road kill data available. Working plan of Wardha division, lists poaching as major threat- poisoning of water hole using urea, trapping of birds and electrocution of wild animals for meat and bones and skin as the common ways of poaching. Keeping in view the presence of threats in the landscape, apparently, there is under reporting of forest and wildlife offence cases. There is no disaster management plan in place. The escalating human- tiger conflict requires special attention of management.
TR has an adhoc PS and SA.	Fair	✓		
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Documents provided by the TR.	During 2015-16, 14 cases of crop raiding and 16 cattle depredation cases have been recorded and Rs. 1.70 Lakh and Rs. 96000 have been paid as relief respectively. The figure is only for one village, which was in the CTH. No data is available for the buffer zone. The TR management has provided 467 units of solar fences to the villagers in 19 EDCs. Tiger-human conflict is on the rise but the tiger reserve is still ill equipped to deal with this emergent issue.
TR has been able to mitigate few human-wildlife conflicts.	Fair	✓		
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Draft TCP. Documents provided by TR and interaction with TR management.	The location of Bor TR vis-à-vis other protected areas and tiger reserve necessitates interventions to secure linkages between such areas. The Draft TCP suggests ensuring the long-term viability of small tiger population in the landscape. TCP has listed following corridors- <ul style="list-style-type: none"> • Bor-Umred-Karhandla-Tadoba • Bor-Melghat-Forests of Madhya Pradesh (West/North Betul Forest Division, Rampur Bathodi Forest Development Corporation) - Pench • Bor-Tipeshwar-Painganga • Painganga-Tipeshwar (linked) - Kawal Tiger Reserve (Andhra Pradesh) (tiger movement from Tipeshwar to Kawal has been reported) with source populations in Pench, Tadoba and Melghat. Therefore, to ensure the continuity of the forested corridors the Working Plans of the adjoining territorial Forest Divisions need to be revised to include suitable prescriptions. Under the IUCN project, interventions are being made to maintain and restore the corridor between Bor-Tadoba-Umred-Melghat.
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

*Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Documents provided by the TR Management	Total sanctioned strength of frontline staff in the TR is 62 including 20 permanent Van Major. Altogether, seven positions of frontline staff are lying vacant which includes two Round Officers and five forest guards. Moreover, increase in incidences of human-wildlife conflict and growing intolerance among the locals in buffer zone, provision of one unit of STPF is required to support the existing manpower involved in protection. Average age of forest guards is around 27 years. Average age of Range Officers is 45 years. There are 3 four-wheelers, 4 motor bikes and 2 tractors for patrolling. Facilities in Patrolling camp, quarters and other infrastructure are adequate as per the current need. However, when the buffer would be under the control of the Tiger Reserve, needs may arise. The field staff have been provided with 25 wireless walky-talky sets. Besides, there are 17 wireless base stations.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

*This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Documents provided by the TR Management.	The TR has adequate number of vehicles (3 four wheelers, 4 motor bikes and 2 tractors) and buildings. Basic supplies to the protection camps have been provided by WCT. For the monitoring of wildlife, there are 18 compass, 18 range finders, 22 GPS, 5 binoculars and 50 camera traps. For Phase IV monitoring Camera Traps and other equipment are provided by the field directorate. There are 20 staff quarters. New quarters are under construction, thus making it sufficient for the CTH. Need may arise after the transfer of the Buffer zone to the FD
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

*These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*																												
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																								
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by TR Management	<p>Year wise budgeted, allotment and utilization of funds by NTCA in last three years is as below</p> <table border="1"> <thead> <tr> <th rowspan="2">Year</th> <th colspan="4">Rs. (in Lakh)</th> </tr> <tr> <th>Bud gete d</th> <th>Sanc tione d</th> <th>Rele ased</th> <th>Expendi ture</th> </tr> </thead> <tbody> <tr> <td>2014-15</td> <td></td> <td>118.49</td> <td>118.49</td> <td>118.49</td> </tr> <tr> <td>2015-16</td> <td>203.49</td> <td>94.58</td> <td>68.84</td> <td>68.84</td> </tr> <tr> <td>2016-17</td> <td>3155.87</td> <td>185.87</td> <td>148.69</td> <td>91.417</td> </tr> </tbody> </table> <p>Utilization in 2014-15 and 2015-16 was 100%. But, in 2016-17 utilization was about 60%. Funds made available are less than budgeted. The funds are released on time. Under Integrated Forest Management Scheme (GoI) Rs. 101.31 lakh was sanctioned and it was utilized in 2014-15. In 2015-16, Rs. 169.69 lakh was made available and it was utilized 100%. In 2016-17, the TR received Rs. 269.54 lakh of which Rs. 166.73 lakh was utilized. The funds are for mainly for Fire control and Management Strengthening. There is a huge gap between the demand raised in the APO and the amount released by NTCA.</p>	Year	Rs. (in Lakh)				Bud gete d	Sanc tione d	Rele ased	Expendi ture	2014-15		118.49	118.49	118.49	2015-16	203.49	94.58	68.84	68.84	2016-17	3155.87	185.87	148.69	91.417
Year	Rs. (in Lakh)																											
	Bud gete d	Sanc tione d			Rele ased	Expendi ture																						
2014-15		118.49			118.49	118.49																						
2015-16	203.49	94.58	68.84	68.84																								
2016-17	3155.87	185.87	148.69	91.417																								
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair																											
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓																										
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good																											

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks												
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by the Tiger Reserve Management.	<p>The state funds made available to the TR is as below;</p> <p>State Plan: Eco-tourism, District Plan, 13th Finance Commission, Shyama Prasad Jan-Van Yojna, TCF, CAMPA</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Allotment in Lakh</th> <th>Expenditure in Lakh</th> </tr> </thead> <tbody> <tr> <td>2014-15</td> <td>113.530</td> <td>82.15</td> </tr> <tr> <td>2015-16</td> <td>528.43</td> <td>496.78</td> </tr> <tr> <td>2016-17</td> <td>6830.95</td> <td>5407.66</td> </tr> </tbody> </table> <p>Tiger Conservation Foundation (TCF): In three</p>	Year	Allotment in Lakh	Expenditure in Lakh	2014-15	113.530	82.15	2015-16	528.43	496.78	2016-17	6830.95	5407.66
Year	Allotment in Lakh	Expenditure in Lakh														
2014-15	113.530	82.15														
2015-16	528.43	496.78														
2016-17	6830.95	5407.66														
Some specific allocation for management of priority action. Funds are inadequate and there is some	Fair															

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

delay in release, partially utilized.			years Rs. 17.59 Crore has been utilized from this fund.
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	√	
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good		

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Documents provided by TR Management. Field visit of the MEE Team.	Wildlife Conservation Trust has equipped all the patrolling camps with furniture, utensils and lighting devices, water filters etc. It has also provided a four wheel drive vehicle and a tractor. SRISHTI helps in EDC works. Kamal Nayan Bajaj Group helps in water conservation works and education. Urvi Piramal Foundation (Morarji Mills) runs a mobile ambulance unit and health care system. It also provides training to rural youth and helps in their placement. These supports are sought systematically to strengthen the management of the TR and meeting its objectives.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	√		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Documents provided by the TR Management.	Field Director is trained in Wildlife Management (WII Diploma). Short term training courses have been arranged for Range Forest Officers
Some trained officers and few trained frontline staff, posted in	Fair	√		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

the TR.			on Wildlife (Protection) Act and its enforcement, and Wildlife Forensics. The staff development plan has not been prepared.
All trained officers and a fair number of trained frontline staff posted in the TR.	Good		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good		

***Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Interaction with Field Director, Bor TR	The staff performance is linked with the management objectives of the TR. Performance of 70% of the staff meet the best category. Divisional Forest Officer (I/C of Bor TR) was given Excellence Award by the State Government in the year 2014-15.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Interaction with the FD, Bor TR.	The tiger reserve management has developed a network of 'Tiger Mitra' in the villages around the TR. It helps in patrolling and fire fighting. Volunteers are also involved in water hole counts. Public participation is also invited for the same. Inputs of experts are sought in habitat management and wildlife health. Workshops are organized from time to time and opinion and suggestions are sought for management improvements.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

***The involvement of NGOs/ NGLs in population estimation may be taken into account)**

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Interaction with FD and Complaint Register	The forest department has a mechanism of registering complaints through the 'Hello Forest' platform. 1926 is a dedicated phone number to register complaints by general public. The concerned DCF is
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	✓		
Coordinated system logs and	Good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

responds effectively to most complaints.				required to address the matter within 48 hours, in case he doesn't, the complaint is automatically forwarded to the next higher officer. It is monitored systematically by the senior officers and is monitored by the Minister on quarterly basis. A complaint register is maintained at Field Directorate. The scrutiny of the complaint register revealed delay in redressal of complaints.
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Documents provided by the TR Management. Interaction with EDCs.	Livelihood and skill development trainings were organized for youths. Computer training was given to 83 youths. To reduce crop raiding incidence by wild animals 467 solar fencing. Bangle making training was given to the villagers. In the last three years 175 youths were trained in different vocations (electrician, beautician, refrigeration, auto repair, sewing, bangle making, wood craft, hospitality etc.). Of these trainees 131 have been placed in respective sectors. <u>Milch</u> cattle of improved breeds (Jersey, Holstein, hybrid Holstein, Gir hybrid) have been provided in three EDCs. The milk is collected by Mother Dairy run collection centres in the nearby villages. Rs. 4.69 Crore has been spent on EDCs since 2012 (LPG Connection: 3013, Cooker: 240; Solar Light: 82; Solar fencing: 467; Guide Uniform: 14; Toilet: 104; Well fencing: 405; Spray pump: 189; Computer Training: 83; Bore well: 9; Lantana eradication: 86 ha; Nala rejuvenation: 15031 RMT; Smokeless chulha: 1586)
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

*The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Documents provided by the TR, visit of the relocated and rehabilitated sites.	There was only one village Nawargaon in the CTH. A total of 311 families have been relocated in 2017 under Option 1 (Payment of Rs. 10 lakh). In addition to the amount, the department also provided land for construction of houses. The villagers have been rehabilitated in village Khadki, 8 km away from the original village site. The relocated villagers seemed quite satisfied with the relocation work. People seem satisfied and happy, out of 311 families- 61 families are resettled in Wardha, rest on a patch of diverted protected forest land. The quality of houses built by families is very good. A well, pump station, overhead tank have been provided. Piped water is provided to the individual households. Mutation of forest land and revenue patta is yet to be given. The lands vacated by the villagers have been mutated in favour of the tiger reserve.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good	✓		

**Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.*

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Interaction with TR Management	There is a combined website of Bor and Pench TR, Maharashtra (www.mahapenchtiger.com). Additionally, some information are also available on www.mahaforest.gov.in
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Visit of the TR by the MEE Team and interaction with the TR managers.	The Draft TCP prescribes an area of 26.77 sq.km. (19.38%) of the core critical tiger habitat of Bor as the tourism zone, comprising a road network of 45 km. The CTH of Bor tiger reserve includes the original Bor sanctuary that was constituted in November 1970. The area began gaining importance as a tourist destination in 2007 when the tourist inflow jumped from around 175 tourists to around 700 tourists. After that there has been a continuation of upward trend. In 2016-17 around 15000 visitors mostly from nearby cities were recorded. Till 2016-17 visitors were allowed to enter through the Bordharan gate. In 2017 a new gate was opened at Adgaon. The Bor dam gate is popular as some infrastructure for tourists were built a decade back. A big tourist complex exists a few kms away from the Bor dam entry gate and a Nature resort run by the Maharashtra tourism is located on a small hillock behind the Bor dam. The resort also provides boating facility to tourists. The tourist Complex is managed by the Maharashtra Forest Development corporation since last five years; prior to it the facility was under the management of the tiger reserve. Online bookings are available at Maharashtra ecotourism and Maharashtra Tourism Development Corporation websites. There are 10 double-bed rooms and two ten-bedded dormitories. The canteen is managed by a women self –help group. Local people are employed by both these facilities for menial work. The women are from the local village. The complex have
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>infrastructure for solar lighting and ground water extraction but at present it is defunct. The green waste is dumped in pits and plastic waste is burned. The facility has no water supply in summer as the well dries. Water tankers are deployed to ferry water to the facility from elsewhere. The overall picture at this facility is of poor management and inadequate planning.</p> <p>The Facility run by the MTDC has four suites, six double-bedded rooms and three ten bedded dormitories. Four small private hotels also cater to visitors.</p> <p>Non-degradable waste is sold to the rag pickers. Green waste is dumped in pits. The visitors are from nearby towns. In both facilities, vegetables, cereals and dairy products are bought from the local markets.</p> <p>Private vehicles are allowed as local taxis are limited (only fifteen gypsies are registered for Bordharan gate). Efforts are on to persuade villagers to purchase vehicles and register them with the TR. At present Bordharan zone allows of 40 vehicles per day and for Adgaon 30 vehicles/day.</p> <p>Though, according to the Draft TCP per day carrying capacity for BOR TR is just 21 vehicles. There are 25 Guides at Bordharan gate and seven at Adgaon gate. They are all local youth with little training. Efforts for participatory ecotourism in the buffer have not yet started. The Bordharan gate has toilet and drinking water facility for the tourists but at Adgaon only drinking water is available. There is no interpretation centre and nature trails.</p>
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****Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.***

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Documents provided by the TR management.	Researches have been done only in the Corridor areas. Phase IV monitoring has been done in 2014. The outcome is used in monitoring of tigers. M-STRIPES is being implemented since 2016-17 with the support of WCT. Only patrolling effort by the staff is monitored. The impacts of habitat interventions (weed eradication, development of water sources and grassland development) are not being monitored. There is no systematic long-term planning for such interventions. The management has no direct involvement in immunization of cattle therefore there is no direct surveillance and monitoring of disease outbreaks in village cattle. Wildlife health monitoring is not being done. There is no systematic effort to gather and analyse visitor information or feedback.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Interaction with the TR Management	Maintenance schedule for buildings, roads and vehicles are available. However, funds for road repair are inadequate.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Documents provided by TR	The tiger reserve has started Phase IV monitoring in 2014-15 in the CTH. The data reveals low prey density (Sambar-3.7/ sq.km, Chital - 2.8 / sq km, Nilgai - 2.2 / sq km, wild pig - 0.6 / sq km. The Tiger density is 1.31 per 100 sq km. This data can be used as baseline for future comparison. No specific effort has been put into to monitor the threatened species like sloth bear, Indian Wild Dog, Leopard, Giant Squirrel etc.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Document provided by the TR and in interaction with FD.	Tiger population in different years is as below; 2012: 5 (1M, 3F and 1 UN) 2013-14: 4 (2M, 2F) 2014-15: 3 (2F, 1M) 2015-16: 3 (2F, 1M) Breeding tigers recorded with total 13 cubs during the period. Reportedly, the sub-adults dispersed outside the CTH of Bor TR. One sub adult was photo trapped in Nagpur FD.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good	✓		
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Documents provided by the TR; Working Plan of Wardha Division.	Data on Wildlife offence cases in the last three shows decline in the number of cases in the CTH. In 2014-15, five incidences of forest fire have been recorded, while other offences have gone down to zero. This could be due to
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being	Good			

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

addressed				
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			protection efforts. Since the area of CTH is small and free from human habitation, cases are negligible. However, keeping in view the number of villages around the CTH, there could be underreporting of the offences. The Current Working Plan data of Wardha Division reflect wildlife offences in the buffer of the tiger reserve. There is no Disaster Risk Management Plan for the TR.

+Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		Documents provided by the TR	According to the TCP, tourism zone covers 26.77 sq. km., which is 19.38% area of the core-critical tiger habitat of the TR. The current carrying capacity of the Core Zone of TR is 70 vehicles / day distributed as 40 and 30 vehicles from two gates. Efforts for participatory ecotourism in the buffer have not yet started.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair	✓		
Tourism management plan is good and well monitored.	Good			
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

+Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Visit of the MEE Team to the villages and meetings with EDCs.	Due to constitution of 15 EDCs in the villages around the CTH and implementation of eco-development and dependency reduction measures the villagers are supportive to the TR Management. The effects of the efforts are reflected in terms of low grazing pressure and signs of illegal collection of firewood. However, hostility of the villagers in the buffer zone is primarily due to human-wildlife conflict, especially related to negative interaction with dispersing tigers.
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

+There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	27.5	59.4%
2.	Planning	07	10	70	35	
3.	Inputs	05	10	50	37.5	
4.	Process	06	10	60	40	
5.	Outputs	04	10	40	22.5	
6.	Outcomes	05	10	50	27.5	
Total		32		320	190	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.*

2. Melghat Tiger Reserve, Maharashtra

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		TCP of Core and Buffer of Melghat TR	Values of Melghat TR have been documented in the TCP. The values include the Biodiversity and Gene Pool represented by 769 species of plants and 265 species of birds and 37 species of mammals. There are many endemic plants in the TR. The TR forms the catchment areas of Tapi and Purna river system with major tributaries like Gadga, Sipna, Khandu, Dolar, Wan, and Khapra. The environmental values of MTR are worked out; economic values as well as Cultural and historical values have also been documented. The total environmental value of MTR works out to be an astronomical Rs. 1,29,000 crores Thus, the values are documented properly.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		TCP of Melghat Tiger Reserve and documents provided by the TR.	Threats to the tiger reserve have been enlisted in the TCP. The threats include encroachments for agriculture, Illicit tree felling, Illegal grazing by local /migratory cattle, Poaching of wild animals and forest fires are key identified threats. There are six temples in the core area, visited by people on certain festive occasions. In the areas adjoining Madhya Pradesh the border is porous and people from the adjoining state use country made guns to poach Indian Bison. Two State highways and other minor roads pass through the TR and animal deaths occur, though the road kills have not been systematically monitored. Fire sensitivity map has been prepared. Under Security Plan of the TR different threats have been mapped and accordingly protection infrastructure and deployment of manpower is done accordingly. Infestation of Lantana and Hyptis is prominent in the core area. Some of the grasslands coming up in village relocated site are being encroached upon by non-palatable species.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good	✓		

*This assessment should be based on number, nature and extent of threats

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.3 Is the 'Core Area' of TR free from human and biotic interference* ?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		TCP of Core Area; Maps of the Tiger Reserve, documents provided by the TR.	There were 33 villages in the core, of which 16 have been rehabilitated. There are 17 villages still in the core area. About 7000 people and 8000 cattle population are present in the core. The villages inside the core exert biotic pressure on the TR. Besides there are 118 villages in the buffer area of the MTR and the inhabitants are mainly tribal, largely of the Korcu tribe (80 per cent) and others include Gond, Nihal, Balai, Gaolan, Gawali, Halbi, Wanjari, etc. All inhabitants depend on the forest for <i>bonafide</i> domestic needs of firewood, timber, fodder, medicinal plants, and non-timber forest products like fruits, flowers, gum and medicinal plants. Grazing still continues as a serious threat to the habitat.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

**This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.*

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Documents provided by the TR management.	TCP has been approved by NTCA on 17th March 2015. The state level Steering Committee was constituted, and one meeting took place in 2013. Tiger Foundation was constituted on 10.2.2009. Last Executive Committee meeting held on 10.3.2017; last Governing Board meeting held on 14.6.2017. SoPs have been translated in Marathi, but many frontline staff are unaware
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	✓		

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

				of it. Equipment required for forensic evidence collection has been given to staff. Interstate co-ordination with Madhya Pradesh. The meetings held on an average every three months. Sometimes it happens earlier.
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***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		Interaction with TR management	About 60% of the notified buffer is not under the control of Field Director. Apparently, the inordinate delay in transferring the remaining notified buffer to the Tiger reserve is jeopardizing protection and management. Of the tiger reserve.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair	✓		
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good			

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		TCP of Core, Buffer and Corridor.	A comprehensive TCP for (Core, Buffer, Ecotourism and Corridor) has been prepared and approved by the NTCA. The TCPs have been translated in Marathi and distributed to all frontline staff.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Field visit of the team; Interaction with TR management; documents provided by the Tiger Reserve.	Survey and researches on Forest Owlet has been done by independent researchers. For mitigation of threats on the TR the tiger reserve has established 92 equipped protection camps, each one is manned and equipped by daily wagers and a beat guard (who lives in the camp for 4-5 days in a week), in the Core and Buffer Zone. A comprehensive Security Plan has been prepared. Camps have been established to control illegal grazing. To reduce villagers' dependency on the TR for firewood 5483 LPG connections have been provided in 53 villages of core and buffer. However, the usage and refilling of LPG is not being monitored. Livelihood improvement measures are being implemented under Shyama Prasad Yojna. To reduce the footprint of visitors to the temples inside, the TR management has implemented several measures. To take safeguard against forest fire, Fire Management Plans are made on annual basis. The strategy includes fire line clearance (about 4900 km long), establishment of fire protection camps (~one for 25 sq km), use of watch towers for surveillance (40 watch towers) and deployment of firefighting squad with vehicle. Monitoring and controlling centres are also made functional. To reduce cattle grazing special camps have been set up in areas experiencing heavy incidence of grazing During 2014-18, 4385 cattle were seized while grazing in the core area during 2014-18. Habitat improvement (weed removal) measures are undertaken to preserve the native biodiversity. In the last three years, removal of Lantana has been done in
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>739 ha area during 2014-15 to 2016-17.</p> <p>To reduce the threat of spread of communicable disease regular vaccination programs are organized in coordination with the Animal Husbandry Department. In 2014-15, 2015-16 and 2016-17, 4885, 28226 and 21900 cattle were vaccinated against Communicable diseases. 3412 ha area has been made available for wildlife conservation as a result of relocation of villages.</p> <p>Currently, one UAV is used to monitor grazing and fire incidence. The TR management is planning to procure four more UAV for such works.</p>
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***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		TCPs of Core and Buffer; Documents provided by TR management; Interaction with TR management.	In Planning for the Core area, there was not much participation from the stakeholders. In Buffer area villagers participate in preparation of micro-planning. The FD organizes regular consultation meetings with EDCs and other stakeholders at Amravati and Semadoh. Through Whatsapp group in which villagers / EDCs have been added, regular feedback and directions flows between the TR and local communities.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		TCPs of Core and Buffer; Field Visit; Interaction with TR Managers	Habitat management interventions have not been planned with a long term perspective. Weed management , especially systematic removal of lantana, is an important work that needs long term planning and monitoring. Grassland and Meadow development plan has been prepared – objectives and actions are planned but its monitoring is missing. Some of the areas where grassland development work has been carried out are now infested with weeds and unpalatable and hardy grass species such as <i>Sorghum helpens</i> . TCP mandates implement ion of measures for meadow development. However, these prescriptions are not followed systematically. Water bodies are being checked by the Beat Guards as per the schedule fixed by the management. The special and unique habitats have not been documented and monitored systematically.
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

**This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.*

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Documents provided by TR management. TCP of Core and Buffer.	The TR has prepared a Security Plan. Fire protection activities are monitored and evaluated rigorously. The tiger reserve prepares annual plan for protection of the area. The beat guard has to patrol 30 km in a week. GPS based patrolling is done and data is tabulated in the
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				M-STriPES format. The is a STPF unit (1 ACF, 3 RFO, 81 FG, 21 Forest Watchers) for the Tiger Reserve. The force also serves in other forest areas in the landscape. They also patrol in the TR area. Offences: During 2014-15 to 2016-17, Illicit felling and encroachments are the key offences in the TR (during 2014-15 to 2016-17 poaching cases have increased drastically from 13 to 43; Illicit felling has reduced from 604 to 329; encroachments reduced from 84 to 24; fire increased from 79to 383). During the period on an average about 800 offences are reported every year. 281 cases are in the court and conviction has been obtained in 12 cases.
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****This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.***

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Documents provided by the TR management	During 2014-15 and 2016-17 altogether 738 cattle kills were recorded and about Rs.45 lakh was disbursed in compensation. However, only six cases of crop damage were reported for which Rs. 25647 was disbursed among the sufferers. Due to cumbersome process of compensation for crop damage, cases are not reported by villagers. During the period wild animals caused injuries to 12 persons. Mostly Sloth bears are involved in the conflict cases. About Rs. 6.5 lakh disbursed as compensation in these cases. A dedicated and fully equipped Rescue team has been placed with the Amravati Territorial division since most of the conflict cases are in the fringes.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

****The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.***

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		TCP for Corridor.	The Tiger Reserve is connected with Satpuda Tiger Reserve through Betul and Hoshangabad forests. The forest status in this corridor is partly good. No survey so far has been conducted to find out the weak links. The TR has also identified Melghat-Pench and Melghat-Kanha corridors, which are in poor state. Five more corridors (Internal Corridors around Melghat) have been identified. These are – Melghat-Betul; Melghat-Morshi and Warud; Melghat-Jalgaon Jamod-Wadodha Corridor; Melghat – Pohra & Malkhed; Melghat-Khandwa Corridors. Of which the status of the last two are poor. Meetings were organized with adjoining territorial divisions after preparation of the TCP (Corridor). Soft copy of the plan has been given to the territorial divisions. However, these divisions were not involved in Corridor Planning process.
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Documents provided by the tiger reserve	There are three DFOs in the field (3 Divisions) and one DFO at the Field Directorate. Altogether Sanctioned / Posted positions of frontline staff including STPF (81) are as below; 1. Range Officer: 23 / 23 2. Forester: 93/92 3. Forest Guard: 358/328 4. Forest watcher (STPF): 27/22. There are 123 regular wagers and 599 daily wagers (excluding firewatchers) in the TR. The sanctioned strength is adequate. Apart from regular staff there are
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management	Good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

objectives.				
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good	√		some contractual staff - one livelihood expert; one ecologist; one wildlife biologists (for Phase IV monitoring); Data entry operator (5); Social mobilizers (2); Tourism Manager (1); Forest Engineers (2); Part time Wireless Supervisor (1); Graphic Designer (1). A Cyber Crime Cell has been set-up and staff is carved out of the STPF. The Cyber Crime cell is supervised by the DFO at FD's Office at Amravati.

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Documents provided by the TR.	Building: There are 188 forest guard quarters, 86 forester quarter, and 23 range office quarters. There is about 25% shortage of quarters for the forest guards. There is sufficient building (Barracks) for STPF. Vehicles: There are 37 four wheeler vehicles and two boats for field staff and officials. Additionally, there are 35 bikes, 8 tractors, 5 trucks and 3 mini bus for the staff. Rescue equipment include Tranquilization Gun (2), Trap cages (5), Transportation cages (9). Other equipment include – GPS (274), Fire extinguisher / blower (120) Camera traps (710), binoculars (35), and digital camera (88). Range finders are inadequate. For communication there are 290 wireless sets. Additionally there are weapons for protection - 29 pistols and 22 SLR (7.62). All protection camps are equipped but the daily wage workers are not provided with field gear such as boots, rain suits, winter clothing etc. One UAV is available. Four more UAVs are required. Hence, adequate resources are available.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	√		

***These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Sanctioned grant by NTCA. Documents provided by the TR Management.	The TR receives grant from CSS. Sanction and Utilization: 2014-15 Sanctioned Rs. 723.877 lakh, Released: 581.76 and Utilized Rs. 559.69 lakh; 2015-16 – Sanctioned – Rs. 656.77 lakh; Released: 508.218 and Utilized Rs. 506.728; 2016-17- Sanctioned Rs. 1271.806 lakh Released: Rs. 1271.806 lakh, and utilized Rs. 1258.609. Village Relocation Grant by NTCA is as below; 2014-15: Sanctioned, Released and Utilized grant: Rs. 2000.00 lakh; 2015-16: Sanctioned: Rs. 4220.00 lakh; Released: Rs. 4178.50 lakh; Utilized: Rs.4178.50 lakh. 2016-17: Sanctioned, Released and Utilized: Rs. 4921.458 lakh. The CSS is almost timely sanctioned and released. The gap in demand and sanction was found under village relocation budget. Majority of funds are meant for wages and salaries and there is shortage of budget for Habitat Improvement, protection and other activities. IUCN Provided Rs.64 lakh which was used for purchase of vehicles (mini bus, tractor etc.), computers, organizing training, weed removal etc.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by TR.	State Plan: 2014-15: Allotted and Released: Rs. 277.22 lakh, Expenditure: 272.17 Lakh 2015-16: Allotted and Released: Rs. 2250.28 lakh, Expenditure: 2245.28 Lakh; 2016-17: Allotted, Released and Expenditure: Rs.1916.01 Lakh. Expenditure: Release of state's grant is not delayed. 13th Finance 2014-15: Allotted, Released and Expenditure: Rs. 467.8 lakh. From Buldhana District Plan about Rs 2 Crore is provided for eco-development, weed eradication etc. State CAMPA and 13 th Finance Commission grant was for Village Relocation. State CAMPA: 2014-15: Allotted, Released and Expenditure: Rs. 1159.8 Lakh; 2015-16: Allotted, Released and Expenditure: Rs. 551.96 lakh; 2016-17: Allotted, Released and Expenditure: Rs. 3120.1 lakh
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.*

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Documents provided by the TR management	WCT: Trainings, donation for equipping the camps; Implementation of m-Stripes, vehicles etc. Satpuda Foundation: Training to communities for making Lantana furniture; 2 Bolero; Second hand vehicles; Youth for Nature Conservation Foundation: Insulated Water bag (55) TRAFFIC-India: 2 sniffer dogs and training WWF-India: Equipment and field gear to STPF, Tractor, tanker and trolley: 2 each Wildlife Research and Conservation Society: Camera Trap training to staff posted in Buffer of the TR. Several local NGOs are supporting in awareness and rescue activities. These helps are sought in a systematic manner.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Documents provided by the TR	During 2014-17; two officers got Diploma in Wildlife Management from WII and One Range Officer has done Certificate Course in Wildlife Management of WII. Additionally, seven officers have completed wildlife related trainings at various institutions. Altogether 14 training programs were organized by the Melghat TR for staff. The training topics included Forest Fire control, UAV operation, eco-development and micro-planning, Wildlife crime prevention, Wildlife Population estimation, Weapon training to about 1050 staff.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

***Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Interaction with TR Management	The TR management uses the staff with specific skills for different kinds of field work. Range Officers and FD assigns the works as per the skill and interest of the staff.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good	✓		

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Interaction with TR Managers.	The EDCs are involved in forest protection and participatory management of the ecotourism activities in the buffer. The EDCs recommend villagers for involving them in the protection work. Volunteers are involved in Waterhole count on the Buddh Purnima day. NGOs participate in many activities. Villagers participate in eco-
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of	Good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

TR management.				development. For involving outside researcher a program Tiger Tech 2018 is being organized to elicit ideas for improving the management of the tiger reserve. Whatsapp groups are for interaction with EDC members. A Volleyball tournament is organized every year for the youths of buffer villages. This is a wonderful initiative to build rapport with villagers, especially the youth.
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGIs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Documents provided by the TR and interaction with managers	There is provision of receiving suggestions and registering complaints on the website of the TR. 'Hello Forest (1926)' – is a call centre where complaints can be lodged. During 2014-2017, 42 complaints were received. All the complaints were addressed. Most of the complaints are resolved at RFO level. The TR also receives complaints through the Chief Minister's website. The TR addresses the complaints within the stipulated time –frame (48 hours). TR also maintains a Complaints register.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Documents provided by the TR Management	Livelihood improvement interventions have been started since 2015-16 under Shyama Prasad Jan-Van Yojna, IUCN and Tiger Foundation. Pratham Education Foundation, Mumbai imparts training on Hospitality course; Montfort Integrated Education Centre, Nagpur provides Vocational Skills. Lac bangle making training is given by Dulan Devi Sansthan, Balaghat. During 2014-15 to 2016-17, 229 women in 5 villages were trained in making lac bangles. The TR Management has organized Livelihood training programs for about 591 villagers, out of which about 50% are women. Placement of the trainees is about 100% (especially in Hospitality and Automobile Repairing). The hospitality dropouts who do not continue job due to family reasons are employed by the tiger reserve management.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

**The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Documents provided by the TR management and Field Visit	Village relocation started in 2001-02. Altogether 3000 families in 16 villages have been relocated. Village relocation proposal has been prepared for 17 remaining villages. Relocation funds for Rs. 10 lakh package comes from CSS (PT), land values comes from CAMPA and State Plan. The rehabilitation is done as per the Maharashtra Rehabilitation Act (1999). Process of relocation under Option 1 is initiated by the Tiger Reserve Management. In Option 2 the related territorial forest division supervises the rehabilitation works.. There is a District Rehabilitation Committee which meets every quarter to discuss issues related to rehabilitation.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

**Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.*

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Interaction with TR managers	The information related to TR are available on the websites of the TR and the Maharashtra Forest Department website (www.magicalmelghat.com and www.mahaforest.gov.in The TCP, population estimation information, educational resources, press news etc. are available on the website.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good	✓		

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Visit to the tourist's facilities and interaction with TR managers	The Tiger Reserve has four main visitor centres. The visitor's facilities (potable water, toilets, canteen and souvenir shops) are available at all the four sites. Elephant ride is available at Kolkaz.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good		Tourist infrastructure, interpretation centre etc. are under renovation. Watch towers, canoes have been provided at certain sites. Garbage disposal is still not appropriate but plans are underway to improve the situation. The canteens are manned by village youngster who was trained in hospitality under the livelihood programme. Boarding facilities – there are 190 beds available at four locations. The bookings can be done online and at the spot itself. There are five homestays at Harisal. There are about 30 hotels and resorts in Chikaldhara. Visitor's book is maintained at the gates.
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**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Documents provided by the TR Management.	TR management is implementing GPS based patrolling and M-STriPES. This helps in decision making on deployment of resources. Waterhole monitoring, PIP monitoring is done. Vehicles are fitted with GPS to avoid misuse of vehicles. Phase – IV monitoring is done since 2012 – once in a year. Habitat improvement measures and eco-development measures are not being monitored systematically. A pleader is appointed on contractual basis for perfect documentations related to offences, labour issues etc. Court cases are reviewed at levels from ACF and above. Research priority has been fixed and TR management has signed an MoU with Amravati University for researches on the TR. Wildlife Health is not monitored. Probably Melghat is one of the most surveyed and researched tiger reserves.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger,*

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Document submitted by TR Management	There is no systematic schedule of maintenance for vehicles and assets. Maintenance is done as per the availability of funds.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Documents provided by TR Management	A research and monitoring project is underway to understand the ecology of Forest Owlet: in melghat. The research is sponsored by MoEF and Raptor Research Conservation Foundation, Mumbai and carried out by WRCS, Pune. The first survey report based on the work done at three research sites –Chaurakund area of the reserve reveals sighting of 38 forest owlet from April to July 2017. A comparison of phase IV data from 2013 and 2015 shows a declining trend in major prey species (Sambar, Chital, Nilgai, and Gaur). Wolf and wild dog though are sighted in the reserve but their status is unknown.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Phase IV report on Tiger Monitoring in 2014, 2015 and 2016.	Tiger monitoring during 2014, 2015 and 2016 revealed 42, 43 and 41 tigers respectively. Thus tiger number appears to be stable in the last three years, but it is below the carrying capacity calculated for the reserve, which is 47.98 tigers.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good	✓		
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Documents provided by TR Management	Poaching has increased (which the management argues is due to more detection of offences!), illicit felling has decreased, encroachments decreased, fire increased and other threats reduced. Grazing cases registered during 2014-15, 2015-16 to 2016-17 are 28, 33 and 23 respectively. In these cases, 1014, 1136 and 1115 livestock were seized.
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4 Is visitor management* appropriate

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		TCP for Eco-tourism	The TR has a comprehensive Ecotourism Plan. Apparently the inclusion of three sanctuaries – Ambawarba, Wan and Naranala in the core zone of the tiger reserve has catalyzed growth of tourism in the reserve. The tourist number has risen sharply from just 26277 in 2012-2013 to 59713 in 2016-17. There are 4 entry gates to provide access to different tourism zones. The tourists avail morning and evening rounds. Accompaniment by a Guide is compulsory. Private
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good	✓		
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

			<p>vehicles permitted, some Gypsies are also registered with the Tiger reserve. The management plans to arrange loans to the willing local villagers to enable them to purchase Gypsy for safari.</p> <p>Toilet and drinking water facilities are available at all gates. Interpretation centres are being refurbished.</p> <p>Carrying capacities for different zones have been determined according to the NTCA guidelines. These are as follows: Semadoh Core – 28 vehicles per day (14/14), Shahanoor (core) – 30 vehicles in the core tourism zone (per day), Vairat (core) 20 vehicles /day, Harisal (buffer) 11 vehicles /day. At Harisal several tourism activities such as canoening, zipline, nature walks, Machan, Cycling have begun in the buffer zone. These activities are being run and managed by the local EDCs.</p> <p>Accommodations are available at Semadoh, Harisal, and Sahanoor - consists of round huts, guest houses, tented accommodation, dormitories and homestays. Home stays are run by willing families of local villages. Canteens are available at all entry points. These canteens are run by the local villagers who are selected through a transparent process.</p> <p>Monitoring of possible impacts of various tourism activities on flora, fauna and habitats are not being done in a planned manner. Garbage disposal is not up to mark; efforts are on to properly dispose-off garbage. Guides carry garbage bags and collect waste from tourists and deposit those at the gate at the time of exit.</p> <p>The Local Advisory Committee is active. A tourism manager has been hired on contract to streamline tourism related activities. Local people have been involved in managing ecotourism in the buffer zone. There is a dedicated web site to showcase the attractions and market tourism.</p>
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***Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Field visit of the evaluation team	The earlier situation of conflict with villagers has changed for the better due to eco-development work, especially the livelihood interventions under Shyama Prasad Jan Van Yojna. Certain rapport building measures such as direct involvement of locals in ecotourism in the buffer and social initiative such as Kulla Volleyball Competition has helped building trust. However, in some villages people are hostile due to removal of encroachments, and in some dominated by the cowherd (Gawli) community situation still remains volatile.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	37.5	242.5 (75.8%)
2.	Planning	07	10	70	55	
3.	Inputs	05	10	50	42.5	
4.	Process	06	10	60	45	
5.	Outputs	04	10	40	30	
6.	Outcomes	05	10	50	32.5	
Total		32		320	242.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3. Nawegaon-Nagzira Tiger Reserve, Maharashtra

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Draft TCP Core, Revisions in the TCP, Draft ecotourism plan	The draft TCP documents Values of the TR, Re-appearance of Saras crane to old site, confirmation of presence of Mouse deer, record of stopover of migratory Amur Falcon have been identified as values. Special habitats such as caves etc systematically documented Floristic list updated and revised by scientific experts. Butterfly list updated from 49 to 102 Catchment values are documented and so is the value of linkages with other TRs documented. Eastern Vidarbha Landscape (EVL) project of WII fine-tuned the corridor values, while no values identified for buffer and corridor. There is scope for identification of more values of core area, Buffer area & Corridors. Phase IV monitoring helps in monitoring some of these values.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Draft TCP (Core) and revised TCP. Documents provided by the TR.	Threats generally documented. The threats are assessed and included in the revised draft TCP. There are 183 villages within the buffer. Human and cattle population in these villages is 181628 and 65710 respectively causing disturbance in the TR. Altogether, 13 threats have been identified and suitably mapped. Seasonal analysis of the threats has been done. Key threats identified are: fire, grazing, Illicit felling, poaching etc. Electrocution of wild animals in the buffer is an important threat which has been assessed systematically. Tourism facility spread in 17 ha area is established deep inside the notified CTH but it has been
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>excluded from the core zone apparently to avoid legal hassles. This a potential threat to the tiger reserve due to anthropogenic disturbances.</p> <p>The highways (State highway: Sakoli-Tumsar, Sakoli-Tirda, Bhandara-Koka-Tumsar; State Highway 275, Tumsar Gondia, Kohmara-Wadsa; and NH 6) passing through passing through core as well as buffer are posing serious threats to the TR, especially in buffer area. Railway lines (Nagpur-Gondia, Wadsa-Gondia) also pass through the buffer/Corridor area. These linear threats are not documented in the Draft TCP.</p> <p>Night traffic on roads has been identified as threat and management actions have been proposed/done (closure/Blinkers etc)</p> <p>Proneness to disease outbreaks is not mentioned as a threat, though this area has a history of FMD epidemic. However, FMD threat is being systematically assessed and Bird flu is also monitored.</p> <p>Weak links and gaps in the Corridors , weed infestation and heavy growth of shrubs resulting in severe congestion in New Nagzira have not been listed as threats in the SWOT analysis</p>
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***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference* ?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Revised draft of TCP (Core) Offence registers, monthly reports, annual reports and other documents provided by office	There were 5 villages (Kalimati, Kawalewada, Jhankargondi, Tumdimenda and Malkajhari) in the core area of the tiger reserve. These villages have been relocated in 2012-13. Only one family in Kawlewada is still residing in the core area due to family dispute. However, land belonging to 35 families in Kawlewada and Kalimati is yet to be acquired. The relocation of these villages has eased out the heavy anthropogenic pressure in the core tiger habitat. However, the villages outside the
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>core continue to exert biotic disturbance in it. During 2014-17, altogether 553 offence cases pertaining to core area has been registered. The Nagzira tourism complex of the area about 17.60 ha is located deep inside in the core and is ecologically an important part of core but it has been deliberately kept out of the CTH to promote tourism. The ongoing tourism activities and the tourism infrastructure create a lot of disturbance, pollution and garbage.</p> <p>In the peak season 99 to 115 people reside inside the complex which puts a lot of pressure on local resources like water and also creates lot of non-degradable litter. Another 65 vehicles and 350 tourists get down there each day that causes significant disturbance. The facility needs to be phased out of the area.</p>
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***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Field visits of the team, interaction with the TR managers and field staff.	Core/CTH has been notified in 12 th December 2013, while Buffer zone was also notified in 7 th September, 2016.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair		Tripartite agreement; Revised Draft TCP – Core (Buffer & corridor in preparation)	Tiger Conservation Foundation established and in operation since July, 2014. However, revenue generated through FDCM in not transferred to Conservation Foundation.
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓	SOP copies	TCP – core was submitted to the NTCA, and its suggestions are incorporated in the revised draft.
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good		TCF meeting minutes	Revision of the TCP (Core, Buffer and Corridor) is in progress as per NTCAs instructions. State level steering committee was constituted in 2008 and reconstituted in 2013. Till now just one meeting has been convened (on 24 January 2013).

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>Ecotourism plan has not yet recommended by the LAC and approved by NTCA. Calculation of Carrying Capacity is not as per NTCA guidelines. Carrying capacity was earlier worked out on the basis of road length, it is now being revised as per the area. The revised Carrying Capacity will be implemented after approval by the LAC. Tripartite agreement has been signed. However, Field Director post was vacant for seven months during 2015-16. There are frequent transfers of the field directors. In just three and a half years, five field directors have served the TR. The SoPs are being followed. The SoPs have been translated in Marathi and given to all field personnel. The staff are well aware of the provisions of SoPs. Special trainings were organized on SOP for the frontline staff.</p>
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an+ Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		Unified Control proposal submitted by Field Director	The buffer zone has been notified on 7 th September 2016. A very small part of Buffer (2.52 sq km) within the core is under control of Field Director, which falls under original TR notification. In August 2017, a proposal for unified control of the core and buffer was submitted to the higher authorities for approval.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair	✓		
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Revised Draft of TCP (Core); NTCA Letter	TCP of Core submitted to the NTCA, is yet to be approved. NTCA has suggested some modifications and asked for submission of all the plans together. Revision is under progress. Ecotourism plan is also under revision.
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Revised Draft Core – TCP; New checklists prepared, MSTRIPES and other strategies in the field like STPF etc	TCP prescribes some specific measures to safeguard the threatened biodiversity values. Inventories of Biodiversity -invertebrates, mammals, birds, reptiles, amphibians, fishes have been prepared and are being updated. Some rare plant species and new species have been brought into record. Slender Loris had been reported around Nawegaon National park. 22 feet long skin of "King cobra" was collected from Nawegaon National Park by Sayyad Ali of BNHS in 1975. Globally threatened species like the Lesser Adjutant, stork Crane, green Munia and the Greater spotted Eagle are reported from this area. "Threatened Birds of Asia", Red data Book confirms that the National Park protects one Critically Endangered (White backed vulture) and several near threatened and vulnerable bird species of Asia. Sarus Crane, Lesser Adjutant, Purple Wood Pigeon, Green Munia and Pallas's Fish Eagle are Vulnerable species found in the TR, while Painted Stork, Greater Gray headed Fish Eagle, Cinereous Vulture and Great Pied Hornbill Near Threatened species of birds reported in the TR. Threat mapping is also being done before inclusion into the revised plans. There are 65 strategically located anti-poaching camps (APCs) in the CTH of the TR. There are 7 APCs in the buffer area. The camps are manned and equipped. The teams of beat guard and daily- wage staff undertake monitoring of wildlife following M-STRIPE protocol. There is one unit of a Special Tiger
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>Protection Force in the TR to strengthen the protection mechanism. The STPF has been split into three groups and placed at four strategic locations (Chandrapur, Nawegaon, Sakoli – Rescue; and Mangezari). For control of fire in the tiger reserve, 1669 km of fire line is maintained and special teams (more than 200 fire watchers) are deployed for fire control. There has been a reduction in burnt forest area in the last three years. Altogether there are 100 EDCs around the core area, out of these 87 committees have microplans and in the rest microplans are under preparation. Firewood dependency reduction measures (provision of LPG) have been implemented and a total of 11349 LPG connections have been given in the villages around the TR. To reduce the chances of spread of communicable diseases in wild animals and vice-versa, cattle vaccination drives are organized in co-ordination with animal husbandry department. Eco-sensitive zone has been notified to make the adjoining land-use compatible with the mandate of TR.</p>
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***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Stakeholders meeting minutes, record of several programmes and events, reports, Committee reports. Interaction of the evaluation team with the stakeholders.	Stakeholders have been systematically engaged in the ongoing planning process. These include retired officers, officers of other departments, NGOs, Teachers, NGIs, Villagers, EDCs, Subject experts, researchers etc. Altogether 87 village level micro-plans have been prepared and at many places participation of stakeholders is ensured. Six exclusive committees (Eco-tourism, Eco-development, Wildlife Health Management, Protection Strategies, Staff Development Plan, Research Planning) were constituted for specific inputs for preparation of Theme plans of the TCP. Two multi-stakeholder consultations were organized to seek inputs of stakeholders in TR planning. Four studies were done by WII. Irrigation department engineers are consulted for SMC interventions. Subject expert was involved in restoration of wetlands. While declaring the Buffer Zone and eco-sensitive zone, the villages to be included in the buffer area were consulted.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good	✓		

***The result of participation must show in the field and not merely reported as a routine exercise.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Revised draft TCP (Core). Interaction with TR Managers; Field visits of the evaluation team.	In the recent years, the TR Management has started monitoring the water holes. Three years minimum treatment plan for all weed eradication works has been prepared. Under SMC activities, the management is treating the streams from top to bottom under a systematic plan. The advice of irrigation dept.is is sought before taking up large scale activities. After relocation of villages from the core, 226 ha area was reclaimed. Mutation of the vacated land has been done in favour of the tiger reserve. Excellent work for creating grassland has been done, but there is no mechanism to monitor its use by wild animals. However, some data on direct sightings of the animals utilizing the grasslands is collected. Pogostemon invasion is a new threat to the habitat, especially in Nagzira.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

**This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.*

2.5 Does the TR has an effective Protection Strategy (PS)+ and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Visits to APCs in field. Threats also identified in Part-I and Para no 1.8 of Security plan. Daily patrolling registers.	The TR has a Protection Strategy in place. The revised Security Plan (with draft TCP) has been prepared after detailed analysis of the threats. The NTCA has identified the TR for Security audit. Sensitivity and vulnerability mapping over temporal and spatial scale not available, except that of sensitive beats. Staff adequate, due to recent
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>recruitment of STPF (Total sanctioned staff is 357 out of this, 60 posts are vacant that includes STPF too)</p> <p>Out sanctioned posts of 112 STPF, 29 posts of forest guards, 9 forest watchers, 2 RFO and 1 ACF is still vacant. There are no vehicle and accommodation facilities available to these officers. The STPF staff has received specialized combat training at Chikaldhara training school. The MEE team found them well trained and effective.</p> <p>Total 56 permanent Anti-poaching Camps (APCs) and 10 temporary camps are in place. All APCs are well equipped with basic facilities with the help of NGOs like WCT. However, there is scarcity of potable water for the staff living in these camps. In the camps, maintenance works are needed.</p> <p>A total of 2 buses, 22 four wheel vehicles and 6 bikes are available for movement of protection force and patrolling.</p> <p>Wireless Network in Nawegaon needs to be strengthened. This has been planned and will be executed in the coming months.</p> <p>There are 534 km of class - I, 1010 km of class- II and 19 km of class -III fire lines. These need to be maintained every year, which is hindered due to inadequate funding. Additionally, 65 leaf blowers, 28 fire watch towers, more than 212 fire watchers are deployed during the fire season but it is essential to increase these resources for effective fire control.</p> <p>Secrets fund is poorly utilized.</p> <p>There are 13 latest wildlife offence cases in the court, of which only one case is pending for more than 3 years.</p> <p>There is rise in cases of animal mortality due to electrocution in Gondia division. The working plan of Gondia division (page 522) mentions- "poaching by tapping electric transmission lines passing through the forests is on the rise."</p> <p>Following equipment are available for communication, monitoring and protections: Repeater stations (02), Base stations (19), Base set for vehicle (12), Walkie-talkies (57), PDA</p>
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				<p>(110), GPS (100), Camera traps (668) and metal detector (13) etc. However, the equipment are inadequate.</p> <p>Tiger Cell has been established at district level. Meeting of the Cell is organised every 6 months. It helps in coordination with the line departments and sensitizing the police and administration. This was effectively used in removing encroachment from the vacated village site.</p> <p>Tourism not efficiently managed. Ad-hoc systems at some check posts and entry - exit points.</p>
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Revised Draft TCP; Interaction with TR Management	<p>There is a theme plan for Management of Man-Animal Conflict. Trained and well equipped rescue team is in place. One rescue unit under IUCN Project is also stationed in the buffer area. The rescue team of the TR is manned by STPF personnel. Adequate equipment are available with the rescue teams those are trained in handling the tranquilization equipment. There is no permanent veterinarian in the TR, but services of two veterinarians from the veterinary department are taken in rescue cases.</p> <p>Conflict issues outside the CTH: In the last three years nine cases of rescue (3 leopard, 1 sloth bear, rest herbivores) have been tackled successfully. One leopard died after the rescue as it had serious injuries.</p> <p>Compensation is paid to the villagers. In the last three years 2159 cases of crop damage in Gondia and Bhandara Division were reported and Rs. 133.31 Lakh was paid to the claimants. Cases of cattle compensation recorded during the period were 245 and Rs.</p>
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>Rs.12.76 lakh was given as compensation. Human attack cases in the last three year were 27 for which Rs. 16.02 lakh was given to villagers. In FDCM area one person was attacked for which Rs. 15000 was paid. Sloth bear and leopard are mainly involved in conflict cases. Payment of compensation is timely as per the G.O. on Service guarantee. ACF is authorized to grant compensation.</p> <p>To reduce conflict individual solar fences have been provided to 359 families in 21 villages. Parapet walls have been constructed in 351 well in 25 villages.</p> <p>Conflict issues outside the TR– compensations, etc are handled by Bhandara & Gondia divisions and FDCM division.</p>
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***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Scientific Reports. Interaction with TR Managers.	IUCN Project planned in 2016-17. NGOs (WTI, SEWA, SEAT, Vidarbha Nature Conservation Society, HIRWA) are involved in the Buffer and corridor area under the NNTR. The villages not covered under EDC, have been included in the IUCN Project. - Tiger Corridors of Eastern Vidarbha Landscape – A report by WII has identified corridors in the region - In IUCN Project, a dedicated website is developed to track the progress of the project. Probably this is one of its kind planned project to address issues in the corridors connecting natal areas. The success of this project may inspire other states to undertake planned interventions in the corridors within their jurisdiction. A large chunk of Buffer forest is still under the management of Maharashtra Forest Development corporation. There is apparently a resistance to handing over the corporation forest under the unified control of
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				the TR management as it would impact the livelihoods of locals. But, without bringing it under the management of tiger reserve and modifying the current intensive commercial forest operations to suit the requirements of wildlife and local people, the purpose of buffer cannot be achieved.
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***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Revised Draft TCP (Core), documents provided by office, interaction with staff, equipment available at the camps	There is about 5% vacancy in the frontline staff, while there is no vacancy in the officer cadre. One STPF unit is deployed and there is vacancy of 18% in the force. The vacancy is due to the fact that the reservation category is not filled-up (persons not available). After 2013, there has been regular posting of frontline staff in the TR, leading to very less number of vacant positions. The staff are young and motivated. Their attitude is very positive and willingness to work in the TR is high. Average age of ACFs, RFOs, Foresters, and Forest Guards is 38, 35, 45 and 32 years respectively. Average Age of STPF Forest Guards is 24 years. Vehicles are sufficient for protection work. There are eight pistols (9 mm) for ROF and ACFs. Women guards do not stay overnight at APC, but the TR has started double storey camps for their safe accommodation.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Documents provided by the TR.	Equipment available for wildlife monitoring are – GPS (160); Compass (150), Range Finder (34), Night vision binocs (5), Binocs (40), Digital Camera (20); and camera trap (1082). There are 36 vehicles (including 6 two wheelers) for protection and movement of TR staff. There are anti-poaching camps (65), frontline staff quarters (101) and check-naka (23) to facilitate effective protection. Quarters for STPF are inadequate. APCs are well equipped with necessary item provided by NGOs. The resources available for the core area are adequate. When the buffer would be transferred to the TR, the resources would have to be increased.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

**These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by TR Management	Generally, the funds are released timely, without much delay. Year wise budgeted amount, allotment and utilization of funds received by the TR from NTCA (CSS) in last three years is as below;
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and	Good	✓		

Year	Amount in Rs. (Lakh)			
	Budgeted	Sanctioned	Released	Expenditure
2014-15	227.99	203.38	168.60	168.60
2015-16	628.53	218.88	176.41	176.41
2016-17	1739.19	1241.94	836.41	836.41

Funds made available are less than the budgeted. The utilization was 100%. The funds released to the TR are slightly delayed.

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good		

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*																		
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks														
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by the TR.	<p>The state funds made available to the TR are as below State Plan, Eco-tourism, Protection, district Plan, 13th Finance Commission, CAMPA. Year wise allotment and expenditure of the state funds is as below;</p> <table border="1"> <thead> <tr> <th rowspan="2">Year</th> <th colspan="2">Amount in Rs. (Lakh)</th> </tr> <tr> <th>Allotment</th> <th>Expenditure</th> </tr> </thead> <tbody> <tr> <td>2014-15</td> <td>406.07</td> <td>406.07</td> </tr> <tr> <td>2015-16</td> <td>1057.23</td> <td>1057.23</td> </tr> <tr> <td>2016-17</td> <td>767.14</td> <td>767.14</td> </tr> </tbody> </table>	Year	Amount in Rs. (Lakh)		Allotment	Expenditure	2014-15	406.07	406.07	2015-16	1057.23	1057.23	2016-17	767.14	767.14
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Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair																	
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good		<p>TCF: In three years Rs. 77.38 lakh has been utilized.</p> <p>Non-Plan</p> <table border="1"> <thead> <tr> <th rowspan="2">Year</th> <th colspan="2">Amount in Rs. (Lakh)</th> </tr> <tr> <th>Allotment</th> <th>Expenditure</th> </tr> </thead> <tbody> <tr> <td>2014-15</td> <td>1415.45</td> <td>1415.45</td> </tr> <tr> <td>2015-16</td> <td>1346.06</td> <td>1346.06</td> </tr> <tr> <td>2016-17</td> <td>1383.59</td> <td>1383.50</td> </tr> </tbody> </table>	Year	Amount in Rs. (Lakh)		Allotment	Expenditure	2014-15	1415.45	1415.45	2015-16	1346.06	1346.06	2016-17	1383.59	1383.50	
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2016-17	1383.59	1383.50																
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓	<p>Non-plan budget is adequate and utilized efficiently. Maintenance budget is sufficient.</p>															

*Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.5 **What level of resources are provided by NGOs?**

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Documents provided by the Tiger Reserve Management.	WCT, WTI, BNHS, SEWA, SEAT, HIRWAL, Satpura Foundation, Adani Foundation and WWF are the NGOs providing resources to the TR. Indian Oil CSR have also provided resources. The resources include: Patrolling vehicles, Rapid Response vehicle, strengthening of APCs. WCT has also organized training / workshops, support in monitoring (camera trapping exercise), equipping APCs, Law Enforcement Training (M-STRIPEs), Trauma training and health check-up camps for staff. BNHS, Satpura Foundation and HIRWA helped in conservation education, awareness and sensitization of youth (600) and women. HIRWA provided training to the staff in self-defense, habitat management, Swachchha Bharat Mission, livelihood training, guiding youths for competitive exams etc. Indian Oil provided LPG connection to 15 APCs. WTI is working for livelihood improvement and forest dependency reduction work in buffer villages besides Wildlife Act training. WCT, SEWA and SEAT have undertaken corridor monitoring program. Adani Foundation supporting livelihood activities, employment opportunities for rehabilitated villages, health, rescue of wild animals in buffer villages etc.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Documents provided by TR Management	Trained officers: Field Director and DCF (Buffer) have done Diploma in WL Management from WII; Dy. Director has done M.Sc. dissertation on Wildlife Conservation with WII. ACFs and RFOs have undergone trainings organized by different organizations. The topics included – M-STriPES; Illicit WL Trade; Cyber Crime; Legal issues in Forestry; Intelligence Gathering. In the last three years the TR has organized 44 trainings in association with different stakeholders. The topics covered were: Camera trapping, law enforcement, M-STriPES, Basic wildlife, Man-animal conflict, Trauma Management, SoPs, PDA for Offence Registration, Staff Motivation, Grass Identification and Meadow development, Weapon training, EDC Account Maintenance; Yoga etc.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good	✓		

*Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Interaction with TR management	For best utilization of the skill set and attributes of individual staff, the TR Management identifies the skill of individual staff and takes measures to sharpen the skill further. The ACFs have been given specific tasks as per their expertise and interest for the entire tiger reserve irrespective of their administrative jurisdiction. This clearly reflects in the effectiveness of the present management.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Field visits, interaction with stakeholders and TR Management.	The tiger reserve involves NGOs, NGIs and EDCs in management activities in the tiger reserve. EDCs help in habitat protection activities. NGOs and NGIs are involved in protection, management of religious gatherings, trainings of guides, research, water hole count etc. Responsibilities of individual EDCs have been given to NGOs for facilitation and guidance of implementation of EDC activities.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGIs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Complaint register and documents provided by the TR.	Complaint registers are maintained at Range Officer and Field Director level. Whatsapp is also used to register complaints. News published in Newspapers are also compiled. The complaints are categorized into different categories, such as MP and MLAs; Senior Officials; Line Departments; Common public etc. Website has a provision where complaints can be booked. During July 2015 – September 2017, altogether 21 complaints were recorded and all complaints were addressed. The forest department has a complaint registering mechanism through 'Hello Forest' (1926) – a phone line to file complaint by general public. The concerned DCF has to address the matter within 45 hours, otherwise, the complaint will be forwarded to next level of officer. It is monitored systematically by the senior officers and is monitored by the Minister on quarterly basis.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good	✓		

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Documents provided by the TR, Field visit of the team and interaction with TR officials.	Livelihood issues of resource dependent communities is addressed through 97 EDC from 2015-16. During 2016-17, 379839 man-days were generated. 357 milch cattle have been provided to EDCs since 2011-12.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				training tourism activities are being undertaken etc. (last 3 years: lac bangle making: 910 women, bamboo mat weaving: 122 beneficiaries; Tendu bonus: worth Rs. 28.14 lakh to 14213 beneficiaries; plantation: 730.75 ha worth Rs. 3.27 Crore; Eco-tourism: Rs. 36.64 lakh given to JFMCs; SMC: 129 works worth Rs. 1.52 crore)
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*The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Documents provided by TR Management. Field visit of the MEE Team	5 villages were relocated from the core in the past. Fund allotted for relocations was Rs. 40.90 core for 374 families. Expenditure incurred for creating amenities in rehabilitated villages (Shrirampur) was Rs. 58.03 lakh. Vacated area available due to this relocation of 5 villages is 226.82 ha. In Kawalewada, one family is yet to be relocated, but land rights of 35 families are yet to be acquired. CAMPA fund with additional package was utilized to rehabilitate villages under Option-I. No NGO support was taken in the initial process. Rs. 20 lakh from CSS and Rs. 2 lakh for livelihood trainings were used for establishing the Skill development Centre. Adani Foundation has committed to train and absorb 15 youths from the rehabilitated families.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good	✓		

*Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5. Output

5.1 *Is adequate information on TR management publicly available?*

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Documents and publications.	The TR has a website (www.mahantr.com). This site was launched in April 2017. Annual reports and publications, notifications and GR and are uploaded on this Website Brochures and Newsletter are printed. Social media is also used for making the information available to public.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 *Are visitor services and facilities appropriate and adequate?*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Field visit of the evaluation team and interaction with the TR managers.	FDCM is managing four eco-tourism facilities. Altogether 58 beds are available in these facilities. MTDC tourist facility at Nagzira has altogether 50 beds. In Chorkamara and Muba private hotels, there are 38 beds. Canteens and eateries are available in Chandrapur and Pitezari. Some homestays are also available. No watch towers or hides are used for tourism. There are seven gates for tourists. Waiting halls are at three gates. Public conveniences (toilet, drinking water etc) are available at all the 7 gates. Average income to the TR from tourism is Rs. 34 lakh/annum. Altogether 111 local youths are employed at 10 entry gate. Maximum (28) guides operate from Pitezari gate, which is presently the most sought after entry point. Some tent accommodation was provided at Pitezari gate with a view to involve Pitezari EDC but as the villagers are still hostile this facility is presently idle.
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Documents and research reports provided by the TR management.	Since 1980, 28 research papers have been published by research institutions based on their studies on various topics. BSI and ZSI have done multiple surveys. The findings have now been systematically used in the management of the tiger reserve. Wildlife Institute of India has completed two research projects in the TR. Phase IV monitoring is being done since 2012. Prey density data not available. However, in 2016, the TR management conducted seasonal prey monitoring. Besides, M-STRIPES is being implemented. Grass species survey was done by experts and the findings are being used in grassland management.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		APOs, Documents provided by TR Management	Inventory of infrastructure is maintained at Range Level. Schedule of maintenance is not prepared. But, the maintenance work is done regularly as per the APO.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Reports and interaction with TR management.	Leopard, wild dog, sloth bear, mouse deer, sarus crane, vultures, wolf (recorded in Putadi - in buffer area) are some of the threatened species. Sarus crane has come back to the landscape after almost 30 years. Vulture (slender billed and white backed) population has gone down. Water hole count data is not comparable. There is no systematic monitoring of threatened species. As per observations of the staff wild dog has increased.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Data provided by TR Management	Tiger population has increased a bit (from 6 in 2012-13 to 8 in 2016-17). The sex ratio is skewed towards males. In the recent years, breeding of tigers has been recorded in the TR.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good	✓		
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Documents provided by the TR Management.	Incidences of forest offence cases have gone down in the last three years. 2014-15: 149; 2015-16: 157; 2016-17: 134 Forest fire cases have increased 2014-15: 18; 2015-16:29; 2016-17: 38. However, the area under fire has gone down. There is no Disaster risk management Plan.
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		Documents provided by the TR management.	The carrying capacity has been calculated on the basis of road length. The tourism zone is in just 4.09% area of the core. As per the current calculation, daily vehicle capacity is 152 from all the seven gates. However, the carrying capacity has been recalculated on the basis of compartment area. It will be implemented after recommendations of LAC. Complaint registers are kept at the entry gates to get the feedback of tourists.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good	✓		
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

***Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Field visits of the MEE Team. Workshop at Bodaljhiri. Meeting with EDC members	Due to recent Eco-development activities and good communication between the TR management and the villagers, the communities are supportive to the management. However, few villages are still hostile.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

disaffectation simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	35	252.5 (78.91%)
2.	Planning	07	10	70	52.5	
3.	Inputs	05	10	50	47.5	
4.	Process	06	10	60	57.5	
5.	Outputs	04	10	40	27.5	
6.	Outcomes	05	10	50	32.5	
Total		32		320	252.5	

*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.

4. Pench Tiger Reserve, Maharashtra

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		TCP of Core and Buffer of Pench TR, Maharashtra.	Values of the Tiger Reserve are documented in the TCP of Core and Buffer. The TR is located in the southern lower reaches of the Satpuda Hill Ranges, which forms the catchments of Pench River. The forest of the TR provide watershed for Totladoh reservoir as well as the lower Pench reservoir. The hydroelectric project generates 160 MW electricity. The ecological values documented in the TCP include species diversity of flora and fauna (33 species of mammals and over 170 species of birds, besides reptiles, fishes, hill stream fishes etc). It is a conservation unit for tiger across the state of M.P. since it is contiguous to the forest of Pench National Park, M.P. along the northern boundary. Pench is an important tiger natal area that is a part of the huge conservation area extending to Kanha tiger reserve, Nagzjira tiger reserves and Satpura – Melghat tiger reserves.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		TCP of Core and Buffer; interaction with TR managers.	The threats have been identified, assessed and documented in the TCP. Poaching and illicit felling are the major threats in the core. Illegal fishing in Totladoh reservoir (24% of the 77 sq km reservoir is in Maharashtra) is one of the important threats that demands a significant portion of time and efforts of the TR management to control Illicit fishing. In Buffer, cattle pressure from 44 villages is a key threat, and so is the poaching.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.3 Is the 'Core Area' of TR free from human and biotic interference* ?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		TCP of Core and Buffer; Maps of the Tiger Reserve, documents provided by the TR.	There is one village – Fuljharii, in the Core Zone of the TR. Sixty five households of the village have been relocated and 17 households are still in the Core area. The remaining villagers are not willing to be relocated. Moreover, 11 villages are sandwiched between the National Park and Sanctuary area. These villages exert biotic pressure on the reserve. These villages need to be relocated to create inviolate space for wildlife. Villagers deliberately set fire to the forest areas. In the last three years 178 incidences of fire have been recorded in the forest, 36.33 sq km area was burnt due to these incidences. No new encroachments are in the TR, but some old encroachments have been given right of use under the FRA. The regular aggressive ingress of fisherfolk into the core for illicit fishing in the Totaladoh reservoir poses a constant threat. There have been serious physical conflicts resulting in mortality of human beings. The MEE team was informed of a recent tiger poaching case in which the apprehended suspects confessed killing of three more tigers over the last three years.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Documents provided by the TR management. A translated book on compilation of the SoPs.	Earlier, on 27 th December 2007, an area of 257.26 sq km of the Pench National Park was notified as Core of the tiger reserve. Further, on 29 th September 2010, an area of 483.96 sq km area was notified as Buffer Zone, including the forest and non-forest land. The forest lands were under the management of Nagpur Division and FDCM. Later on 182.59 sq km area of the forest of Nagpur Division and FDCM
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the	Good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Tri-partite MoU and SOPs complied				forest area was notified as Mansinghdeo WLS on 2 nd November 2010. On 4 th March 2017, the area of Mansinghdeo WLS has been included in the Core Area of the TR. Thus the current area of the core includes the Pench NP and Mansinghdeo WLS. In the light of the recent notification of Mansinghdeo WLS as Core Area of the TR, the Buffer Area needs to be reconstituted and notified again, nullifying the earlier Buffer Notification of 29 th September 2010. Accordingly, the TCP also needs to be modified and updated. The SoPs issued by NTCA are being followed in the TR. The SoPs have been translated in Marathi language and published in the form of a book in 2015. The staff are being trained on these SoPs. The TCP is approved by NTCA on 24 th September 2015. The state level Steering Committee has been constituted, but meeting has not taken place. The governing body of Tiger Foundation meets every year. There are regular interstate coordination meetings between the staff of the Pench TR Maharashtra and Pench TR M.P. The lower functionaries remain in contact with their counterparts on daily basis. Joint patrolling and joint action against illegal fishers is in practice.
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	√		

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		Govt. order No. WLP-0614/Case No. 152 / f-1, dated 8 July 2014.	The Core and Buffer of the TR is under the unified control of the Field Director.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	√		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		TCP of Core, Buffer and Corridor. Notification of Mansingh Deo WLS as Core, Documents provided by the TR management. Interaction with FD	The TCP of Core, Buffer and Corridor has been prepared and approved by the NTCA. However, in the light of the newly added Mansingh Deo WLS as Core area of the TR, the TCP needs to be modified and updated further. Villagers were consulted through meetings held during May 2009 to May 2010 in 40 villages in the Buffer Zone to discuss the notification of Buffer Zone.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Field visit of the team; Interaction with TR management; documents provided by the Tiger Reserve.	The tiger reserve has established 47 equipped protection camps, each one manned by 2 daily wagers and a beat guard (who lives in the camp for 3 days in a week), in the Core and Buffer Zones. To reduce firewood dependency, about 90% of the families in 38 EDCs have been provided with LPG connections. Villagers are using the LPG. The village youths are being trained in different vocations in collaboration with other agencies. Hospitality training is being given to youth, who are placed in good hotels after its completion. This is changing the attitude of villagers towards the TR. To take safeguard against forest fire, fire protection units are stationed at Patrolling Camps. The units are provided with communication and firefighting equipment. To safeguard against forest fire, the TR management prepares Fire Management plan on yearly basis. A total of 1292.35 km long fire line is maintained during the fire season. There are 22 watch towers and 55 camps in the TR for surveillance. During the fire season, facilities of other departments such as Police, Administration, and Health are acquired to combat the threat. Weekly inspection of the boundary pillars is done by the Beat Guard to detect and prevent encroachments. The encroached areas have been
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				reclaimed at several places. To reduce cattle grazing pressure in the TR, the management has allocated some compartments in the buffer to the villages for grazing. The TR is planning to implement the system of rotational cattle grazing in these areas to prevent over grazing in the TR and especially in the areas crucial for tiger prey. There is coordination with the adjoining state (M.P.) for controlling fishing activities in Totladoh Reservoir. Habitat improvement (weed removal) measures are undertaken to preserve the native biodiversity. Since 2012-13 Lantana removal work has been done on 918.56 ha area in different ranges of the core and buffer of the TR.. The major threat of illegal ingress of fisher-folks, to poach fish and other wild animals takes a lot of energy and time of the management but little success could be achieved by the management so far to effectively contain this threat.
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*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		TCPs of Core and Buffer; Documents provided by TR management; Interaction with TR management.	In the planning process for the Core area, there was little participation of the stakeholders. However, in the Buffer area villagers participated in preparation of micro-plans.
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		TCPs of Core and Buffer; Field Visit; Interaction with TR Managers	The TCP prescribes for taking up habitat management interventions. Habitat improvement activities are a part of the APOs. However, there is no monitoring mechanism for the habitat improvement interventions. Though the TCP prescribes identification, mapping, protection, management, maintenance and monitoring of Special and Unique habitats, these are not mapped and monitored so far. The management plan cautions against interventions in riparian habitats without
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are	Good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

generally planned and monitored.				scientific study. For development of water bodies, a thumb rule of availability of water body every 4 sq km area is ensured. Water bodies are being checked by the Beat Guard as per the schedule fixed by the management. Vulture nest monitoring is being done. Important habitat features (such as salt -licks, meadows and water holes are) mapped. Wolf, Wild dogs and Pangolins are present in the TR, however, no measures have been taken to specifically protect or manage their habitat. Weed eradication works are carried out in lantana infested areas.
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)+ and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Documents provided by TR management.	The protection strategy is in place. The tiger reserve prepares annual plan for protection of the area. There are 47 well equipped protection camps, each one manned by 2 daily wagers and a beat guard. Average size of the beat is 10 sq km. The beat guard has to patrol 45 km in a week. GPS based patrolling is done and data is tabulated in the M-STrIPES format. There is a STPF unit (1 ACF, 3 RFO, 27 Foresters, 81 FG) for the Tiger Reserve. The force also serves in other forest areas in the landscape. They also patrol in the TR area. Offences: During 2014-15 to 2016-17, 423 offences were booked. During the period, 48 judgments were made by the courts; however, none of the decisions was in the favour of the TR. However, most of these cases were booked 15-20 years back. The main reason of losing the cases was poor documentation. Now the TR is taking initiative to plug the loopholes through training of field personnel. Key offence cases: Illicit felling (2014-15: 31, 2015-16: 51, 2016-17: 15); Wildlife related (illegal entry) (2014-15: 0, 2015-16: 4, 2016-17: 0); Wildlife Poaching (2014-15: 00, 2015-16: 00; 2016-17: 04); Encroachments (2014-15: 00, 2015-16: 08, 2016-17:
TR has an adhoc PS and SA.	Fair		TCP of Core and Buffer. Field visits. Interactions with FD, ACFs, ROs and field staff.	
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

			00). Good information network has been developed to ensure protection. During In the calendar year (2016-17 to date) 27 arrests have been made. It appears that the tiger monitoring and Protection of the reserve seem to have been revamped very recently, as in the last 3-4 years the 3 tiger poaching cases which the apprehended suspects , in the latest case, have confessed , went undetected. Court cases are reviewed at levels from ACF and above. State government also reviews the progress. Fire protection activities are monitored and evaluated rigorously.
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Records provided by the TR management and interaction with villagers in 2 buffer villages.	From April 2012 to March 2017, only two cases of wild animal attack on human being occurred . The victims were paid compensation of Rs,105200 for injury caused by tiger. Over the last three years 51 cases of cattle kills were reported and an amount of Rs. 5,72,500 was disbursed to the cattle owners as compensation. In 103 cases of crop damage reported and compensated with a payment of Rs.7,43,910. The GR on compensation due to various types of damages caused by wild animals have been revised in 2015, and payment of compensation has become integral part of the Right to Service Act. Compensation has to be paid within a month of the incident. During our field visit we learnt that some of the villages sandwiched between the core and the territorial divisions, though recognized as EDC by the PTR that receives other benefits of the
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>programmes run by the PTR, remained deprived of compensation. The FD informed that certain villages on the periphery are under the jurisdiction of adjoining territorial division and therefore they should get compensation from the respective Forest Divisions. This needs to be rectified to get the support of these EDCs. Rescue squad is equipped with cages, tranquilizing guns. The TR Foundation has employed a veterinarian. No large animals have been rescued as such cases didn't happen. The rescue operations were conducted to save snakes and birds. The conflict with wild animals is mainly in the form of crop raiding. Recently the management has provided subsidized solar power fences to some farmers but the result is not very encouraging apparently owing to lack of interest on the part of the farmers. A study tour of farmers to Tadoba to see the benefits of solar fences as well as to learn the maintenance technique may be useful.</p>
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*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Field visits; TCP for Corridor; and maps provided by PTR.	The Tiger Reserve is a part of three functional meta-populations – Pench-Kanha-Achanakmar; Satpura-Melghat; and Tadoba-Chandrapur. Pench TR, Maharashtra has direct connectivity with Pench TR, Madhya Pradesh towards north. In the eastern side the Pench TR is connected with forests of Ramtek tehsil that is contiguous with the forests of Bhandara Forest Division, which in south and south east joins the forest of Gondia and Bhandara divisions respectively. Observations suggest that a tiger corridor exists between Pench TR and Nagzira-Navegaon corridor. The TR has prepared a Corridor Plan. Activities are being implemented in the corridors in Vidarbha region with funding support of IUCN. Under the project interventions include reducing the dependency of villages on the corridor. The Working Plans of the adjoining territorial divisions include provisions for wildlife
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				management (through Wildlife overlapping circle). The NH-7 passes through 30 km stretch of the corridor between the Pench TR (Maharashtra) and the territorial forests. Suitable retrofitting measures are being adopted in the NH widening project. Provisions of eight over-bridges and one underpass are in the implementation stage. Beyond the NH 7, a disturbed large forest patch connects Pench with Nagzira Corridor. This area may be included in the buffer zone for protection and amelioration.
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***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Records provided by PTR and interaction with TR managers	From the level of CCF to Chara-cutter, total strength of staff in PTR is 210. There are 143 frontline staffs (Below Range Officer). Altogether 28 positions of frontline are lying vacant (Forester – 4, Forest Guard-24). As far as educational qualification is concerned, 32% staff are graduate and 59% are secondary / HS, while the remaining are matriculate. In the STPF, altogether 113 posts are sanctioned, of which one RFO, two FG, and one Forest Watcher position is lying vacant. Most of the staff are young - 43% of the Frontline staff (below RoF) are in the age group of 20-30 yrs; 38% staff are in the age-group of 30-40 Yrs; and only 6% of the staff are above 50 years. Alertness and body language of the frontline staff is good. More secretarial staff is needed. Reorganization of Forest Ranges will be done in near future, and the Nangalwadi Range will be split down into two forest ranges.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Records provided by PTR and feedback from FD, Dy Directors, ACFs and Rangers	Building: There are 60 forest guard quarters, 16 forester quarters, and 6 range office quarters. More residential accommodations are needed for the frontline staff. There is a need to construct quarter for Paoni RoF. There are sufficient buildings for STPF. Vehicles: There are 25 four wheeler vehicles, 30 two wheeler vehicles, three boats, and a water scooter for field staff and officials. In addition to these government vehicles, vehicles donated by NGOs include - one boat, four four-wheeler vehicles and eight bikes. Rescue squad is equipped with cages, tranquilizing guns. GPS devices and digital cameras are available in sufficient number. All beat guards are provided with android phones. Protection camps have been equipped with resources of the PTR as well as in kind donations from NGO (WCT). Hence, adequate resources are available with the TR.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

**These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		NTCA Grant Sanction letters, records provided by the TR Management.	CSS Grant The grant proposed, sanctioned and released under CSS from NTCA, and utilization by the tiger reserve over the last three years is as follows; 2014-15: Proposed in APO Rs.8.91 crore , Sanctioned Rs. 5.52 , Released 4.11 crore, Utilized Rs. 4.11 crore; 2015-16: Proposed in APO Rs.8.12 crore , Sanctioned Rs. 5.24, crore Released 4.32 crore, Utilized Rs. 4.32crore; 2016-17: Proposed in APO Rs.9.92 crore, Sanctioned Rs. 7.99 crore , released Rs. 7.99 crore, Utilized Rs. 7.99 crore The CSS is timely sanctioned and released. The gap in demand and sanction under CSS ranges from 20-40% The allocated funds are utilized efficiently on time.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important	Good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

objectives. Generally funds released with not much delay and mostly utilized.				Tiger Conservation Foundation (TCF) funds: The TR also uses TCF funds for management and development activities. Year wise sanction and utilization of TCF fund is given below; 2014-15 Sanctioned – Rs.1.51 crore Utilized –Rs. 1.31 crore 2015-16 Sanctioned – Rs. 2.20 crore Utilized – Rs. 1.40 crore 2016-17 Sanctioned - Rs. 2.17 crore Utilized - Rs. 1.75 crore Average underutilization of the sanctioned amount during the period (2014-2017) was about 23%.
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Records provided by PTR	Release of state's grant is delayed by a few months. In the last three years the Tigers Reserve received following allocations from various sources. State Plan: Received and Utilized – Rs. 262.27 crore District Plan: Received and utilized Rs. 462.24 crore. The funds from the above two Plan sources increased manifolds in 2016-17. From the State CAMPA the TR received- Rs. 89.37 crore (expenditure Rs. 74.44 crore); from Tiger Conservation Foundation Received- Rs.5.89 crore (utilized Rs. 5.47 crore), Under Non-Plan (maintenance of Assets)– the PTR received Rs. 11.14 crore and used Rs. 10.44 crore during 2014-17. Over all the allocation from the State sources is just adequate.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Records provided by PTR, Interaction with TR officials	The NGOs are providing support mainly in kind. Strengthening of Patrolling Camps; vehicles for protection; equipment for research and monitoring are the key areas benefitted from such contributions. The TR Management systematically seeks these resources. Skill training to villagers are done by NGOs on payment basis. Livelihood and awareness interventions are also done by some NGOs. Monitoring of tiger and co-predators and support for protection activities are also supported by NGOs. Key NGOs supporting the TR without any cost are – WCT, Satpura Foundation, WWF, and WPSI. NGOs supporting on payment basis are - PRATHAM, Montfort, CK Lac etc. A total of 756 village youth and women have been trained in vocational skills out of which 716 got placement in respective sectors. At present youngsters - both girls and boys from the buffer zone of other tiger reserves of the state are undergoing training at Sillari centre.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good	✓		

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Records provided by PTR and discussion with TR managers	Currently, only the Field Director of the TR has done Diploma course from WII. Short courses on various aspects of wildlife management are organized for the personnel of PTR from time to time. In the past three years, seven training programs have been organized. The topics included – biodiversity education and research, site security, meadow development, wildlife crime prevention, drone handling and photography, MSTRIPES, and Tiger Monitoring. 31 officers (ACFs and RFOs) trained in the above-mentioned training programmes. More skill oriented hands on trainings for forest guards and watchers must be organized especially on detection and prevention of wildlife crime, crime scene protocol, collection of forensic evidence, investigation of wildlife crime, reading signs and evidences of wildlife etc.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Interaction with FD, Deputy Director and Range officers	The TR management uses the staff with specific skills for different kinds of fieldwork. Range Officers and FD assigns the works as per the skill and interest of the staff.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good	✓		

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Interaction with TR Managers. Visit to EDCs and interaction with villagers and EDC functionaries especially Ghatpendri.	Owing to the recent interventions in the villages, the attitude of villagers in some villages towards the PTR is changing for better, but there are many villages still not very happy with the reserve. Recurrent and increasing fire incidents indicate an undercurrent of hostility. The EDCs are involved in forest protection and fire control. The EDCs recommend villagers for involving them in the protection work; these villagers are employed as protection workers after police verification. NGOs (WCT and Satpura Foundation) also help in protection during Holi and Pola festivals. WCT helps in computerized analysis of M-stripes data sheet submitted by the Beat guards. Volunteers are also involved in water hole census on Buddha Purnima. About 100 members of Friends of Tiger (Vyaghra Mitra Mandal) of 7-8 villages are associated with the TR management.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGIs in population estimation may be taken into account)

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Verbal feedback from the FD and Deputy FD of PTR.	There is provision of inviting suggestions and registering complaints on the website of the Tiger Reserve. 'Hello Forest (1926)' – is a call centre where complaints are lodged. Most of the complaints are resolved at RFO level. The TR also receives complaints through the State Government's online channel. The TR addresses the complaints within the stipulated time –frame (48 hours). It also maintains a Complaints Register. However, there is no detailed description of the disposal of the complaints in the register.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	✓		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Documents provided by the TR Management.	The TR management has started vocational training programs for women in the villages dependent on the tiger reserve. During 2013-14 to 2016-17, the TR Management has organized Livelihood training programs for more than 1000 villagers, out of which about 30% were women. The training modules included – hospitality, lac bangle making, beautician, tailoring, driving etc.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

*The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Documents provided by the TR management and field visits to the partially vacated village	There is just one village in the original core area. The relocation of the village was planned after obtaining the consent of the villagers and Gram Sabha. A part of the village Fuljhari has been
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good		site and relocation site.	relocated. The families, who were ready for relocation, selected the rehabilitation site. They opted for the Option 1 (Rs. 10 Lakh per family). However, the government provided them a piece of land for house construction, which is not a part of the original package. The TR authorities are in constant touch with the rehabilitated villagers and help them as and when required. Now, with the inclusion of Mansingh Deo Sanctuary in the core/critical habitat, fresh efforts will have to be made to relocate the villages in the sanctuary.
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***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Interaction with FD and visit to Websites	The TR has a website (www.mahapenchtiger.com) on which mainly tourism related information is uploaded. The TR has also a link on Maharashtra FD website (www.mahaforest.gov.in) where some general information of public interest is uploaded.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Interaction with FD and Dy. CF, Visit to Sillari and Kolitmara tourist camps. Visitors' Book.	The Tiger Reserve has three main visitor centres – Sillari, Kolitmara, and Nangalbadi. The visitor's facilities at Kolitmara and Nangawadi are adequate but the campus needs some landscaping and better maintenance. Nature Interpretation Centre (NIC) at Sillari is attractive. As there is no mechanism to collect visitors' feedback in the NIC, it
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				is not possible to comment on the effectiveness of the interpretation centre in creating awareness and change the attitude of visitors towards conservation and welfare of wildlife. Forty four double-bed rooms are available to accommodate the visitors at the three tourist centers. There are several categories of rooms. Public utility areas have been provided at 4 places. Drinking water is available at all the sites. Visitors' book is maintained at the gates. The visitors have general complaint about the rude behavior of guides and bad condition of safari vehicles. The TR management is making efforts to improve the same.
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***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Documents provided by the TR Management. Discussion with FD	TR management is implementing GPS based patrolling and M-STriPES software for analysis of manually filled observation sheets. This helps in decision making on deployment of resources and monitoring of tigers on day to day basis. Phase – IV monitoring is done since 2015. However, prey monitoring data has not been analyzed so far, therefore, results are not available. Fire monitoring is done on regular basis but there is some lacuna as is apparent from the fact that no alert was ever raised when three tigers went missing in the last three years, Their absence became known when the suspects of the latest tiger poaching case confessed to have killed 3 tigers in last three years.. The TR Foundation has employed a veterinarian who
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				monitors the health of wild animals. Regular immunization of livestock is done. Vegetation monitoring plot has been laid in the TR by DFO (Research) based at Nagpur. However, the results of vegetation monitoring has not been shared with the TR management. , so far.
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***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Document submitted by TR Management	There is systematic schedule of maintenance of infrastructure and assets of the tiger reserve. 25% of the assets are maintained on yearly basis.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good	✓		

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Documents provided by TR Management	Phase IV monitoring data collected on co-predators and prey since 2015 has not been analysed so far. Data of waterhole count indicates that the populations of Leopard, Wolf and Wild dog are stable. Data on other Endangered species such as Pangolin and vultures are not available.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Phase IV report on Tiger Monitoring and AITM 2014 report.	Population density of tiger has increased in the last 2 years (2014: tiger density 2.89 tigers /100 sq km; 2016: 5.14 tigers / 100 sq km)
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good	✓		

***This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.**

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Documents provided by TR Management and interaction with TR Management.	Illicit felling has reduced, incidence of fire has increased, Grazing pressure has increased, encroachment has increased., poaching has increased, as the latest case of tiger poaching revealed three previous tiger poaching cases. The threats are being addressed. However, the protection machinery has been strengthened in past years, a week informer system and poor use of tiger monitoring data in informed protection strategy is taking toll of tigers in the reserve. The increase in illegal activities by villagers, hopefully would subside as the recently launched livelihood and crop protection measures take root in the coming years.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		TCP for Eco-tourism and visit of Kolutmara and Sillari tourist complexes.	The TR has a Eco-Tourism Plan, according to which 10.46% area of Pench TR is open for regulated tourism. About 3% area of the core zone is under eco-tourism zone, however, the calculation is based on the 45 meter width on both the sides of the roads used for tourism purpose. There is a list of Do's and Don'ts for the tourists. Carrying capacity of the vehicles has been calculated, and 100 vehicles are allowed per day in the core zone. The bookings are made online. Nature Interpretation Centers (NIC) are at Sillari and Kolutmara. The NIC at Kolutmara needs to be maintained and monitored to make them more effective in communicating the conservation message to tourists.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good	✓		
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

***Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Field visit of the evaluation team	Eco-development microplans have been prepared only in 50% of the 44 buffer villages in which EDCs constituted. The villages where eco-development initiatives have been taken are thawing up and show support for the PA management. However, some villages, especially the fisher community dominant villages or those where eco-development works have not started are still hostile. Solar power fencing for crop protection against depredation by wild animals is still not popular among villagers. A lot of effort would be needed to bring about change of attitude in farmers through awareness creation. Villagers' exposure trips to the buffer villages of Tadoba Andhari Tiger Reserve where solar fences are an effective intervention for reducing crop depredation by wild animals,
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	40	Total MEE Score: 245 (76.6%)
2.	Planning	07	10	70	52.5	
3.	Inputs	05	10	50	45	
4.	Process	06	10	60	42.5	
5.	Outputs	04	10	40	27.5	
6.	Outcomes	05	10	50	37.5	
Total		32		320	245	

*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.

5. Sahyadri Tiger Reserve, Maharashtra

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		TCP of Core Zone	The tiger reserve is carved out along the Crest of North Sahyadri Range of the Western Ghats. It forms the catchment of Warna reservoir and Koyana Reservoir. It is a home of many threatened flora and fauna. Sahyadri. The tree giants like <i>Harpulia arborea</i> , <i>Scolopia crenata</i> and <i>Turpinia malabarica</i> are conspicuous in the TR. Tiger, leopard, wild dog, leopard cat, and rusty-spotted cat are key carnivores. Forty one species of snakes, 9 species of Geckos have been documented. Four-horned antelope, mouse deer and barking deer are important ungulate species in the TR. Indian giant squirrel, stripe necked mongoose and brown palm civet are common in the area. Sites of historical importance – mainly forts such as Vasota, Bahirgad, Mahimangad and Jangali Jaigad are integral part of the tiger reserve. Values have been documented but their assessment and monitoring have not been done systematically.
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		TCP of the Core and Buffer Area; field observations	The TCP identifies poaching, illicit fishing, grazing by the cattle from the villages still inside the TR and presence of the feral cattle as threats to the TR. Wind mills in Chalakevadi plateau area also cause disturbance to wildlife. Bauxite mining, road widening and establishment of resorts and tourism infrastructure in the buffer between Koyana and Chandoli as well as bauxite mining and ongoing rubber plantations in the corridor area pose serious threats. Establishments of resorts and water sports in the forest and water areas under private ownership would lead to fragmentation of the forests inside the TR and it would adversely impact the functionality of the buffer zone. Carving out 14 villages in the south western part
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				of Koyana sanctuary from the CTH, by realigning the boundary of the core, may permanently vitiate the connectivity between the two units of the tiger reserve. The forested areas around Navja village particularly needs complete protection.
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***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference* ?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		TCP of Core Area and documents provided by the TR. Field observations. Interaction with staff and villagers	There were 35 villages in the Koyana WLS and Chandoli NP. Of these, 28 villages have been relocated in different phases since 1995-96. Currently, there are seven villages inside the Core area of the TR. Anthropogenic pressure from the villages on the fringe of the Core Area has been mitigated by enhanced protection over last one year. The committee did not see signs of over grazing, lopping, and tree felling in areas visited within the CTH. There are 568 families residing in the villages in the Core Area. These villages exert biotic pressure on the reserve. These villages are to be relocated to create inviolate space for wildlife. No encroachments or FRA cases are reported in the TR.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Documents provided by the TR management.	Core and Buffer areas of the TR have been notified on 21.8.2012 vide notification no. WLP-2012/CR.NO.240/F-1. Tiger Foundation constituted on 21.1.2012 and the last meeting was held on 14.06.2017. State level steering committee has been re-constituted on 7.2.2013 (4 years' tenure expired) and its last meeting was held in 26.10.2016. Tiger Conservation Plan has been approved by the
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs	Good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

complied				NTCA on 25.10.2013 vide letter no. F.No.1-18/2013 NTCA.
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			The officers and staff have little awareness about the SoPs issued by NTCA.

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		Documents Provided by the TR	The Core and Buffer of the TR is under the unified control of the Field Director.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) *?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		TCP of Core and Buffer.	The TCP of Core, Buffer and Corridor has been prepared and approved by the NTCA on 25.10.2013 vide letter no. F.No.1-18/2013 NTCA.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Documents provided by the Tiger Reserve. Field observations, interaction with staff.	<p>The tiger reserve has established 34 protection camps in each beat, manned by a forest guard and two daily wagers. The camps are equipped with GPS device, PDA and wireless sets. For monitoring and patrolling Hejje software is used. The staff is being oriented for wildlife monitoring. There are 14 check posts. Monsoon and night patrolling is done. Special patrolling is also organized. But the committee observed that the field staff is not used to staying in the camps. Camp facilities and equipment provided to them is also inadequate. Several camps, especially in Chandoli are temporary. Wireless network is not very effective, Efforts are on to establish more base and repeater stations.</p> <p>Apparently very little managerial inputs had gone into consolidating the tiger reserve so far. The committee felt that good initiatives towards protecting the TR, improving habitat and livelihood and ecotourism have just started.</p> <p>The absence of buffer zone along the western boundary makes the wildlife vulnerable to extraneous threats.</p> <p>To take safeguard against forest fire, Fire Management plan is prepared on yearly basis. A total of length of fire line in core (425 km) and buffer (140 km) is maintained during the fire season.</p> <p>There are 14 watch towers for surveillance during fire season. Fire watchers are deployed in group of four for six months during fire season. In the last three years, though the number of incidences of fire has increased but the area burnt has gone down.</p> <p>To reduce villagers' dependence on the TR resources livelihood improvement measures are have just begun. In the last one year some livelihood training programs (paper and cloth bag making) have been organized, altogether 197 trainees have participated in the programs.</p>
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		TCPs of Core and Buffer; Documents provided by TR management; Interaction with TR management.	Some stakeholders such as few NGOs and journalists were consulted. Meetings of officers were also held on several occasions. Micro-plans have been prepared for 41 EDCs in consultation with the EDC members and villagers and district level government departments.
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		TCPs of Core and Buffer; Field Visit; Interaction with TR Managers	Key habitat improvement interventions in the last three years include; Meadow development: 666 ha Unwanted species removal: 315 ha Water holes have also been developed and improved. These habitat improvement interventions are done on ad-hoc basis. These are not being monitored systematically. No plan is in place for special and unique habitats inside the TR. The buffer that connects two units of the TR is under threat due to development of tourism infrastructure and proposed widening of road.
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.5 Does the TR has an effective Protection Strategy (PS)+ and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Documents provided by TR management. TCP of Core and Buffer. Field visits, camp visits and interaction with staff.	A Security Plan is included in the TCP, but this is not comprehensive. Currently, a protection strategy is in place. The TR has submitted a proposal for deployment of STPF for protection inside the TR. The tiger reserve prepares annual plan for protection of the area. There are 34 protection camps, each one manned by 2 daily wagers and a beat guard. Average size of the beat is 15 sq km. GPS based patrolling using Hejje Android App is done. The collected data is analyzed on monthly basis at Dy. Director's office. Following offences have been booked during 2014-17: 2014-15: (Poaching – 2; tree felling-1; Fire: 12) 2015-16: (Poaching – 0; tree felling – 2; Fire: 11) 2016-17: (Poaching- 3; tree felling – 1; Fire: 21) During the period, 64 offences were booked. Information network has been developed at Range Level to ensure protection.
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Records provided by the TR management.	Human-wildlife conflict cases are summarized below; No. of Human casualties: 2014-15: 1 due to Gaur 2015-16: 1 due to S. bear 2016-17: 1 case of injury Rs. 908750 were paid as compensation amount to the sufferer families. No. of Compensation for cattle 2014-15: 02 2015-16: 10 2016-17: 16 About Rs.2.50 lakh was given as compensation No. of crop damage cases:
TR has been able to mitigate few human-wildlife conflicts.	Fair	✓		
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>2014-15: 5 cases 2015-16: 29 cases 2016-17: 120 cases Total amount paid as compensation for crop damage was Rs. 4.89 lakh. The compensation amount is paid timely. Plan to provide solar fences to the farmers and constitution of Rescue Team is underway. Solar street lights have been provided in all the villages to deter wild animals during evening hours. There is no retaliatory killing of wild animals by villagers. The tiger reserve lacks a trained and equipped rescue team.</p>
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*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Field visits; TCP for Buffer. ; Map of the landscape, Field visits	The Forest in and around STR is connected to the forests of Satara division on the North and north- east; Ratnagiri division on the west; and with Sangli and Kolhapur divisions in the south and south-east. On the northern side, the connectivity extends up to Bhima Shankar WLS in Pune district. The southern boundary of the STR continues up to Radhanagari WLS (Kolhapur Division) at the southern end of Sahyadri range in the Western Ghats. Thus, STR forms the vital link between the northern and southern part of the Western Ghat Tiger Landscape. In the southern side the landscape is connected with the Kali Tiger Reserve in Karnataka through Tilari forest area of Kolhapur division. The Tilari forest area presently harbors few breeding tigers hence it would be wise to establish a sanctuary here. Two units of the TR (Koyana WLS and Chandoli NP) are connected through a buffer zone having private forest land, where infrastructure development for tourism has already begun The State Highway 76 passing through this part of the tiger reserve is being upgraded to a National Highway. The work has already commenced just outside the buffer boundary.
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				Carving out the areas consisting of 14 villages in Navaja will seriously damage the connectivity between the two units of the tiger reserve as there is all possibility that once these villages are outside the notified PA several incompatible development activity, especially resorts will come up on these lands. Eco-development activities and plantation activities is underway in the area, but these are no dedicated plans for protection of the corridor.
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***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Records provided by the TR and interaction with TR managers	Managerial staff: 4 from CCF to ACF. Frontline staff: Ranger 7 (2 vacant); Round Officer/Forester: 18 (4 vacant); Forest Guard: 72 (3 vacant). Daily wager: 20
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			Apart from these, 116 temporary daily wage workers are posted. Staff strength is insufficient keeping in view the tough terrain and geography.
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		Average Age of the staff: ACF: 51 yrs Range Officers: 50 years Round Officer: 51 Years Forest Guards: 31 years
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			There are only two permanent secretarial staff in the Dy. Director's office, rest of the staff are on contract. Beat sizes are very large and hence reorganization of beats and ranges must be done at the earliest and more guards should be provided. At present resources are inadequate to manage this tiger reserve effectively.

***This assessment should inter-alia be based on number of personnel allocated for attainment of R objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Records provided by STR and feedback from TR officials. Field visits	<p>Building: There are 5 forest guard quarters, 2 forester quarters, 1 RFO quarter and 5 range office buildings, 1 souvenir shop. Check posts: 14 Protection huts: 34 There is shortage of staff quarter and protection camps as well. There are no roads to access the interior areas of Koyana part and the condition of roads in Chandoli part is miserable. This is a serious impediment as precious time is wasted in travelling from one place to another. There is no inspection hut in the TR. More residential accommodations are needed for the frontline staff.</p> <p>Vehicles: There are 19 four wheeler vehicles, 9 two wheeler vehicles and 10 boats and launches.</p> <p>Communication equipment: Hand-set: 45, Base station 27, Repeater station: 5, mobile set – 8; PDA- 45; Range finder - 22, Compass – 23. All beat guards have GPS device. Digital cameras are made available to a few guards. In Chandoli all camps have been provided with LPG. The camps and staff need to be strengthened and equipped further.</p>
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair	✓		
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

**These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		NTCA Grant Sanction letters, records provided by the TR Management.	<p>CSS Grant The grant proposed, sanctioned and released under CSS from NTCA, and utilization by the tiger reserve over the last two years is as follows; 2015-16: Proposed in APO Rs.301 lakh, Sanctioned Rs. 198.24 lakh, Released 113.94 lakh, Utilized Rs. 113.94 lakh; 2016-17: Proposed in APO Rs.692.94 lakh, Sanctioned Rs. 469.63 lakh, released Rs.</p>
Some specific allocation for management of priority action. Funds are	Fair			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

inadequate and there is some delay in release, partially utilized.			257.17 lakh, Utilized Rs. 257.17 lakh There is delay in sanction and release of the CSS grant. In general the sanction comes during September – October. The allocated funds are utilized efficiently on time. Tiger Conservation Foundation (TCF) funds: The TR also uses TCF funds for management and development activities. Year wise sanction and utilization of TCF fund is given below; 2014-15 Utilized –Rs. 9.08 lakh 2015-16 Utilized – Rs. 165.02 lakh 2016-17 Utilized - Rs. 257.60 lakh In 2014-15, Rs. 33 Crores was fined from wind mills and deposited in the TCF.
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	√	
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good		

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Records provided by the TR	State Plan: 2015-16: Sanctioned and utilized Rs. 470.42 Lakh 2016-17: Sanctioned and utilized Rs. 1129.40 lakh District Plan: 2015-16: Received and utilized Rs. 280.14 Lakh. 2016-17: Received and utilized Rs. 181.19 Lakh. State CAMPA 2015-16: Sanctioned: Rs. 54 lakh / Expenditure: Rs. 53.50 lakh 2016-17: Sanctioned: Rs. 298.88 lakh / Expenditure: Rs. 272.20 lakh Over all allocations from the state sources are adequate.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	√		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Records provided by the TR	Many NGOs such as WRCS, Koyana; WCT, Mumbai; Planet Earth Foundation, Sangli; IUCN; Creative Nature Friends, Karad; WWF; Pugmark Art Gallery, Kolhapur; Individuals; Doctors' Association, Satara; and Rotary club, Kolhapur are working on various issues like corridor restoration, livelihood training, development of m-Stripes protocol, organizing health camps for staff, awareness creation activities, conservation strategies for rare, endangered and threatened wildlife of Sahyadri TR, Medical kits and uniform for staff are also provided by NGOs. There is a need though to institutionalize the NGO support by providing a platform for regular meetings and discussions. This will help reducing duplication of efforts and bring in planned and systematic support in various fields where NGO support may be critical.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Documents provided by TR managers	The Current Field Director and Deputy Director of the TR has done Diploma course from WII. One trained Range Officer (WII Certificate Course) has been transferred recently. Following short courses have also been organized by the TR in the last 3 years. Bird watching: 65 participants VEDC Accounting: 20 FG Snake handling: 2 FG Immobilization: 73 participants Personality Dev.: 20 FG Wildlife Crime Handling: 2 Foresters GPS/ Transect Line: 79 personnel Eco-tourism guide: 30 guides Hejje: 21 + 16 (2 batches) Crime Investigation: 44 One-day workshop to frontline staff on various topics: 35 Monitoring and evaluation of World Heritage Site: 62 Forest Fire Control: 10 Guide training : 24
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Interaction with TR Managers	The TR management uses the staff with specific skills for different kinds of fieldwork. Range Officers and FD assigns the works as per the skill and interest of the staff.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Interaction with TR Managers. Interaction with villagers	The EDCs are involved in forest protection and fire control. Volunteers are also involved in water hole census on Buddha Purnima. About 30-35 volunteers participate in the Water hole count. NGOs and NGIs are involved in different management and staff welfare activities.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGIs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Interaction with Deputy Director of STR.	There is provision of inviting suggestions and registering complaints on the website of the Tiger Reserve. 'Hello Forest (1926)' – is a call centre where complaints are lodged. But, the complaints related to the Sahyadri Tiger Reserve is forwarded to territorial division, from where the TR receives the complaint. The DD office also maintains a Complaint Register and the complaints are redressed through the concerned forest ranges. During 2015-18 (till January
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	✓		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

			<p>2018), a total of six complaints were received and forwarded to concerned officials. However, the records of such cases is not maintained and information regarding action taken is not sent back to the complainant A complaint register is also maintained at Forest Range Office and a redressal mechanism is in place. The complaint is sent to the concerned official / staff.</p> <p>TR also receives complaints through the State Government's online channel.</p>
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***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Documents provided by the TR Management, Field visit by the MEE Team. Interactions with beneficiaries	The TR management has recently begun livelihood improvement training programs for women in the villages dependent on the tiger reserve. Two persons- a Sociologist and a Livelihood Expert have been employed from the TCF funds. A master trainer is deployed to motivate and train the women to come forward for participation in Livelihood Improvement Program. From 2016-17 onward a minimum of 15 villages have been covered under the program. The training program included – paper bag making, office stationary training, cloth bag training, and rucksack making training to women. Organic farming training, hospitality training and nature guide training, bee keeping and honey collection training etc are being provided to men strata of the villages. Vermicompost and vermiwash are being produced by giving 45 bed to the villagers with supports of Organics India. It is planned to train the villagers in honey processing. Focus has been given on
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>hands-on training. Sewing machines have been provided and a workshop has been established.</p> <p>Initiatives have been made to link the production with marketing of the products created by the women groups. Currently, the TR authorities have got an order to provide 10000 paper bags per month by Mahabaleshwar Nagar Parishad. Local market has also been tapped to sell the products. A local garment shop has also ordered for cloth bags. A local garment shop has also ordered for women garments, which is being done by 50 women. Around 40 women are involved in paper and cloth bag making activity. These products are also sold at the souvenir shop established by the TR at Bambnoli.</p> <p>These activities are covered from Dr. Shyama Prasad Mukherjee Jan-Van Yojna.</p>
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*The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Documents provided by the TR management and field visits to the partially vacated village site and relocation site.	<p>In the last 20 years 28 villages have been relocated from Koyana WLS and Chandoli NP.</p> <p>Number of relocated villages and families:</p> <p>1997: 4 villages, 214 families; 1998: 13 villages, 773 families; 1999: 2 villages, 216 families)</p> <p>In the last 3 years, 9 villages (2014-15: 4 villages; 2015-16: 5 villages) have been relocated from the TR.</p> <p>There are seven villages in the Core Area. The villagers have seen the land on which relocation could happen. But, their consent is awaited. The MEE team visited a relocation site Babar Machhi and interacted with the relocated</p>
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>families. The villagers were found generally happy and satisfied with the relocation work and the facilities at the new village site. The only issue they have today is the absence of irrigation facility.</p> <p>The responsibility of implementation of rehabilitation of village is coordinated by DCF, District Rehabilitation Officer and Executive Officer in the district where the villages are relocated. CAMPA and other funds are also used in relocation and rehabilitation. Due to involvement of many agencies there is confusion among these functionaries.</p> <p>The ACF of the division from where the village is relocated co-ordinates the hand-holding and grievance redressal.</p>
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***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Interaction with TR Officials and visit to Websites	There is a website of Kolhapur Forest Division (www.kolhapurwildlifedivision.org.in) on which information related Sahyadri TR, PA in Kolhapur WLD etc are available. An android based application has been developed (Bhramanthi app) for online booking and feedback system on Sahyadri TR. The TR related general information of public interest is also available on Maharashtra government Forest Department (www.mahaforest.gov.in). The TR has also a Facebook page.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Interaction with FD and Dy. CF, Field Visits to Chandoli and Koyana.	The Tiger Reserve has five entry gates – Koyana, Bambnoli, Chandoli, Helwak, and Dhebawadi. Souvenir shop, changing room and toilet facility is at Koyana. At Bambnoli, souvenir shop is provided for the visitors. At Chandoli, Nature Interpretation Centre and youth hostel (dormitory) are provided. There is no facility at other two entry gates. Tourism in Koyana mainly consists of trekking while at Chandoli wildlife safaris are organized. We saw garbage strewn along the edge of the reservoir at Bamnoli. The MEE team was informed that provision of Drinking water and ATM is planned.. Visitors' book is maintained at Bambnoli, Chandoli and Koyana gates. To manage garbage in the TR, recently, a system has been introduced to provide a rucksack to carry their plastic material and garbage to the visitors on deposit of Rs. 200 (mandatory), and Rs. 180 is returned to the visitors after they return the rucksack. A plastic crushing machine will be installed soon to get rid of littering of plastic bottles. A Coffee Table Book has been produced for Kolhapur FD. A book entitled Biodiversity of STR has been published and a six monthly magazine 'Sahyadri Varta' is also published from the TCF fund.
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

::100::

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Documents provided by the TR Management. Discussion with DD	TR management is implementing GPS based patrolling using Hejje application. This helps in decision making on deployment of resources and monitoring of tigers on day to day basis. Phase – IV monitoring is done in summer since 2014-15. Prey data has been analyzed, but no particular trend of prey has been recorded. An Ecologist has been employed since 2015-16. He trained the staff in camera trapping, GPS training, line transect sampling, Phase IV monitoring etc. Veterinary Department vaccinates the cattle, but the TR is not monitoring it. Impacts of Habitat interventions, water availability in pinch period, impacts of eco-development (livelihood interventions) and awareness programmes are not monitored systematically. Proper inventory of biodiversity, monitoring of unique and special habitats is lacking.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Document provided by TR Management	Systematic schedule of maintenance of infrastructure and assets of the tiger reserve has been started from 2016-17. An engineer has been employed for preparation of estimates and
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				supervision of the works. The TR seeks fund from District Plan for maintenance of various assets.
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6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor	✓	Documents provided by TR Management	Phase IV monitoring data collected on co-predators and prey since 2015 has not been analysed so far. Data of waterhole count indicates that the populations of Leopard, Wolf and Wild dog are stable. Data on other Endangered species such as Pangolin and vultures are not available.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor	✓	Interaction with TR managers; monitoring reports	No evidence of tiger presence has been recorded in the last three years.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Documents provided by TR and field visit of the MEE team.	The frontline staff have started residing in the protection camps recently, hence the protection has improved. Illegal entrants were apprehended on the basis of camera trap photographs and it resulted into conviction of the offenders. Signs of grazing, lopping and illicit felling were not recorded by the MEE team . There are about 15000 cattle in the buffer areas, but due to presence of staff grazing of these cattle Has been curbed effectively in the interior areas of the CTH. To reduce the dependence of the villagers on the TR for firewood, LPG connections have been provided to 1388 families in 40 villages in the buffer villages. In the recent years relationship of some buffer villages, has improved owing to constant efforts of the TR managers and initiation of livelihood interventions. There is no Disaster Risk Management Plan, the threats are being addressed through various thematic plans prepared and updated from time to time.
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		Field visit of the MEE team; documents provided by the TR authorities	Tourism consists mainly of boating and trekking, in Koyana and safaris in Chandoli. Seasonal influx of visitor happens during monsoon. So far, there has been no attempt to determine carrying capacity for various tourist activities nor there is any attempt to monitor impacts of tourism or gather feedback. At Bamnoli boats are equipped with necessary protective gear. The Boat operators from several villages, who were operating
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair	✓		
Tourism management plan is good and well monitored.	Good			
Tourism management plan is good and well monitored with innovative	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

ways of engaging and educating tourists.				their boats individually, have been organised with the efforts of the management. Garbage is an issue but plans are underway to manage garbage at tourist sites. A Plan is underway to develop ecotourism with the participation of local villagers in Bamnoli and Ambawdi in the north-eastern buffer of Koyna and at Zhamboli entry point of Chandoli area. There is no interpretation at present. A Souvenir shop at Bamnoli was started last year. Villagers in Bamnoli and Ambawdi were quite happy with the new initiatives. So far there has been no attempt to determine carrying capacity for various tourist activities.
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**Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism*

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Field visit of the evaluation team	Few of the adjoining villages provide support to the TR management in controlling fire incidences. Sometimes they also provide information regarding poaching.
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	32.5	Total MEE Score: 192.5 (60.2%)
2.	Planning	07	10	70	42.5	
3.	Inputs	05	10	50	35	
4.	Process	06	10	60	40	
5.	Outputs	04	10	40	22.5	
6.	Outcomes	05	10	50	20	
Total		32		320	192.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

6. Tadoba-Andhari Tiger Reserve, Maharashtra

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		TCP of Core Zone	The values of the tiger reserve are well-documented in the TCP and include biological, historical, catchment; recreational and educational values.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		TCP of Core and Buffer Zones	The threats are primarily in the buffer zone of the reserve. Threats include Illicit removal bamboo, firewood and timber, grazing, poaching, fire, road kills scarcity of water in some areas, etc. However, the threats are not properly assessed, quantified and mapped. Potential threats are the proposed dam on Human river on the North-east boundary of the buffer that would submerge some parts of the buffer thus hampering free movement of tigers to the Nagziira corridor. The spread of Prosopis planted on the overburden of open-cast coal mine may destroy native vegetation of TATR in the long run, The dust pollution from the coal mine on the north western side, which is likely to be expanded, might have already polluted the air and affected the water-bodies and adversely impacted the health of animals as well as staff working in the area.
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.3 Is the 'Core Area' of TR free from human and biotic interference* ?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		TCP of Core Zone, Field visit and interaction with the Reserve Managers	There were 6 villages within the core area, of which three have been completely relocated. Half of the households in the village Kolsa has also been relocated. As on date there are about 400 families residing in the core area along with their cattle. These existing human and cattle population exert pressure of the core. Cattle grazing is prominent in the forests around the existing villages. Villagers are dependent on the core area of the reserve. for firewood and bamboo, and seasonal collection of mahua, wild vegetable etc.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Documents provided by the TR. And interaction with range officers and Acfs in the field.	The TCP is approved by the NTCA. The Core and Buffer areas have been notified, Tiger Foundation has been constituted – with two bodies (Executive and Governing body). The recent meeting of the governing council was held in April 2017. One tigress straying out incident happened (in 2015) in Gorda village on the fringe of the TR and this animal was rescued and released back into the wild. In 2016 a tigress was captured in Shivni Range, it was rescued and sent to Gorewada Zoo. The same tigress had earlier killed 3 persons in the Range. Tiger depredation on livestock is common. The relevant safeguards to protect tigers given in the SOP have also been included in the Government Resolution on Cattle kill compensation (latest in 2015). 39 cases of human injury and 13 cases of human deaths have occurred from 2012-13 to 2016-17. This indicates growing human-tiger conflict in TATR. The SoPs on various aspects of protection and management of tigers are being followed by the officers and staff.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	✓		

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v)**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		Buffer Notification and Govt. Resolution	The Buffer area was brought under unified control of the Field Director in 2012. The FD has full control on the administrative and financial matters.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		TCP of Core and Buffer	The original TCP was written for the period of 2008-09 to 2017-18. The TCP Review committee of NTCA recommended mid-term review of the plan and instructed to incorporate the issues highlighted by the MEE-TR Report 2010, and Tiger estimation report of 2010. In view of this, the plan was revised but it is not only a revision as the period of implementation has been extended up to 2025-26. Hence, most data used in the TCP is almost 10 years old. Data has not been analyzed for giving appropriate prescriptions on various aspects of TR management.
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Interaction with TR managers, STPF, Frontline Staff, Field Visit, and review of Working Plan of	There is a list provided in the TCP on endangered and threatened species of the tiger reserve, but this list needs rechecking with the current IUCN Red data book. The important species of mammals that are present in the area other than tiger and
TR safeguards a few threatened biodiversity values.	Fair			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

TR safeguards a large number of threatened biodiversity values.	Good	√	the buffer area.	leopard are – wild dog, sloth bear, pangolin. No specific intervention have been planned or implemented specifically addressing these species. But the overall efforts to protect the TR habitats takes care of these species too. Efforts include regulating cattle grazing by issuing permits for Cattle grazing in the Buffer, there is a system in place for grazing in identified compartments. Nominal fee is charged. Forest Development Corporation Maharashtra carries out fire prevention and control in the Core, and in the Buffer the tiger reserve management does it with the active involvement of EDCs. Compensation for crop depredation is paid within the prescribed time limit. To gain public support subsidized solar fences have been provided to about 1600 farmers in buffer villages. Beneficiary of this scheme is not eligible for compensation for crop damage. 420 Open wells have been secured with parapet walls. 344 ha land in core (only in PF) and buffer has been given handed over to local claimants under FRA. STPF has been deployed for protection of the TR since 2012. Staff using PDA through “Hezze” application to monitor the beats of the TR. To reduce fuel wood dependency, all the (21000) families residing in the buffer zone have been provided with LPG connection. 23 villages are heavily dependent on the TR for bamboo. To reduce their dependency, provision of “Village Forest” has been implemented in the buffer and extraction of bamboo as per the approved Working Plan and value addition is in practice.
TR safeguards all threatened biodiversity values.	Very good			

**Remarks need to elaborate on the kind of safeguards and how they work or are intended to work*

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Field visit, micro plan, proceeding of LAC meetings, TCP	Recommendations of Multi-stakeholder LAC (that has people’s representative, NGOs, etc as members) have been incorporated in the eco-tourism plan. Inputs of 11 NGOs members, 1 Researcher, and officials of FDCM etc were incorporated in of the TCP of the Core. In the Buffer zone planning process inputs from Villagers were taken through questionnaire survey (including their comments and suggestions) 92 EDCs were surveyed. The microplans are being implemented by the EDCs themselves. During field visits we observed that the livelihood improvement activities are being implemented in collaboration with
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	√		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

				the EDCs. Other activities (such as LPG connection, Electric fencing of agricultural fields) are also done by involving the EDCs.
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*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Field visit, review of TCP and EDC Microplan, Interaction with PA managers.	Water bodies have been identified and mapped. 86 waterholes are in the Buffer and 134 in the Core area. The thumb rule is to provide one perennial Water hole in 5 x 5 km grid. During the field visits, we observed that several water bodies have been desilted to increase their water holding capacity. In the Buffer, water management planning has been done up to beat level and included in the Microplans. Solar pumps have been installed (50 in the buffer and 44 in the core) and monitored. Scientific input has been taken from Prof. G. D. Muratkar for treatment of areas vacated after village relocation, to develop grasslands. However, systematic plan to treat and manage each site is required to be prepared. During our field visit the Botezari grassland was found to be infested with weeds and less used by wild herbivores due to the cattle pressure from the nearby Ramtalodhi village in the core. To develop grasslands the management is removing <i>Acacia nilotica</i> while retaining the fruit bearing zizyphus from evacuated sites. Eradication of weeds such as <i>Hyptis suaveolens</i> (locally called Bhutganja or Rantulasi) and Lantana etc has been prescribed in the TCP and the management is following this prescription. Identification of unique habitats has been done. The habitat management prescription are not explicit. Dens and caves that are mostly located in the northern part of the core are special habitat for several species. Locations of these special habitats have been marked on the map but it is not evident whether these sites are actively monitored.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

*This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as *Lantana sp.*, *Mikania sp.* etc. would be examined.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.5 Does the TR has an effective Protection Strategy (PS)+ and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Documents provided by the TR management;	The TR has prepared a Security Plan in 2015-16. The Security Audit has not been done so far. The security plan is relevant as well as effective to some extent. The informer (intelligence gathering) system is still weak and the utilization of the secret fund is not optimal. Over the period from 2013 to June 2017, 49 offenders have been arrested in 13 offence cases. Special Tiger Protection Force is in place. They are involved in protection of the Core and Buffer Zones. Monsoon patrolling is done. There are 3 captive elephants for this purpose. Monitoring is going on. Areas vulnerable to different types of offences are also mapped. For effective protection there are 84 wireless equipment - 14 fixed station and remaining are hand-sets,. All the wireless sets are available to the staff only in the Core zone. The staff have been provided with 16 nine mm pistol, 10 SLR, 4 12 bore rifle, and 0.315 rifles one). The RFOs (9), 5 ACFs and 2 DCFs have 9 mm pistol. Rest of the arms are kept in the safe custody of police armoury. There have been 45 wildlife offences recorded during 2013-14 to 2016-17. During 2014-16 to till date six tigers have died, of which two died in road accident, rest died in territorial fights. During the period 4 leopard died, to the causes of deaths have been ascribed to tiger attack, falling in a well, accidental electrocution and road hit. Investigations in the cases involving death of tigers and leopards the SOP is being followed and the reports have been submitted to the NTCA. Intelligence gathering and crime investigation skills need to be further honed up through hands on trainings
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Interaction with DD Core and Buffer; Documents provided by TR	From 2012-13 to 2016-1, there have been 2610 cases of cattle kill and 31 of cattle injury . Rs. 1,96,37,449 was paid as compensation to cattle owners. This indicates the importance of cattle as a
TR has been able to mitigate few human-	Fair			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

wildlife conflicts.			Management.	<p>supplementary prey for tigers in Tadoba.</p> <p>There were 13 Human deaths by wild animals. or which Rs.8000000 was paid as compensation. Cases of human injury were 39, for Rs. 2407359 compensation was paid. Crop damage cases were 2488 , for which Rs. 10330552 was paid towards compensation. To mitigate crop damage 1600 farmers have been provided with subsidized solar power fence,</p> <p>Timely payment of compensation is ensured as per the Right to Service Act of the State government. Compensation amount is revised regularly. In case of human death the amount is Rs. 8 lakh and for permanent disability it is Rs. 4 lakh. The protocol related to cattle kills given by the NTCA has been included in the GR. There is a mobile rescue squad in TR, besides a Rapid Response Unit of Chandrapur Division is also being used for wildlife rescue operations. The teams are equipped with medicine and tranquilizing guns. A veterinarian has been appointed on contract. Since 2013, 8 leopards were rescued (3 were rehabilitated, 4 were sent to the zoo, while one died of trauma and shock) During the same period Two tigers were rescued. District Tiger Cell (Chaired by the SP) helps in managing the conflict situations. The Cell organizes monthly meetings. Administration and Police cooperation is good during such situations. The Rescue centre established by Chandrapur Circle is also used by the TR authorities.</p>
TR has been able to mitigate many human-wildlife conflicts.	Good	√		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		TCP of Adjoining Area. Discussion with DD Core and Buffer	The TR has prepared a plan for adjoining areas. Wildlife Institute of India and WCT has identified following tiger. corridors: Tadoba-Nagzira-Navegaon; Tadoba-Umred Karandla; Tadoba-Chapralla-Indravati; and Tadoba-Bor; Tadoba-Kanargaon-Tipeshwar. Provision for water has been made in some corridors. The Forest department is implementing a project funded by the IUCN in Nagzira-Navegaon corridor, with the help of Wildlife Trust of India. The issues in the weak links of the
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	√		
TR is fully integrated into a wider network/	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

landscape.				<p>corridors are being addressed . The interventions include mitigation of Human-Wildlife conflict, reduction of dependence on forest resources, improvement of livelihoods , and awareness generation..</p> <p>The project aims at improving the forest cover and connectivity. Underpasses in NH6 in the Nagzira-Navegaon corridor have been planned by the NHA. In NH7 in Tadoba-Umred Karandala corridor and Pench (Maharashtra) work has been started to construct underpasses and over-bridges to facilitate safe movement of wild animals. There is no attempt to rationalize land-use around the TR.to make it compatible to tiger conservation.</p>
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***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use ‘Smart Green Infrastructure’?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Documents provided by TR Management. Deputy Director Buffer and Core.	Total Position: Forest Guard : 145 (10 vacant); Forest Guard STPF 81 (3 vacant); Forster: 39 (1 vacant); RFO: 12 (no vacancy); RFO STPF: 3 (No vacancy); ACF : 5 (2 vacant); Forest Watcher : 27 (3 vacant). Apart from permanent staff more than 300 daily wage staff are deployed at Patrolling Camps to assist the forest guards. These daily wage workers are nominated by the EDCs . There are 153 Van Mazoor on staff roll. Most of the field staff is young (especially among field guards the average age is 28 years) The management opined that despite the vacancy there is adequate number of personnel for protection. Altogether, more than 200 firewatchers are deployed seasonally during Fire Season i.e. 15 th Feb-15 th June.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a-vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Documents provided by TR management , Interaction with DD Core and Buffer.	The TR management has made a 5-year plan for maintenance of buildings and assets. The TR needs more buildings. It has 120 residential building, but, 77 (4 RoF+13 Forester + 60 Guard and Clerk) more residential quarters are required in buffer. There are 55 patrolling camps, Availability of equipment: PDA - 157; Trap cages -12; Tranquilizing Gun - 2 Camera trap - 735 GPS -118 Metal detector - 11 Adequate numbers of Range finders, digital camera: and binoculars are available. There are 38 vehicles in the TR.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

**These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided y the management. Interactions with DD Core and Buffer.	Under CSS; during 2014-15 to 2016-17 total grant sanctioned by the NTCA and utilized grant is as below 2014-15: Sanctioned - 622.49 lakh (Released: 540.35 lakh); Expenditure - 540.32 lakh; 2015-16: Sanctioned – 581.96 lakh (Released 465.57 lakh), Expenditure 465.57 lakh; 2016-17: Sanctioned – 1034.58 lakh (Released – 1034.58) Expenditure: 1032.44 Lakh. There is delay in sanction by NTCA and release by the state. Due to delay in sanction STPF are not paid the salary on time. There is gap of about 20-25% in the required amount and the sanctioned amount by NTCA.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.				
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*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is <i>ad hoc</i> , funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by the TR management.	In the past three years the TR has received adequate financial resources from the state under different schemes . In financial year 2014-15 to - 2016-17 TATR received following grants - State Plan (55.86 Crore, utilization 55.86 crore); State CAMPA (11.36 Crore, utilized 11.36 crore); District Plan (1.92 Crore, fully utilized); and Maharashtra Tiger Foundation (Rs.7.32 crore, Utilization Rs.7.32 crore). State Non-Plan (10.78 Crore, utilized Rs. 10.78 Crore)
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

*Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Document provided by the TR management. Interaction with DD Core and Buffer .	NGOs provide in kind support to the TR. Key contributors are WCT, Tata Motors, and State Bank of India. WCT supports in equipping the field camps, vehicles and rescue equipment, medical camps for staff are also organized. State Bank of India provided solar pumps. Eco-pro provides manpower support in conservation awareness activity. Satpuda Foundation has done works related to sanitation awareness, conservation awareness, health check-up etc. BNHS is helping in organizing Nature Camps for school students.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Documents provided by TR Management. DD Buffer.	One DD and the FD have done Diploma in WL Management from WII; One Range officer has undergone WII's Certificate course; one Range officer and one ACF trained in Wildlife Forensics; Veterinarian has attended one month training at WII on WL immobilization. Altogether, the TR management has organized 5 trainings for frontline staff. There is no HR development plan prepared, but the requirement of training for skill development is assessed while reviewing the ACR of staff, and they are sent for suitable training.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Interaction with officers and Field Staff and CWLW	The performance of staff is reviewed annually. And, their deployment and capacity building is done as per the performance, skill and choice of the staff.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good	✓		

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Field Visit, Interaction with	Owing to the several recent interventions like cwp protection

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Opportunistic public participation in some of the relevant aspects of TR management.	Fair		EDc members, interaction with TR field staff	fences, LPG connections, livelihood interventions the villages and partnership in buffer zone ecotourism there is an apparent change attitude of villagers and they have begun supporting the tiger reserve staff. During our interactions with villagers we could feel palpable enthusiasm in villagers including the village women. Common people participate in regular wildlife monitoring exercise organized on Budh Purnima. The villagers also participate in fire protection work. In the buffer management of Ecotourism is done systematically by EDCs.
Systematic public participation in most of the relevant aspects of TR management.	Good	√		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGIs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Discussion with former Field director and Deputy Director	There is a state level initiative for forest department to receive comments and complaints. (Call Number 1926; Hello Forest Service). The complaints are addressed within 48 hours. Right to Service and Mukhyamatri Complaints are also addressed. Complaint Registers are maintained at Range Offices. The complaints are addressed by Range Officers that is reviewed annually by the DCF. Number of complaints is less. There is no proper system for recording suggestions and complaints of tourists.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	√		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Visits to villages, interaction with former Field director Shri Garad, Dy Director ,Buffer Shri Gajendra, Narwane, Deputy Director Core Shri Kishore;	LPG Connections given to 21000 households, it helps in making time available for the women to carry out works other than firewood collection; 350 families provided milch cattle; in Agarbatti production unit 110 women are involved; 100 families were provided support for backyard poultry; weaving
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by	Good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

TR management.			Interaction with women and EDC members	and cloth making – 25 women. State Plan Funds, CAMPA and Foundation Budgets are used for livelihood activities. In all activities, contribution of beneficiaries is ensured.
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good	√		

*The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Visit of relocation site; interaction with the villagers and document provided by TR Management.	Out of 6 villages, 3 complete and half of Kosla village have been relocated. One village Phalasaon is under the process (FC Act clearance has been completed). Total requirement for relocation is Rs. 24 Crore, of which 13 Crore has already been provided by the state government. The TR Management helps the villagers by co-coordinating with other government agencies such as irrigation, electricity, Panchyat and PWD. There is no full proof mechanism for receiving and resolving the grievances of the relocated families.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	√		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

*Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Interaction with TR managers and documents provided by them	There is no dedicated website for TATR. The TR has a Page on (www.mahatadobatiger.com) forest website. There is an App on Tadoba. Public related information (such as eco-development and compensation) are available on the website of Maharashtra Forest Department. Directional and information signage are installed at various places.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	√		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

public domain on management and condition of public assets.				
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5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Interaction with TR management, visit of the sites. Meeting with 4 hotel owners, two owners of home-stay facility and visit to Maharashtra Tourism hotel and one private resort.	Visitor services available at the entry gates, toilet at all gates; adequate number of vehicles; Waiting facility at Moharli; two canteen and souvenir shop are available. There are 188 guides for the tourists. Water Cooler is available at the main gate. At other gates, water filters are available. Solid wastes are segregated and collected by the garbage collectors deployed by the Gram Panchayat. Vermicomposting beds have been installed; these will be made operational from next year. Resort owners sell their waste to <i>Kabadis</i> . One resort owner burns the waste. Boating facility is available (3 boats) in Irai reservoir. There is no mechanism to receive visitors' feedback. There is an interpretation centre in the TR, but not operational. Pugmark (a NGO) organizes training for tourist guides.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

*Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Reports on studies, interaction with TR Managers.	In the TR altogether, ten studies have been completed since 2001. Vegetation ecology, flora and fauna, computerized database on monitoring of various aspects of TR management, monitoring of tigers, genetics etc have been the broad topics of research. There is a post of RoF (Research), however, there is not much input from the RoF, since he is not a scientist. WII has involved three researcher in a Project on "Long term monitoring of tigers, co-predators and Prey Species in Tadoba-Andhari Tiger Reserve". Under the project Phase IV monitoring is also being done. There is not much research going on to address management issues and dispersal of tigers. Waterhole monitoring is done by the reserve management. These researchers are also helping in Phase IV monitoring exercise. Training for M-STRIPES has
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

undertaken and attempts made at course corrections as relevant.				been completed, six officers attended the training. However, at present the TR is using 'Hezze' an App for patrolling and monitoring. Cattle grazing is monitored in the Buffer.
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***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Documents provided by the TR Management.	Yes, sufficient funds are in place. Schedule for infrastructure and vehicles are maintained systematically.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good	✓		

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Phase IV report of 2016. TCP	Phase IV data shows that Sambar population has reduced marginally; while there is good increase in Spotted Deer; density of wild boar and barking deer has increased. Leopard and tiger are the key threatened species in the TR. The leopard population has increased from 24 in 2013 to 37 in 2014 and 49 in 2015; Though the Density data of sloth bear and dhole have not been estimated. But the water hole count data from 2011 to 2013 indicates drastic drop in dhole population and marginal drop in population of sloth bear.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		All India Tiger , co-predator and prey estimation report of WII and Phase IV Monitoring Reports of the TATR	The tiger population within TATR is stable. The tiger density per 100 sq km is as below (2010 onwards): 2010 – 5.29 (SE 1.12); 2012 – 5.40 (SE 0.60); 2013 – 5.62 (SE 0.82); 2014 – 5.60 (SE 0.77); 2015 – 5.67 (SE 0.69); 2016 – 5.64 (SE 0.71).
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good	✓		

***This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.**

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Offence Report produced by TR Dy. Director Buffer and Core.	During 2014 – 2017; Illicit felling, encroachment and illegal transportation has reduced; wildlife poaching cases and forest fire too have declined. The TR has prepared a Disaster Reduction Plan and submitted to the district administration. Disaster Risk Management plan of TATR addresses Human-wild animal conflict and forest fire, and it has been incorporated in the district disaster management plan. However, a plan for the disaster management for the tiger reserve should be in place.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		Eco-tourism Plan of the TR, visit to tourism facilities, and interaction with TR Managers.	The TR has prepared an Eco-tourism Plan. The plan has many inadequacies and it is not comprehensive. The plan doesn't include possible impacts of visitor use or infrastructure development nor does it provide prescriptions for monitoring of tourism impacts
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

<p>Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.</p>	<p>Very good</p>		<p>and mitigation strategies. There is no interpretation centre at present. The participatory Ecotourism in the buffer with active involvement of EDC is a novel and successful model that needs to be replicated in the buffer zones of all tiger reserves. Guides are trained at regular interval. In Buffer zone, the tourism is managed by EDCs. In the core zone tourism is allowed in about 20% of its area. Vehicles are allowed as per the carrying capacity. Basic visitor facility is available. LAC meetings are held on regular intervals. Conservation Fee is charged from the resorts, as suggested by the NTCA. The TR has organized outreach program for 4644 school students. The govt. schools students and teachers were brought to the TR and guided visits were organized. Several brochures and pamphlets for tourists have been prepared and provided to the visitors. A quarterly magazine is also published by the tiger reserve. In our interactions with the officers of TATR and the CWLW, we gathered that there is huge pressure to open the core area to tourism in monsoon. This is a bad idea that must be stalled.</p>
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**Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism*

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Interaction of the evaluation team with villagers and EDC members.	In the last 2-3 years, several eco-development initiatives have been taken up and the villagers have been incentivized in many ways. Due to the reason they participate in the TR management activities. Most of the villagers are satisfied with the TR management's initiatives.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	37.5	Overall Score: 247.5 %age: 77.3
2.	Planning	07	10	70	52.5	
3.	Inputs	05	10	50	42.5	
4.	Process	06	10	60	47.5	
5.	Outputs	04	10	40	30.0	
6.	Outcomes	05	10	50	37.5	
Total		32		320	247.5	

*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.

7. Mukundara Hills Tiger Reserve, Rajasthan

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Draft TCP	Values of the TR documented in the TCP include it being a habitat of many important species and having a site of archeological and watershed values. Gargon forte is a World UNESCO Heritage site. However, the values are not systematically assessed and monitored.
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Draft TCP of the TR	The TCP mentions some threats like NTFP Collection, Grazing, tree felling, lopping etc. due to presence of villages in the valleys in the TR. Frequent draughts, decreasing availability of water are also identified as threats. However, these threats are not assessed in a systematic manner.
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor	✓	Documents provided by the TR	There were 16 villages in the CTH, of which one village has been completely relocated. One village has been partially relocated. Thus, currently 14 villages having 1585 families and about 10000 cattle heads are inside the CTH. Also, 86 villages having around 76000 human population and around 85 thousand cattle heads are located on the fringe of the CTH. These villages exert severe pressure of grazing and lopping in the core area.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Documents provided by the TR.	The Core and Buffer were notified on 9.4.2013. State Level Steering committee has not been constituted. Constitution of Tiger Conservation Foundation is proposed. Draft of the TCP has been submitted to NTCA, about a year ago but approval is still awaited.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair	√		
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		Document provided by the TR	Core and Buffer is under the unified control of the Field Director since 22.07.2014.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	√		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Interaction with TR Management. Draft TCP	The Draft TCP has been submitted to the NTCA on 9th May 2016. The TR has yet to get the comments and suggestions of NTCA for further improvement.
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Interaction with the TR management , field visit of the team and documents provided by the TR.	The TR has many threatened species such as leopard, wolf, black buck, chinkara, fox, otter, magar crocodile etc. Important threats include grazing and lopping. The area had history of presence of tigers. To bring back the tiger population in the area, a reintroduction program has been planned, works for implementing this plan has begun.. There are 6 Ranges 23 Nakas and 82 Beats to ensure protection of the TR and thus its biodiversity values. However, there is lack of manpower and infrastructure. Patrolling routes are being improved. Fire lines network is being increased. There are eight fire watch towers. The Forest Guards are supported by Home Guards. Two staff (Forest Guard and Home Guard / Work Charge) are based in the camps. Special patrolling is organized during monsoon season. E-patrol / Hejje is used to monitor the patrolling effort only in one Range (Darra). The Data is monitored by a DCF level officer. There is a Whatsapp Group and staff share the information related to animal sightings and offences within
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>the group. To reduce pressure of sheep herders the Tiger Reserve Management has successfully diverted the migration route, earlier passing through the TR, from outside vide an order dated 19.5.2015. About 2 lakh sheep used to move through the TR. Cattle camps (about 1000) inside the TR have been removed. To reduce the impact of linear infrastructure on wild animal movement mitigation measures (overpasses and underpasses) have been put into the condition, which the implementing agencies have agreed to implement.</p> <p>To reduce the anthropogenic disturbance construction of boundary wall of about 40 km length is going on. It will help restore the degraded areas and reduce human-wildlife conflict.</p> <p>To reduce villager's dependence on the forest for firewood the TR has distributed around 10334 LPG connections in 100 villages in the vicinity.</p> <p>Thus, a lot of ground work is being done to reduce biotic pressure on the habitat, which is a critical threat.</p>
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***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Interaction with TR Management	The stakeholders were consulted during micro-planning of 25 villages. However, the micro-plans do not include any specific prescription. Also, tiger translocation issue was discussed with the villagers. The villagers expressed their concerns of grazing due to this. Other stakeholders – NGOs, Individuals and Interest Groups were not involved in the planning process
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Draft TCP and documents provided by TR management	Removal of invasive species (Lantana), rehabilitation of degraded area, habitat improvement for flagship species, moisture improvement, grazing regulation etc. have been highlighted in the TCP. Strategies have been outlined for habitat management programs. For improving predator population in the TR, 376 chital sourced from Jaipur Zoo, Sanjay Van, Shahpura and Jodhpur Zoo were hard released in the TR (Approved by CWLW in August 2016 and 2017). However, post-release monitoring was not done.
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Documents provided by TR Management, Draft TCP.	The Protection Strategy has been outlined in the TCP. The current protection strategy lays emphasis on foot patrolling including night patrolling, deployment of manpower at strategic locations and intelligence gathering. There are 23 naka and 82 beats, manned and equipped, to ensure protection in the TR. In the last three year only one poaching incidence was reported. Tree felling cases are as follows: 19 in 2014-15, 25 in 2015-16, and 21 in 2016-17. No case of fire was recorded in 2014-15, while in 2015-16 and 2016-17 there were only 1 and 6 cases respectively. Other incidences such as loping, grazing etc. were recorded in high number (69 in 2014-15; 112 in 2015-16; and 143 in 2016-17). Year-wise number of cases in which investigations were completed are as: 2014-15: 192; 2015-16: 231; and 2016-17: 159. In all investigated
TR has an adhoc PS and SA.	Fair	✓		
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				cases complaints have been filed. One forest guard has to protect around 7-8 sq km area. However, the current staff strength is poor to implement the prescribed measures in the TCP. Vehicles are also in short numbers.
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Documents provided by TR Management.	Only a few cases of human-wildlife conflict were reported. In the last three years only two cases of human casualties have been reported. There is no wildlife rescue team in the TR. However, one leopard was rescued with the help of staff from Ranthambhore TR. As per the recent GO (16.11.2017), compensation amount to be paid in case of human death is Rs. 4 lakh; permanent disability: Rs. 2 lakh; Temporary disability: Rs. 40000; Cattle kill: Ox and buffalo: Rs. 20000; Cow: Rs. 10000; Cattle Calf: Rs. 4000; Goat and Sheep: Rs. 2000; Camel: Rs. 20000; Donkey / Mule: Rs. 2000. No compensation is paid for crop damage.
TR has been able to mitigate few human-wildlife conflicts.	Fair	✓		
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor	✓		The key corridors in the landscape are: 1. Mukundara-Kota-Bundi – Indragarh-Sawai Madhopur 2. MHTR-Etawah-Sultanpur—Kali Sindh ravines Tiger movement in the landscape: 2003 – A tiger came up to
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

TR is fully integrated into a wider network/ landscape.	Very good			<p>Borabas and got killed in train hit.</p> <p>2009: A tiger came to Sultanpur</p> <p>2017: A tiger came in Ramgarh Sanctuary in Bundi district, about 30-40 km away from MHTR. T91 tiger of Ranthambhore TR is using the area, but due to habitat fragmentation as a result of mining and agriculture activities the tiger could not move up to MHTR.</p> <p>In Bundi area National Highway disrupts the movement route.</p> <p>No specific actions have been taken so far to ensure connectivity between these areas and facilitate tiger movement in the landscape.</p>
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***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Documents provided by the TR Management	<p>Number of frontline staff deployed in the TR is as below;</p> <p>Ranger (Grade I)- 2 (2 vacant);</p> <p>Ranger (Grade II) – 8 (2 vacant);</p> <p>Forester – 18 (1 vacant)</p> <p>Assistant Forester – 18 (1 vacant);</p> <p>Forest Guard – 111 (13 vacant)</p> <p>Work Charge – 40 (none vacant).</p> <p>There is a sanctioned position of one veterinary officer, but it is lying vacant. A committee has been constituted by the State Board for Wildlife (5th Meeting) to review the strength of staff in the TR. The committee has recommended to the government to increase the staff strength as below:</p> <p>Ranger (Grade I): 2</p> <p>Forester: 22</p> <p>Assistant Forester: 12</p> <p>Forest Guard: 190</p>
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				Driver: 12 Current staff strength is inadequate to man the area effectively, in the view of operational threats.
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***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Documents provided by the TR management.	For the management and protection purpose there are 29 vehicles (1 car; 9 four wheeler for the use of DD, ACF and Range officers for protection. There are 15 motorcycle; 1 Canter; and 3 motor boats with the TR). For communication there are wireless sets, both fixed + mobile (32) and hand-sets (43). There are 43 buildings in the TR used by management and protection staff. 10 anti-poaching camps are established. The field staff in anti-poaching camps have been provided with Tents, camp cot, field gears, torches, binoculars and solar lanterns. However, the resources available in the TR are inadequate for management and protection.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

***These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by TR Management and interaction with the TR managers	Budget allocated by NTCA is as follows; 2014-15: Budgeted: Rs. 877.20 lakh, Sanctioned Rs. 145.77 lakh / Released Rs. 104.96 lakh (expenditure Rs. 87.30 lakh); 2015-16: Budgeted: Rs. 251.50 lakh, Sanctioned Rs. 102.05 lakh / Release Rs. 108 lakh (expenditure Rs. 86.97 lakh), and 2016-17: Budgeted: Rs. 1066.00
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the	Good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

most important objectives. Generally funds released with not much delay and mostly utilized.				lakh, Sanctioned: Rs. 290.61 lakh / Released Rs. 232.49 lakh (expenditure Rs. 212.58 lakh) respectively.
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			The sanctioned grant is 16-50% lesser than the budgeted / required grant. First installment is released generally in the month of September and second installment is released in February. Budget is not available for some crucial works, such as fire management, weed control, restoration of relocated village sites.

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Relevant documents provided by the TR	The TR receives funds for works and maintenance under the state Plan, NABARD, CAMPA (ANR and Habitat Improvement) and Rajasthan Protected Area Conservation (RPAC) Society. Various interventions such as village relocation, LPG distribution in the villages, road and infrastructure development, protection walls along sensitive areas (RPAC Scheme), grassland development and micro-planning (NABARD) are being done from these state funds. State Plan; 2014-15: Sanction Rs.21.60 lakh / Expenditure Rs. 21.60 lakh 2015-16: Sanction Rs. 52.28 lakh / Expenditure Rs. 52.21 lakh 2016-17: Sanction Rs. 30.92 lakh / Expenditure Rs. 30.07 lakh. NABARD expenditure: 2014-15: Rs. 293 lakh 2015-16: Rs. 342 lakh 2016-17: Rs. 211 lakh CAMPA Expenditure 2014-15: Rs. 182 lakh 2015-16: Rs. 440 lakh 2016-17: Rs. 436 lakh The resources are used efficiently for the management objectives.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.5 **What level of resources are provided by NGOs?**

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor			WWF contributed 135 pair of shoes and 7 mosquito nets for the staff. Water filters have also been provided by the organization. Since, it is not a popular tiger reserve; contribution from NGOs is very poor.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. **Process**

4.1 **Does the TR have manpower resources trained in wildlife conservation for effective TR management?**

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Documents provided by TR Management.	DD is trained in WL management (lateral entry in diploma course). There is no systematic training plan prepared. Trainings on the topics - Line transect, sign survey, camera trap, GPS, participatory management etc. were organized at range and division level.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 **Is TR staff management performance linked to achievement of management objectives?**

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Interaction with the TR management	Management performance of various staff posted in the TR is linked with the objective of the TR management.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	√		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Interaction with TR Management.	Locals are involved in patrolling with the staff on paid basis. Local students are invited through the colleges for line transects surveys. Locals also render support in fire management.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	√		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGLs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Documents provided by the TR Management	There is a dedicated phone number 181 to make complain to the CM. The redressal is done at four consecutive levels, in case it is not addressed at the lower level. During 2014-17 altogether 65 complaints were addressed through this mechanism.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	√		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor	√	Documents provided by the TR	16 trainings were organized for Institutional Development such as constitution of EDCs and SHGs.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Few livelihood issues are addressed by TR management.	Fair		Management	But, none of them were targeted towards livelihood improvement. The TR has generated 48724 (women: 37018) man-days during the year 2016-17.
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Documents provided by TR, Field Visits of the MEE team and Interaction with TR managers.	Of the total 16 villages in CTH, one village has been relocated completely, while only partial relocation of one village has taken place. CAMPA funds are used in relocation and rehabilitation of the villages. Planning has been done for relocation of the remaining villages in the CTH. The relocated villages are not monitored.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor	✓	Interaction with TR managers, documents provided by the TR.	The TR has developed a Diary, brochure and documentary on Mukandara TR. There is no dedicated website, but, a Facebook page is operational.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor	✓	Discussion with TR management and visiting the tourist facilities.	There are not many tourism activities in the TR. Boating is organized in the Chambal River at Kota. The boats are registered with the TR. The TR is planning for 3-4 entry gates. There is no interpretation facility or other facilities for the tourists.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor	✓	Interaction with Tiger Reserve managers	The TR has employed a researcher on contract basis to monitor wildlife and habitat. Prey estimation data has been collected but not analysed. Habitat features are also not monitored.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Interaction with TR management	There is an inventory of infrastructure and assets but their maintenance schedule is not maintained. Maintenance of buildings and other assets is done as per availability of funds. Important maintenance such as roads and fire lines are maintained.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor	✓	Documents provided by the TR and interaction with TR Managers.	Sloth bear, leopard, wolf, chinkara, vultures etc. are the key threatened species in the Tiger Reserve. The TR has started Phase IV monitoring; it will help assessing trend of its population in future. Thus, there is no comparable data available for assessing population trend. Black buck has started using the TR habitat from the adjoining areas (about 20 km away).
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor	✓	Interaction with TR managers	There is no tiger in the reserve at present.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

surrounding landscape, core area addresses tiger dispersal appropriately				
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****This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.***

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Interaction with TR managers and field visits by the team	The TR management has just started taking initiatives to address the threats. One of the threats such as habitat destruction by migratory sheep has been successfully addressed by changing the migration route of the sheep and diverting it away from the CTH. To reduce the anthropogenic disturbance construction of boundary wall of about 40 km length is going on. It will help restore the degraded areas and reduce human-wildlife conflict. To reduce villager's dependence on the forest for firewood the TR has distributed around 10334 LPG connections in 100 villages in the vicinity. Thus, a lot of ground work is being done to reduce biotic pressure on the habitat, which is a critical threat.
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

****Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?***

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor	✓	Interaction with the TR managers.	Planned Tourism has not yet begun. Boating is organized in a small portion of the Chambal River at Kota. The boats are registered with the TR. The TR is planning for 3-4 entry gates. Locals visit a temple in the CTH by paying entry fee.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good			
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

****Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism***

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Interaction with TR managers, field visit of the MEE team.	The local communities manhandled two forest staff who were trying to stop grazing and lopping. The communities are hostile towards the TR in some villages. However, in many areas they support the management.
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	27.5	49.2
2.	Planning	07	10	70	32.5	
3.	Inputs	05	10	50	30	
4.	Process	06	10	60	35	
5.	Outputs	04	10	40	15	
6.	Outcomes	05	10	50	17.5	
Total		32		320	157.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

8. Ranthambhore Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Draft TCP of Core, Buffer and Corridor	The Tiger Conservation Plan of RTR generally identifies the values and significance of the TR. The TR is of conservation value due to the presence of important animal and plant species. It also highlights the significance of the TR owing to the presence of recreational and historical values. Research and education values are due to plant biodiversity. It is of immense value for the local people for meeting their need for forest resources. Values of the TR as watershed conservation for the downstream irrigation are mentioned. Thus, most of the values are identified but not all values are systematically assessed.
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Draft TCP of the Core and Buffer of RTR	Key threats identified in the TCP include ecosystem deterioration due to biotic pressure, genetic factors leading to inbreeding depression, proneness to communicable diseases from domestic cattle, habitat degradation due to loss of top soil, invasion of <i>Prosopis juliflora</i> in the RTR and poaching threats. Grazing by Cattle and demand for fuel wood is biggest threat. Nearly 250000 cattle heads are seasonally dependent on the resources of the TR. Pilgrimage is another serious threat. There are more than 25 temples within the CTH and two major pilgrimage sites, which attract lakhs of tourists every year. Security plan in the draft TCP of the Core mentions range wise key threats. However, threats have not been assessed fully to determine the magnitude, extent and location.
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.3 Is the 'Core Area' of TR free from human and biotic interference* ?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor	✓	Draft TCP of Core; interaction with the FD	The TR authorities informed that there were 65 villages in the CTH, however, the draft TCP mentions presence of 67 villages in the Core. Of the 65 villages in the CTH, six have been relocated in the last 8-9 years. Relocation of six villages is under progress. Villages have been prioritized for relocation and it is planned to relocate all villages by the year 2022. Thus, currently there are 59 villages in the CTH. There are 8022 families residing within the CTH. These villages have about 80000 cattle heads. The National Park Area is completely village free, except the monsoon season when there is grazing pressure in the peripheral areas. Further, within the 2 km from the CTH there are 112 villages. Around 16000 families and 1.6 lakh cattle reside in this area. The Kailadevi sanctuary, half of which is included in the CTH, has 44 villages and therefore highly disturbed. The Ganesh temple in the national park and Kailadevi temple in the sanctuary attract several lakh tourists and thus create serious disturbance to the animals and habitats.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Documents provided by the TR management and discussion with the officials.	Notification of Core and Buffer Zones: CTH: 28.12.2007; Buffer: 6.7.2007 Tiger Conservation Foundation notified on: 25.02.2010 (last meeting of Governing Council on 23 rd November 2017). State Level Steering Committee has been not been constituted. The TCP is not approved. The Draft TCP was submitted to NTCA which suggested some changes in it. The suggestions have been incorporated and the draft TCP has been submitted for approval, approval is awaited. The SoPs are known only up to the
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair	✓		
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				level of DCFs. Only a few Range Officers know about the SoP. Frontline staff are generally unaware of the SoPs.
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*Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		Documents provided by the TR management.	The core and buffer is under unified control since 2013.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Draft TCP and documents provided by the TR.	Draft TCP was submitted to the NTCA. The NTCA suggested incorporating some changes. The suggested changes have been incorporated and final version was submitted to NTCA (by CWLW, vide letter no. 7755 on 1 st July 2014), and its approval is awaited. The NTCA, in its letter dated 10.11.2017, addressed to the CWLW has requested for appropriate changes in the TCP of Buffer Zone in the light of recent order of the National Green Tribunal. There has been inordinate delay in finalizing and approving the TCP by the NTCA. Due to enormous time being taken in the approval, the TR is using the draft TCP for the management.
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Documents provided by TR Management. Interaction with FD, DDs, Tiger Watch representative.	<p>The TR has many threatened species like Rusty spotted cat, wolf, vultures, fishing cat, caracal etc. The TR has made an Action Plan for protection and development of Keladevi Sanctuary, which will be implemented in the next FY. Studies are being conducted by individuals on few species - such as Vultures. There is no specific activity to safeguard the threatened biodiversity values. However, the protection and habitat improvement mechanism of the TR might help in safeguarding these threatened species.</p> <p>Monitoring is one of the key activities to safeguard the tigers and other key wildlife. For the protection of the tiger reserve, there are 26 nakas and 87 chowkies in the TR. These are equipped with communication facilities. Day to day monitoring is done by the beat guards, home guards and local daily wagers. Temporary camps are also established during July-September to deter illicit grazing and other unwanted anthropogenic activities in the TR. Section 144 of CrPC is imposed by the District Collector during the monsoon when the cattle grazing pressure is high. In the recent past efforts have been made to control grazing pressure which has yielded good result in the National Park and some parts of Sawai Mansingh sanctuary. There are 384 water holes in the TR and these are maintained during pinch period to ensure water availability to wild animals. To reduce the impact of pilgrimage, volunteers of about 40 small and large organizations participate in garbage management activities. Forest fire occurs from February to June. A network of 334 km of fire line is maintained every year and firewatchers are deployed during the period to control the fire.</p> <p>Cattle population around the TR is vaccinated by the Animal Husbandry Department twice in a year. The TR management facilitates vaccination activities.</p>
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor	✓	Interaction with TR officials	Except a few inputs from individuals, no opportunity was given to the stakeholders in the planning process.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Interaction with TR managers.	The draft TCP suggests some interventions for habitat management / improvement. However, there is no detailed and long-term plan for weed eradication / grassland development or managing the vacated village sites as edge habitats. Weed (<i>Cassia tora</i> , <i>Parthenium</i> and <i>Prosopis</i> etc) removal and ensuring water availability are the key interventions for habitat improvement. Locations of the waterholes have been mapped and these are monitored by the staff. The unique and special habitats have not been listed and mapped. The habitats of Kailadevi Sanctuary consists of flat plateau and narrow as well as wide deep gorges that harbor a distinct special assemblage of vegetation and water sources. Problems in these areas consisting of unique geomorphic and riparian habitats have not been addressed yet. These are the sites harboring rich biodiversity and must be explored and protected. The habitats in the gorges are preferred by tiger while flat plateau are occupied mainly by the antelopes and wolf.
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

connotations). *Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.*

2.5 Does the TR has an effective Protection Strategy (PS)+ and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Documents provided by TR and interaction with staff.	Protection Plan, as a Theme Plan, is a part of the draft TCP. Patrolling is done using Android based Hejje Application. Patrolling is done by frontline staff and flying squad (36 staff), The field patrolling team ensures about 10 km patrolling every-day. Range officers ensure night patrolling four times a week. It is monitored on monthly basis. During winter and monsoon special patrolling is organized. Dossier of habitual offender is being maintained at DD Office. Tiger Cell is constituted to monitor tigers and intelligence information management to ensure enforcement. Along the periphery of the TR a program of deploying Village Level Volunteers is being implemented in association with a NGO. Fifty such volunteers are deployed by Tiger watch. They are paid by RTR and Tiger Watch (50-50%). The TR management had organized Gramin Vanya Jeev Sammelan in collaboration with Tiger Watch in which students of 90 villages participated. This network of students has also begun participating in information sharing. This is an innovative idea to build an intelligence network. Mogiya Sammelan was organized in July, 2017. A hostel for Mogiya children is being supported by Tiger Watch. Altogether 200 Mogiya families reside in the area. There are two check-posts in the RTR to check illegal entry in the tiger reserve. During 2014-17 altogether 824 offences were registered, of which poaching and tree felling were the prominent ones. In the last three years, the offence data suggest an increasing trend - (2014-15: 211 cases; 2015-16: 300 cases; 2016-17: 313 cases). Three units of STPF on deputation from Police department (total strength 112) are under the control of DFOs.
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Discussion with TR management and documents provided by the TR.	Human wildlife conflict cases – mainly of livestock depredation is common in the area. The Tiger Reserve has a Rapid Response Unit manned by Flying Squad team lead by an ACF. The team deals with emergency situations arising due to negative interactions of human and wildlife. A government veterinarian is summoned in case of emergencies. During 2014-17, 3 human casualties (2 death and 1 injury) took place, while altogether 892 livestock depredation cases were reported. Rs. 2613570 was paid as cattle compensation. As per the recent GO (16.11.2017), compensation amount to be paid in case of human death is Rs. 4 lakh; permanent disability: 2 lakh; Temporary disability: Rs. 40000; Cattle kill: Ox and buffalo: 20000; Cow: 10000; Cattle Calf: Rs. 4000; Goat and Sheep: Rs. 2000; Camel: Rs. 20000; Donkey / Mule: Rs. 2000. The TR has made a protocol to provide immediate assistance to the victim/victim's family in case of human injury/death by wild animals. Deadlines for payment of relief amount are also fixed by the TR. In case of death of a human being, the amount is paid within 2 days, while in cattle killing cases the amount is paid within 7 days. An Android based app is developed to get information about compensation cases. An officer of the rank of ACF monitors the process.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Draft TCP of Corridor.	Four key corridors (including within the TR) have been identified. The corridor between Keladevi WLS and Kuno Palpur WLS is an important corridor. The habitat connectivity between Ranthambhore National Park and Keladevi WLS has been brought under management regime by declaring it a buffer. Village relocation is also planned in this corridor.
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Documents provided by TR	The personnel currently employed in the TR are as below; Range Officer 18 (2 vacant); Forester 19 (3 vacant); Assistant Forester 34 (1 vacant); Forest Guard 226 (11 Vacant); Work Charge 117 (None vacant). Three units of STPF on deputation from Police department (total strength 112) are under the control of DFOs. There are 97 constables + Head Constables + Inspector + Dy. SP in the STPF. There are two sanctioned post of Veterinary Officer, but both positions are vacant. However, keeping in view of the size of the TR and the current needs and varied work the sanctioned strength of staff is inadequate.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Documents provided by the TR management	Availability of resources: Vehicles: 90 (Gypsy – 8, jeep – 6, canter – 5, motor cycle – 55, Bolero Camper -6, Ambulance – 1, Bolero- 6, Rescue vehicle – 2) Communication equipment: Wireless: Fixed set – 67 Hand set – 114 Mobile handset - 215 Research equipment: Camera trap – 427, Range finder – 54, GPS – 95, Binoculars – 22,
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

objectives.				Tranquilizer gun – 5, Compass – 130. Buildings: 169 (including 6 APCs equipped with Torch, GPS, Wireless, Range Finder. Staff quarter and residence are grossly inadequate. The staff living in the camps does not have quarter facilities for their family. Most buildings require upkeep and maintenance.
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***These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by TR Management. Intercation with FD	Budget allocated by NTCA in the last three years is as follows; 2014-15: Budgeted: Rs. 6029.29 lakh, Sanctioned Rs. 413.28 lakh / Released Rs. 297.60 lakh (expenditure Rs. 283.04 lakh); 2015-16: Budgeted: Rs. 5070.44 lakh, Sanctioned Rs. 326.077 lakh / Release Rs. 222.418 lakh (expenditure Rs. 191.255 lakh); and 2016-17: Budgeted: 5068.14 lakh, Sanctioned: Rs. 930.144 lakh / Released Rs. 440.736 lakh (expenditure Rs. 207.252 lakh) respectively. The sanctioned grant is less than the budgeted / required grant. However, there is gap between released amount and expenditure. Sometimes funds are released late.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by TR Management	The State Plan Head also includes salary and other costs. Allotment and expenditure during 2014-17 is as below; 2014-15: Sanction Rs.1326.50 lakh / Expenditure Rs. 1278.17 lakh

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair		Interaction with FD	2015-16: Sanction Rs. 624.11 lakh / Expenditure Rs. 575.27 lakh 2016-17: Sanction Rs. 989.19 lakh / Expenditure Rs. 932.69 lakh. Expenditure of TCF grant is as below: 2014-15: Rs. 193.97 lakh 2015-16: Rs. 293.05 lakh 2016-17: Rs. 596 lakh
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	√		The gate money and other revenues raised by the department go to the government and released by the Finance Department after a gap of year or so. Earlier a part of the revenue was released to the foundation, but now it has been decided to give back the entire revenue to the foundation.
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			CAMPA funds are used for relocation of villages, building maintenance, water hole development etc. 2014-15: Sanctioned – Rs. 352.12 lakh, Expenditure – Rs.347.87 lakh; 2015-16: Sanctioned – Rs. 208.68 lakh, Expenditure – Rs. 189.789 lakh 2016-17: Sanctioned: Rs. 1987.25 lakh, Expenditure – Rs. 740.92 lakh

*Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Documents provided by TR and field visit of the MEE team	WWF India has provided 4 bikes, 4 wireless handsets, 1 base station, 15 mosquito dome tent, 10 camp tents. The organization also helps in wildlife monitoring in Kailadevi area. Tiger Watch helps in wildlife monitoring outside the tiger reserve. The organization also helps in various activities including enforcement and education of communities. The committee had an impression that the staff manning the patrolling camps (Chowkis) are ill-equipped and a large number of camps lack in some basic amenities.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	√		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document (s)	Remarks
No trained officers and frontline staff in the TR.	Poor	✓	Documents provided by the TR management	None of the officers are trained in WL Management. During 2014-17, three training programs on Line Transects were organized for the frontline staff in which 50, 63 and 63 staff were trained in 2015, 2016 and 2017 respectively.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Documents provided by TR managers and interaction of the MEE team with staff.	There is linkage between the management objective and performance of the staff. However, there is no performance based promotion.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Interaction with TR managers	Villagers participate in fire control and management. The community leaders also help during emergencies such as law and order situations arising from human - tiger conflict. 40 different NGOs and institutions participate in cleaning drive during pilgrimage
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			season. Though the management has succeeded in controlling illicit removal of forest produce and rampant grazing by village cattle in the national park area and some parts of the two sanctuaries through law enforcement, the committee witnessed no systematic and planned interventions to elicit public support for the tiger reserve.
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*The involvement of NGOs/ NGLs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Documents provided by the TR. Interaction with TR management team.	There is a dedicated phone number 181 in the state to make complaints to the CM. The redressal is done at four consecutive levels, starting at range officer level. If the complaint is not addressed at the lower level, it automatically passes on to the next higher level. At each level there is a time limit for inquiry and reporting. During 2014-17 altogether 350 complaints were addressed through this portal. Phone number and e-mail is displayed at prominent places. Visitors can send their feedback on these numbers. A feedback form has been developed for visitor data collection, but the data is not analyzed. The feedback form does not include any question related to the facilities provided by the TR.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Interaction with TR officials and documents provided by TR.	Under Van-Dhan Yojna training camps were organized in 50 villages and 170 persons were registered for skill training by RSLDC, of which 90 people participated in the training.
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by	Good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

TR management.				
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			<p>Agriculture skill training was given to 437 persons while Animal husbandry training was imparted to 9000 people. TR management played the role of facilitator in organizing these trainings.</p> <p>Nature training guide was also organized. Refresher training was organized for 150 guides and EDC Guides of the buffer zone. Gypsy driver training for 280 people. (Total 400 Gypsy and 288 Canters registered) Activities for women are being initiated. Women SHGs are being constituted. The local villagers are involved in various development and management works in the TR. However, data related to man-days generated through these activities is not maintained.</p>

***The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Documents provided by the TR; interaction with the TR Managers	The TR has relocated 6 villages since 2008. Relocation process for 9 villages is completed and the TR management has focused on three villages for relocation. Relocation is done with CSS grants. In case CSS is not available the state government provides funds. Handholding is done with the Tiger Foundation funds. NGOs help in relocation and rehabilitation process. They provide supports like drinking water, irrigation bore-wells etc. There is a team for relocation – constituted of DCF (2 nos.) ACFs, Range Officers and Forest Guards for the process of relocation.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Interaction with TR management	There is no dedicated website, but there is a link on the state government website on which relevant information is available (www.rajasthan.gov.in). There is a website on Forest Management and Decision Support System, with a Citizen Charter page.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Documents provided by the TR management. Interaction with officials, field visit.	There are 5 tourism zones in National Park and Sanctuary areas each. Each tourism zone has been provided with toilet and potable water facility for tourists. As per the modified TCP, the effective road length in tourism zone is 287 kms. Booking counter is in the city. The TR provides a paper bag to the visitors to collect and carry the garbage back outside the TR. There are 400 Gypsies for safaris and 288 canters. There are 134 Nature Guides and 52 EDC Guides. The vehicles are registered with the TR management. Experienced drivers of the TR are in the committee for assessment of the condition of vehicle. Guides and drivers are punished for damaging behavior or violating the TR rules and norms. Life of the Gypsy used in safari is 5 years. Films have been produced by different producers. About 16% area of
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				the Core Zone is under tourism zone. There is no interpretation centre.
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***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Documents provided by the TR management	Presently DNA based study is being done by NCBS team. Till now management has not taken any step to systematically monitor various aspects of management and incorporate the outcomes for improvement in management of the tiger reserve. Except for the regular monitoring of tigers no other serious efforts for research and monitoring was observed. There is an apparent lack of scientific temper in the management of the tiger reserve.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Interaction with TR Management	Inventory of the infrastructure and assets are maintained but there is no maintenance schedule.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Reports provided by TR Management; interaction with researchers involved in Phase IV monitoring	Phase IV started in 2014. As per the waterhole count data available for the period of 2010-2013 population trend of some important species is as below; Leopard: Stable Wolf: Increasing Sloth bear: Stable Caracal: Marginal increase. The population data of prey species based on Phase IV monitoring couldn't be compared as in 2016-17, 182 fresh transects have been laid systematically, while earlier it was laid randomly, hence data is not comparable.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Phase IV results provided by the TR	Trend of tiger population shows that it is stable over the last three years. Sub-adults and cubs are increasing. However, no science based information on dispersal of the tiger population was found. The committee was informed that since last 6-7 years habitats of Mansingh (part of CTH) sanctuary has improved and now it has some resident tigers Tiger mortality in the last 3 years is as below: 2014-15: 1 2015-16: 1 2016-17: 2
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good	✓		
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Documents provided by the TR Management , Field visit impressions.	Data of last three years offences related to forest and wildlife shows that the average number of poaching cases over the last three was 30 every year. Number of tree felling during 2015-16 and 2016-17 shows a sharp decline from 107 to 55, respectively. In the last 2 years 48 cases of encroachment were registered. Grass cutting and grazing have been effectively controlled in the national park area but the pressure still continues in the sanctuaries included in the CTH. Fire Risk Management plan has been prepared.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		Field observations, interaction with Staff, TCP	There are 10 tourist routes (treated as zones) in the CTH. Zone 6-10 are kept open throughout the year. The TCP sees tourism as a serious issue. According to the TCP the number of vehicles that can enter the park at a time is only about 90/round. This number has been fixed based on carrying capacity calculations. Only morning and evening rounds are allowed in most tiger reserves as the carrying capacity calculations are based on various factors, such as road length, proneness to erosion, disturbance to key wildlife species and number of vehicle per km and temporary closure of area. The GO about tourism rules doesn't mention full day (8hrs) and half day (6 hours) tours but apparently an adhoc arrangement has been made and tourists are allowed to take full day and half day tours by paying enormous amount of money. This vitiates the very purpose of fixing carrying capacity. Besides, there are around 1600
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair	✓		
Tourism management plan is good and well monitored.	Good			
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>bed/night available in the hotels situated around the park and there is a likelihood that the bed night would increase to 2500 soon. Hence there is lot of tourism pressure on the park, and needs immediate attention.</p> <p>The visitation to the TR has doubled in the last 5 years from around 247000 visits in 2012-2013 to around 470000 visits in 2016-2017. And now there is a proposal to further enhance the Carrying capacity. This move may be counterproductive. Imprinting of birds was also seen at spots where tourists halt and spend sometime. Apparently the staff do not restrain them from feeding the birds. The team was told that even staff enjoy feeding wild birds and animals. The team also observed open air garbage burning inside the CTH by staff. Tourism data is not analysed. There are two categories of guides - the route guides (local villagers) and the naturalists (with better of knowledge and skills, are selected through a test). Occasional trainings are organized for them.</p> <p>A new post of DCF - Tourism has been created recently who is mainly involved in providing bookings and taking care of the receipts from tourism.</p> <p>The buffer is small, scattered and disjunct. There is no involvement of local people in tourism except for some menial jobs. A small number is engaged in taxi business and guides as well. The total revenue from tourism for the year 2016-2017 was around 20 Crore. More than 60 % of the tourism entry fee consists of 'Eco-development fee' but the committee could not find out how this money is being utilized.</p>
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+Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Interaction with TR Managers	The Management feels that most locals are supportive of the TR management and that the hostility of some villagers is due to mining issues. The issue of crop raiding is a burning issue and there has been no effort to tackle this. The calm may be superficial.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	27.5	59.4%
2.	Planning	07	10	70	42.5	
3.	Inputs	05	10	50	32.5	
4.	Process	06	10	60	35.0	
5.	Outputs	04	10	40	20.0	
6.	Outcomes	05	10	50	32.5	
Total		32		320	190	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

9. Sariska Tiger Reserve, Rajasthan

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		TCP (Core and Buffer) of the Tiger Reserve	The TCP has an account of the values and significance of the TR. However, there are some contradictory statements: at some places it mentions existence of a corridor connectivity while at other places it says that Sariska reserve is a completely isolated area - 'an ecological island'
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		TCP of the Tiger Reserves	The threats have been identified and enlisted in the TCP. Major threats include illegal grazing, lopping, illicit felling, poaching, firewood collection, encroachments, illegal removal of NTFP, poorly maintained boundaries of the forest areas in core and buffer, retaliatory killings of wild animals, mining, proneness to cattle-borne communicable diseases, pressure of tourism and pilgrims in the core, loss of gene-flow of the tiger reserve owing to loss of connectivity with other tiger natal areas, retaliatory attitude of villagers, spread of non-native plant species such as <i>Prosopis</i> , wild animals mortality on the State Highways - 13 and 29 A are the prominent threats to the TR (though we gathered that there are frequent road-kills, the management failed to provide us data despite repeated requests). Moreover, unabated flow of pilgrims to various temples in the core area continues to be a key disturbance element that has not been addressed at all to reduce the negative impacts. Ironically, these threats have not been analyzed properly using the available data. Hence, the threats have been captured in the TCP but not properly assessed.
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.3 Is the 'Core Area' of TR free from human and biotic interference* ?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor	√	TCP and Field Visits of the team during 4-6 th August	The core area suffers from myriad biotic pressures. There were 29 villages inside the core area. Of these, three villages - Baghani, Rotkela, and Umri have been completely relocated while six villages - Dabli, Sukola, Kankbadi, Kraska, Haripura and Debri have been partially relocated. Human and cattle population in the existing villages area exerting tremendous pressure on the TR in general and core area in particular. Pressure on the habitat due to human population is further aggravated due to presence of more than 20000 livestock heads in the villages inside the core. Grazing and lopping of dominant species- <i>Anogeissus pendula</i> around these villages has degraded the habitat. Additionally, there are about 2.5 lakh people and 2.75 lakh cattle in the 150 villages within 5 km of the Core Area, exerting tremendous biotic pressure on the core/critical tiger habitat. There are 61 mines within 1 to 500 m from the Core area and 24 mines within 100 to 300 m around Jamwa- Ramgarh Sanctuary – buffer of the TR. Bartihari, Pandupole, Nilkanth Mahadev, Taalvriksh, Udainath and several other temples are visited by about 8-10 lakh pilgrims exerting pressure on the Core Area.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Interaction with TR Managers; and documents provided by them	The core and the buffer were notified in December 2007 and July 2012 respectively and the TCP was approved in 2014; Tiger Foundation was constituted and meetings are held regularly. State Level Tiger Steering Committee has not been constituted. None of the SoPs are being followed. Translated versions (local
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite	Good	√		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

MoU and SOPs complied				language) of SoPs are not given to staff. To appease public outcry in a case of leopard attack on human beings, five leopards were captured and sent to zoo, without following the relevant SoP.
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		Notification of the unified control of buffer	Buffer came under unified control of Field Director, Sariska TR vide Government Order dated 12th May 2014.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) *?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		TCP of Core and Buffer.	The TR has a NTCA approved TCP (date of approval: 31 st December 2014). However, planning process for TCP was not participatory. There is no Corridor Plan for the TR, since it is considered an isolated area, without any connectivity either with source or sink sites. But the Committee feels that the peregrination of tiger T13 of Ranthambhore to Bharatpur indicates that some connectivity exists allowing the movement of tiger. There is a need to undertake a detailed study on this aspect.
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		TCP of Core and Buffer; Documents provided by the TR management; discussion with TR manager.	Monitoring is one of the key activities to safeguard the reintroduced tigers. There are 13 teams in place to monitor them. The teams keep track on individual tigers. For the protection of the tiger reserve, there are 123 patrolling camps in the Core and 22 camps in buffer area. The protection camps are equipped with communication facilities. Day to day monitoring is done by the beat guard and local daily wager. To ensure water availability, perennial water bodies are used to pump water into numerous seasonal natural and artificial water holes in the TR. During pinch period, tractors fitted with alternator are used to pump water from bore-wells and perennial water bodies. However, the method of water delivery causes disturbance in the TR. Moreover, due to biotic disturbances and pilgrim pressure, other biodiversity values are not under strict safeguard. Almost 50% of the boundary of the TR is not properly demarcated; biotic pressure is intense; illicit grazing and lopping is an important threat that has not been addressed adequately, thus a constant threat to floral biodiversity of the TR. Forest fire occurs from February to June. Though frequent, it is mainly ground fire localized to buffer. In 2016, a major incidence of fire took place devastating about 100-125 ha forests. A network of 296 km of fire line is maintained every year and firewatchers are deployed during the period to control the fire. The wild animals around the pilgrim sites are conditioned to human presence and feed on garbage littered around such centres. Little effort has been made for eco-development in the villages. Cattle population around the TR is vaccinated by the Animal Husbandry Department; TR management does not participate in the activity or keeps any systematic record of the vaccination done in the villages. Night traffic on the state highway SH13 passing through the Core area of the reserve has been diverted for the safety of animals.
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor	✓	TCP and interaction with TR Managers	Input of stakeholders in the planning process is negligible since they were not given the opportunity to participate in planning process. Village level eco-development micro-plans, which open up scope for participation of villagers, have not been prepared so far.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

***Score: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor	✓	TCP of Core and Buffer; discussion with TR Managers	There are some activities suggested for habitat management / improvement in the TCP. However, there is no detailed plan for weed eradication / meadow development etc. The vacant site after relocation of Bhagani village almost eight years back is under succession to woodland due to lack of management interventions. Otherwise the space could have been managed to create an edge habitat as a grassland. For water improvement works the TR management has issued instructions in July 2017 to generate information on season wise availability, to facilitate planning for development and monitoring of water holes at strategic locations. Unique habitat features such as tiger den sites have been identified by WIJ, but little input has been given by the TR management to protect or manage these sites.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.5 Does the TR has an effective Protection Strategy (PS)+ and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		TCP of Core and Buffer; discussion with TR Manager, Field visits.	The TCP has a theme plan for stepping up protection. It includes generic yet good prescriptions, but, on the ground implementation is unimpressive. Areas critical from the viewpoint of wildlife offence are not identified to take effective protection measures. Patrolling is done by beat guard and daily wagers. However, due to vacancy of beat guards, about 50% of the patrolling camps / protection camps are manned by daily wagers. Rangers and ACFs also participate in patrolling at regular intervals. Monitoring and checking of vehicles entering into the core to visit the Pandupol temple is not done that is a protection lapse. Wildlife offender may take advantage of this loophole. In two forest ranges dossiers of wildlife offenders is maintained. Home guards (without weapon) are placed in some patrolling camps. Foot and vehicle patrolling is done. Recently, night patrolling has been started. Frontline staff, including Range Officers are unaware of the SoPs issued by NTCA. During 2014-17, 2554 wildlife offence cases were booked. The offences include poaching, lopping, grazing, mining and illegal felling. At the end of the FY 2016-17, 400 cases were pending in different courts and 271 cases are under investigation. Of these, 158 cases were pending for more than 3 years at the end of 2016-17. During 2014-17, 65 arrest were made (2014-15: 15; 2015-16:28; 2016-17: 22). STPF has not been constituted for Sariska Tiger Reserve.
TR has an adhoc PS and SA.	Fair	✓		
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Documents provided by the TR Management. Interaction with staff.	During 2014-17, altogether 16 incidents of attack on human beings occurred, in which jackal, leopard and hyena were involved. Seven human being died due to leopard attack, one death happened due to jackal, while one death occurred due to unknown animal. Total compensation paid during the period was Rs. 29.4 Lakh, of which Rs. 10 lakh was paid from the Tiger Foundation. For human-wildlife
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

wildlife conflicts.				<p>conflict mitigation, the state has made provision for compensation amount. For human death Rs. 4 lakh is paid to the family of the deceased. However, there is no scheme to compensate farmers for loss of crops to wildlife depredation.</p> <p>TR has provided financial support to farmers to install solar fences for crop protection on experimental basis to two beneficiaries in two villages. One leopard was killed in March 2017 by angry mob of villagers in retaliation of a human death. During 2016-17, nine wild animals were rescued (four leopards, two hyenas, one sambar and one macaque). The rescue team of nine members headed by an ACF has a vehicle, transportation truck, 6-7 trap cages, and tranquilizing gun. The Jaipur zoo veterinarian participates in the rescue operations.</p>
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***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor	✓	Interaction with TR Managers and documents provided for the evaluation purpose.	According to the TCP, the tiger reserve is almost isolated. There is no connectivity with other forests, except the territorial forests of about 200 sq km area in Alwar division, which is still less disturbed. The Manager and staff of Alwar Division should be sensitized and trained for tiger protection, since the dispersing tiger may go to these forests. Jaipur Division forest is also contiguous. There has been no attempt to explore the movement route that was used by tiger T13 (now T6) of Ranthambhore to reach Bharatpur.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Document provided by TR management, interaction with TR managers	A total of 227 field staff are sanctioned for the TR. Current staff position is as follows; ACF: 9 (3 vacant); Range Officer: 12 (2 vacant); Forester: 21(3 vacant); Asst. Forester: 23 (7 vacant); Forest guard: 139 (27 vacant). About 30% staff are above 50 years old. There are 100 home guards for protection works. Sanctioned strength of the staff needs to be revised and approximately 100 more forest guards are required. The Work Charge staff (daily wagers) and Home Guards are not provided with field gear for effective protection work. The deputy director feels that the entire workforce consisting of home guards must be replaced by regular forest guards.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a-vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Documents provided by the TR management	Details of resources available for protection and management of the Tiger Reserve is as follows: Movable: Vehicles: Four wheelers – 15 (about 3-8 years older); Motorbikes - 35; Tractor: 2; Tanker: 3 (only 1 working in condition); 4 ACFs do not have vehicles. There are 91 wireless hand handset, 44 fixed wireless stations. Monitoring equipment include Range Finders (31), Binoculars (7), night visions binoculars (1), GPS devices (80), Compass (165), Camera traps (391). There are 114 android mobile phones. Immovable: There are 145 buildings in the tiger reserve. These are in use and sufficient in number.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

***These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents (Sanction and Utilization statements) provided by the TR management.	Budget allocated by NTCA is as follows; 2014-15: Sanctioned Rs. 402.91 lakh / Released Rs. 346.97 lakh (expenditure Rs. 281.38 lakh); 2015-16: Sanctioned Rs. 3446.40 lakh / Release Rs. 1082.12 lakh (expenditure Rs. 414.04 lakh), and 2016-17: Sanctioned: Rs. 2139 lakh / Released Rs. 1142.49 lakh (expenditure Rs. 419 lakh) respectively. The Tiger Foundation fund is around Rs.120 lakh, out of which about 10% is utilized for payment of compensation for damages caused by wild animals. This is an inappropriate practice that should be discontinued. The meager funds available in the tiger foundation account should be used in developing good relations with the buffer villagers. A part of it may be shared with the EDCs and rest should be used only for those critical activities for which budgets are not available from any other budget head. Utilization of funds has not been up to the mark.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents (Sanction and Utilization statements) provided by the TR Management	The financial resources provided to the TR by the state in the last three years is as follows; Non-plan head: 2014-15: Sanction Rs. 795 lakh / expenditure Rs. 793 lakh; 2015-16: Sanction Rs. 824.35 lakh / expenditure Rs. 803.41 lakh; 2016-17: Sanction Rs. 878.30 lakh/ Expenditure Rs. 872.75 lakh. The non-plan funds are basically for the salary of the staff and the budget for maintenance of assets is meager.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly	Good	✓		
				Plan head: 2014-15: Sanction Rs. 378 lakh / Expenditure Rs. 358 lakh 2015-16: Sanction Rs. 761 lakh / Expenditure

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

utilized.				Rs. 540 lakh
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			2016-17: Sanction Rs. 915 lakh / Expenditure Rs. 630 lakh. The non-plan funds are for plantation, subsidy for LPG, wildlife damage compensation. CAMPAs: 2014-15: Sanction Rs. 180 lakh / expenditure Rs. 169 lakh 2015-16: Sanction Rs. 609 lakh / Expenditure Rs. 216 lakh; 2016-17: Sanction Rs. 1246 lakh / Expenditure Rs. 250 lakh. Works under CAMPA funds include plantation, LPG Connection, Construction etc.

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Documents provided by the TR Management	Among NGOs WWF, Grey Film and WCT have provided vehicles (Motorcycles: 14; Four wheeler and canter: 4) to the TR. WCT has also equipped some patrolling camps. Financial incentive to relocated families was provided by WTI. Tarun Bharat Sangh organized awareness programs, Upkar Sansthan organized free health check-up camps in the buffer villages.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Document provided by TR management and interaction with TR Management	Three officials (CCF and DCFs) are trained at WII (Diploma Course). Training of frontline staff was done for monitoring of tiger and habitat. Six rangers attended M-stripes training at Corbett. No training programme has been organized by the TR management.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

***Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Discussion with TR Management	There is linkage between the management objective and performance of the staff. However, there is no performance based promotion.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Discussion with TR management. Interaction with villagers	The villagers participate in fire protection works. . Volunteers help in Phase IV monitoring, this gives opportunity to stakeholders to participate in the management of TR.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGLs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Documents provided by TR Management.	Public can register complaints through SUGAM (a state government complaint portal) and the reply is sent to the government through the Collector. There is no systematic recording of feedback/suggestions of the tourists.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Document provided by the TR Management. Interaction with villagers	A programme to wean away Bawariya community from poaching is being implemented on a small scale. The focus is on providing them with sustainable livelihood opportunities. All development works are done through EDCs and it led to generation of mandays worth Rs.6.17 lakh in the last 3 years. Dovetailing of district schemes is not being done. The EDCs don't have eco-development micro-plans.
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

*The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		TCP of Core and discussion with TR managers. Visit to the relocation site and interactions with relocated families.	The Tiger Reserve has prioritized 9 villages for relocation from the CTH. Three villages– Baghani, Rotkela, and Umri have been completely relocated, while six more - Dabli, Sukola, Kankbadi, Kraska, Haripura and Debri are partially relocated. The villages have been relocated on forest land, but the forests have not been de-reserved and the mutation of the forest land has not been done as a result legal status of the land has remained unchanged, even in the cases where relocation was done nine years ago Due to this lapse, the relocated families are not eligible for agriculture loan and they are mostly kept deprived of Panchyat's developmental activities Such inordinate delay may lead to loss of credibility and may impede the relocation process. Besides, there is no mechanism of handholding of the relocated families. Communication between the TR management and the relocated villager is negligible thus in case of any problem the villagers find themselves stranded., The progress of relocation has been very slow. Not a single village could be relocated in the last three years owing to the resistance and unreasonable demands of the villagers.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

*Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5. Output

5.1 *Is adequate information on TR management publicly available?*

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Discussion with TR management.	The TR has no dedicated website. Some information about the TR is available on state government website (www.forest.rajasthan.gov.in). Information (of public interest and public utility) on TR management is not available in public domain.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 *Are visitor services and facilities appropriate and adequate?*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Documents provided by the TR Management, Field Visit of the MEE Team.	Average number of visitors to the Reserve is around 46000. In addition, more than one lakh pilgrims also visit Pandupol and other temples located in the CTH. In 2016-17, more than 35000 vehicles visited the temples. There are 65 Gypsy and 15 Canters available for tourists. There are 44 registered guides, of which 30 are working. A seven room guest house is available (without kitchen). A nature interpretation centre has been developed near the booking counter at Sariska. The Interpretation centre is of very basic standard and lacks proper thematic interpretation sections. Visitors have to pay Rs. 20 as entry fee to the interpretation centre. There are 13 private hotels scattered around the tiger reserve catering to the need of tourists. Public conveniences are available at the booking counter. A canteen facility is available. Online booking facilities are available for tourists. The tourist Gypsies are fitted with GPS, to monitor their movement as well as violation of space and time guidelines issued by the NTCA. Drinking water is available at the booking counter. Feedback of visitors is not collected / analyzed. Garbage management system is non-existent - religious tourists spread grains, fruits and other eatables at the temple and all along the forest road leading to the temple. This attracts wild animals and the practice has altered their behavior forcing them to congregate on the roads and implore for food. The Pandupol temple management dumps
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				garbage in open cemented bins where the committee witnessed sambar, wild pigs, monkeys and birds making a beeline. The current practice of burning the garbage in the temple campus releases toxic fumes into a natural and clean environment. No effort has been made by the TR Management to contain this easily manageable problem. Discussion with the TR Management clearly indicated political interference thwarting the efforts of managing this crucial problem. However, the committee still feels that this problem can be managed easily with some firm action.
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***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Documents provided by the TR.	Independent researchers have done several researches in the tiger reserve. A research on economic valuation of the tiger reserve is under progress. Phase IV monitoring is being done with the support of WII. Impacts of biotic pressure on the TR are not being studied. Livestock vaccination is done by Animal Husbandry Department, without much involvement of the TR management.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Documents provided by the TR management, and interaction with TR officials.	There is inventory of infrastructure, but maintenance schedule is not maintained. Buildings and assets are maintained as and when funds are available. Fire lines and roads are repaired annually.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Phase IV Monitoring results, Interaction with TR Management	Sloth bear, wild dog, chinkara, and caracal have not been seen for the last few years, possibly their number has declined drastically. Population of Chowsingha is declining. Population of leopard is increasing. Prey density estimates as per the results of Phase IV monitoring in the TR is not reliable – there are unacceptable discrepancies in the density estimates in consecutive years (2014 and 2015). White-rumped vulture are found in the reserve but their population trend is not available.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

*This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Phase-IV monitoring report	Population of tiger has been stable (14) over the last three years. There was only one litter in the last three years.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good	✓		
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

*This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Documents provided by the TR management, discussion with TR Managers; Range officers, Field Visit by the MEE Team.	The threat of poaching has been addressed to some extent through day and night patrolling, manned Patrolling Camps inside the TR, and dawn to dusk tracking of tigers by dedicated teams. However, intelligence based enforcement is utterly missing. Though, it is important for an area like Sariska which is surrounded by communities traditionally involved in wildlife hunting and caused extermination of tigers from the TR at a point of time. There has not been much effort put into the TR to reduce other serious threats such as habitat degradation in the CTH from immense biotic pressure. As many as 487 families were relocated during 2008-2012, but in the last three years only a few families have been relocated. The unattended and unmonitored vehicles of visitors who enter to visit the temple deep inside the CTH pose a serious threat.
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

*Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		TCP, visit to core and buffer, visit to ticket counter and interaction with the Range officer in-charge of tourism management	The tourism plan has some excellent prescriptions but it doesn't provide guidance for monitoring of tourism impacts. The prevalent and likely impacts of visitors use are neither listed nor assessed. Prescriptions for monitoring impacts from visitor use and tourist infrastructure are missing. There is no mention of visitor safety measures or a rescue plan to deal with emergencies. The management on the ground is good as far as visitors coming to watch wildlife are concerned- tourist vehicles (taxis) are registered with the TR, Guides have been given licenses after passing out a three-week training, Nature guides have to contribute 5 % of their earnings into the Tiger Conservation Foundation. GPS based vehicle tracking device has been installed in all tourist vehicles that allows real time monitoring of their movement. But the private vehicles
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good	✓		
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>carrying the religious tourists are never monitored or checked. This particular lacuna compromises the protection of the CTH. Opening up the CTH to tourism in monsoon this year is not a good idea as would add to the myriads of pressures that this tiger reserve is already facing.</p> <p>There is an ambitious plan to launch participatory ecotourism in the buffer, which must have provisions for additional manpower to manage the activity.</p>
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**Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism*

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Interaction with villagers. Field staff.	The villagers were of the opinion that they are supportive to the tiger reserve management. However, field visits and interactions lead us to infer that there has been little impact of the villagers' support in reducing the pressure on the habitat. Recently, in March 2017, villagers in Madhogarh burned a tranquilized leopard during a rescue operation. The villagers of Indokgarh attacked the TR staff who were in the village for eviction of encroachment on forest land. Very little effort has been made so far by the TR management to establish a cordial relation with the villagers around the TR. The officers and field staff appeared under fear of a local public representative who also happens to be a minister.
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	30	Score: 187.5; %age: 58.6
2.	Planning	07	10	70	32.5	
3.	Inputs	05	10	50	35	
4.	Process	06	10	60	37.5	
5.	Outputs	04	10	40	22.5	
6.	Outcomes	05	10	50	30	
Total		32		320	187.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

10. Dudhwa Tiger Reserve, Uttar Pradesh

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		TCP (Core and Buffer) of the Tiger Reserve	Values are generally identified but not systematically assessed and monitored. DTR is the best remaining representative of the terai ecosystem in north India outside Nepal and Assam. Global and national values include several endangered species such as tiger, elephant, rhino, swamp deer, Bengal florican, hispid hare, swam partridge, Gharial and Gangetic Dolphin. The area preserves terai grasslands, wetlands and forests and forms the catchment of Sharda, Suheli, Gerwa, Ghaghra, Mohana and several other rivers in the region. Besides wildlife conservation, it has enormous opportunity for eco-tourism as well as has high socio-cultural and religious values.
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		TCP of the Tiger Reserve, Interaction with Deputy director Dudhwa and field visit of the team.	Porous and long international border with Nepal, extensive sugarcane fields just outside the TR, presence of trans-boundary roads, railway lines inside the TR, sporadic insurgency in certain parts, siltation of river and recurrent floods that has impacted vegetation by bringing in exotics and pioneers, grazing, poaching and encroachment (especially in Buffer), fragmentation of buffer by expansion of agriculture and human habitation, human-carnivore and human-elephant conflict and fire are the major threats. There are 34 villages in the core and despite efforts none of them could be relocated. There was an attempt to relocate Surma village on the northern part of the reserve but the attempt failed and the village was regularized under the forest Rights Act. These 34 villages
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>of the core and 202 of the buffer exert enormous biotic pressure on the reserve. It is surprising that the data on cattle and human population in the villages of the buffer has not been compiled yet.- not even for writing the TCP. The local villagers invade the core for Mushroom collection during monsoon and in order to get a good harvest of mushroom they set fire to the grasses around old growth trees and start a conflagration. Timber poachers from Nepal also raid the core in monsoon when most of the low lands become inaccessible for the staff. Lantana has invaded in some ranges of Dudhwa and Kishanpur but it has spread into most part of Katarniaghat part of the core. In Dudhwa overabundance of <i>Tilliacora</i> has become a problem. In some areas in Dudhwa and Kishanpur and in most parts of Katarniaghat lantana has spread. Regular annual flooding of areas owing to manmade changes to the natural drainage outside the reserve boundary has changed the vegetation of certain areas within the core. Railway line and tar roads passing through the reserve pose a serious threat to wild animals. During 2008-2017, 4 tiger, 22 spotted deer, 1 hog deer, 2 blue bull, 7 wild pigs, 1 elephant and 1 crocodile were killed on the railway track passing through Dudhwa tiger reserve.</p>
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*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		TCP of Core and field visit s	There are 34 villages in the core of the tiger reserve. The impasse created by the Forest Rights Act and the high land price in the region there seems little likelihood of their relocation. Though initial process has begun to relocate one village. A large area in Katarniaghat was under the control of Central state Seed Farm. There is extensive plantation of <i>Jatropha</i> and some other fruit-bearing species. Colonies of Seed Farm are still present. Cattle grazing pressure is high in Katarniaghat.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				There is conflict with Surma village in the Core of Dudhwa, due to FRA. The villages are instigated by some activist group from outside.
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***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Interaction with TR Managers; and documents provided by them	Buffer was notified on :20.7.2012 Core / CTH notification: 9.6.2010 Tiger conservation Foundation: is yet to be constituted. State Level Steering Committee: Not constituted so far. Staff are unaware of the SoPs issued from time to time by the NTCA. International co-ordination is not institutionalized but meetings are organized by the DM with the authorities of Nepal. During the meeting, issues related to Wildlife are also discussed.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair	✓		
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		Notification of the unified control of buffer	The Buffer has come under unified control on 1.9.2017.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		TCP of Core and Buffer.	The TCP of the TR was approved by NTCA on 2.3.2015.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		TCP of Core and Buffer; Documents provided by the TR management; discussion with TR manager. Field visits.	<p>For the protection of the tiger reserve, there are patrolling camps -18 in the core - and 14 in the buffer area. Every beat guard has two watchers. Two more watchers are deployed during fire season. The protection camps in buffer are not equipped with communication facilities. During floods large number of people enters the TR for timber felling, especially in Sathiana bordering Nepal. More number of staff is deployed in vulnerable areas during the monsoon. SSB outposts along the Indo-Nepal border also help in protection activities.</p> <p>STPF (112 jawans / currently 96 jawans) has been formed with personnel from Police Department. STPF is under the control of Field Director. The Dy. S.P. also reports to the three DDs. The STPF have been trained at Forestry Training Institute, Kanpur. Most of the Ranges have vehicles for patrolling work. Night patrolling is done on the directions of Deputy Director.</p> <p>Two projects on Bengal Florican and White Rumped Vulture have been implemented by BNHS. Rhino monitoring is being done by WWF.</p> <p>Very little effort has been made to control grazing in Katraniaghat.</p> <p>Forest fire occurs from February to June. Though frequent, it is mainly ground fire. About 987 km long fire lines exist in the tiger reserve. The fire line is maintained annually. There were 36 EDCs constituted in 2011-12 under JICA Project, but most of them are defunct. A Few EDCs are participating in management of canteen. Cattle vaccination is reportedly done by the veterinary department but data on</p>
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>vaccination in and around the tiger reserve is not available in FD's office.</p> <p>Last year, the U.P. High Court has ordered that the railway line passing through Dudhwa should be realigned or shifted. As per the order of the Court a high level meeting chaired by the cabinet secretary was held in March 2018. In this meeting recommendations are – i. not to upgrade the meter-gauge line passing through the tiger reserve and retain it as a meter-gauge line. To use the meter gauge line to operate a train for ecotourism. We hope that adequate safeguards are put in place before the ecotourism train starts operation in future otherwise it will defeat the purpose of the court order- that is to stop accidental death of wild animals on the track.</p>
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***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		TCP and interaction with TR Managers	Few individuals and Institutions were consulted during the planning process
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor	✓	TCP of Core and Buffer; discussion with TR Managers. Field visit of the team.	The TCP has detailed prescriptions for habitat amelioration, maintenance and monitoring but in practice the only major habitat intervention is the annual harrowing and burning of all the grasslands. Though, weed infestation in certain pockets is high, little effort has been made to reclaim these areas. <i>Euryle ferox</i> (Makhana) is removed from some wetlands. But, the committee did not find any protocol for monitoring the impact of such manipulation of the habitat. Arsenic contamination need to be
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				monitored in the artificial waterholes as well as natural watering points. The species composition of grasslands has not been studied to understand the impact of regular harrowing and burning. The special and unique habitats have neither been mapped nor monitored.
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***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)+ and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		TCP of Core and Buffer; discussion with TR Manager, Field visits.	There is no separate Security Plan for the tiger reserve. However, the TR prepares guiding documents on yearly basis. The DD maintains an Informer Network. The TR is aware of the sensitive areas, but data based mapping has not been done. TCP has a theme plan – Protection and Intelligence Gathering. Most of the prescriptions in the TCP are not implemented on ground. Security Audit has been done during 17-20 March 2018. STPF (of force from Police Department) has been constituted. Areas critical from the viewpoint of wildlife offence are not identified to take effective protection measures. Patrolling is done by beat guard and daily wagers. Frontline staff, including Range Officers is unaware of the SoPs issued by NTCA. The offence data pertaining to the last 3 years shows increase in poaching cases (2014-15 – 33 cases, 2015-16- 40 cases, 1015-16- 42 cases), Illicit felling cases show a marginal decrease (from 199 cases in 2014-15 to 164 cases in 2015-16. Besides there are several cases (on an average 266 cases /year) of various offences. Surprisingly the data on fire incidences and encroachment is shown as NIL. Some instances of good investigations and removal of a 35 year old illegal habitation on the forest land in the core led by the DD was brought to our notice. But systematic and planned mitigation of various threats is not visible on the ground.
TR has an adhoc PS and SA.	Fair	✓		
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Documents provided by the TR Management. Interaction with staff, NGOs and villagers	Leopard, tiger and elephant are the key species involved in the conflict. Crop damage by herbivores is common. WTI has placed a well equipped conflict mitigation team of veterinarian, biologist and sociologists (for carnivores) since 2009. Primary Response Teams of villagers have been constituted in sensitive villages. Altogether 27 cases of carnivore conflict were addressed by the team in the past 3 years. Eight tigers were captured in the landscape; four were released back into the wild. Cases of conflicts involving human and cattle is as follows- (2015-16 to 2017-18) Number and Compensation Paid: Human injury: 80 cases Human death: 21 cases Rs. 4070000 was paid in compensation. In the last three years 388 cases of crop damage were reported and a compensation of Rs. 1252704 was disbursed to the impacted farmers by crop depredation: Disbursement of crop compensation is delayed due to involvement of two departments. Villagers complained about delay in payment of compensation for cattle depredation. Amount of compensation to be paid as per the latest GO dated 1 Oct 2014 order is as follows); Rs. 5 lakh for human death Rs. 5 lakh complete disability Rs. 1 lakh partial disability and serious injury Rs. 15000 Cattle Rs. 10000 (Camel) Rs. 40000 (Mule and horse) Rs. 5-8000 (calf) Rs. 5000 (Donkey) As per the MSP for the crop loss.
TR has been able to mitigate few human-wildlife conflicts.	Fair	✓		
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

*** The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Documents provided by the TR, Interaction with TR managers	The Katarniaghat Wild Life Sanctuary, which is part of the core area of the Tiger Reserve has a strong connectivity with the Bardia National Park, Nepal. The Kishanpur sanctuary has connectivity with the Pilibhit Tiger Reserve in the west. Laljhadi-Basanta corridor has been identified between Dudhwa and Shukla Phanta WLR of Nepal. Between Kishanpur sanctuary and Dudhwa national park (both are now included in the core) there used to be a good forested corridor but today the entire patch of 16 kms is under cultivation and encroachment. The nalas are the only possible movement cover for the tigers between these two units of core but that too is in bad shape and highly disturbed. Between Katarniaghat part of the core and Dudhwa the only possible movement route is along the Mohana river but this area is also highly disturbed. In order to insure long term conservation of the tiger reserve it would be imperative for the government to take all possible measures to secure the connectivity between the three separate units of the core area. Meetings at the level of CWLW have taken place but little work has been done on the ground. Besides the internal efforts it would be important to get into an intergovernmental agreement with the government of India, government of UP and Nepal to safeguard and restore the trans boundary corridors.
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3. Inputs

3.1 *Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?*

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Document provided by TR management, interaction with TR managers	There are 12 ranges in the core and 14 in the buffer; the total number of beats is 136. The average beat size is 14.6 Sq.km. 121 forest guards and 109 wildlife guards are sanctioned for the reserve but only 86 FGs and 58 wildlife guards are posted. All 3 posts of ACF are vacant. Against 24 posts of rangers only 20 are posted and against 25 deputy rangers only 18 are working. The information provided by the TR management on officers and staff reveals that 9 posts are vacant in the officer category and 171 posts are vacant in the field staff category.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			
				According to the information provided, there are only 24 Anti poaching camp in the entire reserve. We visited some camps and found that besides drinking water, torches, wireless handsets, solar light has been provided. Most of the camp accessories like cots, bedroll and utensils have been arranged by the staff and watcher themselves. The hand pump bore wells in some camps are not very deep and may lead to arsenic poisoning. The anti poaching camps are not equipped properly. There are 110 vehicles, 157 wireless sets and 517 buildings in the reserve.

**This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor	✓	Documents provided by the TR management. Field visits	Camps are not fully equipped. Filters and ROs have been provided to some camps. There is no vehicle for STPF despite the fact that the reserve reports availability of 110 vehicles. There are no barracks for them. Shallow bore hand pumps in some camps pose health hazard as arsenic content in water is high.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

**These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*																									
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																					
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor	✓	Documents (Sanction and Utilization statements) provided by the TR management.	Budget allocated by NTCA is as follows;																					
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			<table border="1"> <thead> <tr> <th></th> <th>2014-15</th> <th>2015-16</th> <th>2016-17</th> </tr> </thead> <tbody> <tr> <td>Budgeted</td> <td>1802</td> <td>2528</td> <td>5594</td> </tr> <tr> <td>State & central</td> <td>963</td> <td>973</td> <td>1877</td> </tr> <tr> <td>Released</td> <td>817</td> <td>830</td> <td>879</td> </tr> <tr> <td>Expenditure</td> <td>817</td> <td>830</td> <td>879</td> </tr> </tbody> </table>		2014-15	2015-16	2016-17	Budgeted	1802	2528	5594	State & central	963	973	1877	Released	817	830	879	Expenditure	817	830	879	Delay in release of the fund in second and third year. The sanction is lesser than the demanded in the APO. State government is not releasing proportionate state share against funds released by the Central Government. Many important works continue to suffer owing to extreme shortage of funds.
					2014-15	2015-16	2016-17																		
				Budgeted	1802	2528	5594																		
State & central	963	973	1877																						
Released	817	830	879																						
Expenditure	817	830	879																						
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good																								
			Comprehensive	Very good																					

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.				
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***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks												
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor	✓	Documents (Sanction and Utilization statements) provided by the TR Management	<p>The financial resources provided to the TR by the state in the last three years is</p> <p>The non-plan funds are basically for the salary of the staff and the budget for maintenance of assets is meager.</p> <p>Plan head:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Allotment</th> <th>Expenditure</th> </tr> </thead> <tbody> <tr> <td>2014-15</td> <td>141.036</td> <td>141.036</td> </tr> <tr> <td>2015-16</td> <td>266.72</td> <td>266.72</td> </tr> <tr> <td>2016-17</td> <td>322.61</td> <td>322.61</td> </tr> </tbody> </table> <p>Funds have also been sanctioned under CAMPA but we could not get the information was despite several requests.</p>	Year	Allotment	Expenditure	2014-15	141.036	141.036	2015-16	266.72	266.72	2016-17	322.61	322.61
Year	Allotment	Expenditure														
2014-15	141.036	141.036														
2015-16	266.72	266.72														
2016-17	322.61	322.61														
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair															
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good															
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good															

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Documents provided by the TR Management. Patrolling camp visits.	<p>WWF: Tiger estimation (All India Tiger Estimation), Rhino monitoring, Gharial Monitoring; Staff training; Conflict mitigation (solar fencing); livelihood skill development on small scale. Conflict mitigation (Rs.10000 immediate relief). Distributed mosquito nets, jackets, vehicles (in buffer) etc.</p> <p>WTI: Staff and PRTs training for conflict mitigation; publicity through announcements in Masjid, Gurudwara etc. related to tigers; Rapid Response Team is deployed by WTI.</p>
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

of many TR level activities.				There are some NGOs who are working in the area and need to be made partner in Eco-development and conservation awareness programmes.
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4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor	✓	Document provided by TR management and interaction with TR Management	No officer / manager is trained. 103 meetings and trainings have been organised in the past three years but focused trainings on developing core skills (Wildlife crime investigation, collection monitoring of various management inputs, ocular monitoring of wildlife health reading wildlife signs and evidences, among field personnel were only a few. No long term staff development plan and training schedule has been developed.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

***Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Discussion with TR Management. Interavtion with staff in the field	In the core area there seems good linkage between the management objective and performance of the staff. But in the buffer zone the staff and the DFO are still not clear about the objectives of a buffer zone and kind of management a buffer zone requires. However, there is no performance based promotion.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor	✓	Discussion with TR management. Interaction with EDC during field visits	Some Individuals have contributed. Dr. V.P. Singh has worked in the TR on barasingha ecology and continues supporting the TR management. Mr. Jairaj Singh (Tigers Haven Society) also supports the TR.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGIs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Documents provided by TR Management.	There is online portal (Integrated Grievance Redressal System). Complaints are addressed within 15 days. Grievance Redressal Cell at Tehsil level under the monitoring of DM. The review of complaints is done at government level. Complaint Box is in Tourism Zone, but no record is kept.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	✓		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor	✓	Document provided by the TR Management. Interaction with EDCs	No interventions towards providing alternate livelihoods have been initiated after the culmination of the JICA project. Most of the EDCs are non-functional.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

**The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor	✓	TCP of Core and discussion with TR managers	There are 34 villages. Relocation of Chaltua in Kishanpur WLS is at the planning stage. Land cost is high that poses difficulty in relocation. Surma village occupied lands at two places – the village was supposed to be relocated, they occupied the relocation site without vacating the original village. As this village is an encroachment the NTCA may not provide funds for its relocation.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Discussion with TR management.	The TR has a dedicated website. (www.dudhwapark.org). But, it doesn't contain much information of public use.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Documents provided by the TR Management, Field Visit of the MEE Team.	There are three entry gates (2 in Dudhwa) and one in Katarniaghat Dudhwa campus: 14 Tharu Huts; Sal FRH; Dormitory; Meeting hall; Canteen; Library etc. Sonaripur: 4 rooms Kishanpur: 2 rooms Salukapur: Elephant Safari in the rhino area Sathiana: 4 rooms in GH and 4 loghuts; Public conveniences are available at Dudhwa and other FRH. There is inappropriate arrangement of garbage disposal. There are 41 safari vehicles for tourists. Some vehicles are run by EDCs. There are 60 registered guides.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				Online booking of accommodation facilities are available for tourists. The Nature Interpretation Centre is located at Dudhwa, but the interpretation is very minimal.
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***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Documents provided by the TR.. Interaction with staff and field visits	Phase IV monitoring has been started systematically from 2018-19. Annual census (Total count) of herbivores is conducted. But the data provided by the TR management reveals that the estimates are highly unreliable.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Documents provided by the TR management, and interaction with TR officials.	There is inventory of infrastructure, but maintenance schedule is not maintained. Buildings and assets are maintained as and when funds are available. Fire lines and roads are repaired annually.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor	✓	Interaction with TR Management and data provided by the TR	There are several threatened species in the TR, but the team could not get access to any reliable data to ascertain the population trend. The reports prepared on the basis of waterhole counts were made available to us. According to this the Swamp deer population has gone down (3789 in 2013 to 2226 in 2016). A recent survey by WWF-India estimated 59 Dolphins in 10 km stretch of Gerwa River in Katarniaghat (WWF 2012) Rhino reintroduced Rhino population has increased to 34. No systematic yearly monitoring of Gharial has been done but the data provided by the TR management suggests that there is drastic decline in Gharial population- from 204 in 2013 to 41 in 2016. BNHS is working on Bengal Florican since a long time and recently they have begun work on vultures but we did not find any reports pertaining to these studies.. The data provided by TR management about vulture population shows a stable population (190-208).
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

*This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor	✓	Documents provided by the TR	The data provided by the TR management after much persuasion reveals a declining trend of tiger – 51 in 2014, 38 in 2015 and 24 in 2016. The Phase IV monitoring has started this year and the data is yet to be analyzed.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

*This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Discussion with Dy Director. Field visits	Hopefully the threat of accidental deaths of wild animals due to accident will be reduced after the Hon'ble High Court order is implemented Encroachments have been controlled. The illegal Gauri Fanta Mandi located near the international boundary with Nepal was evicted in a drive by the TR Management diligently and strategically steered by the Deputy Director. This eviction has reduced disturbance in the area. Illicit felling has been controlled. Grazing has been controlled in the interior of the core. Cattle camps have been removed from Kishanpur area. Co-ordinated efforts with SSB have resulted into improved protection in the areas bordering Nepal. Tenure of staff at camps is fixed for one year. The proposed road along the Indo-Nepal border will disrupt the corridors and result in massive destruction of woodland habitat as thousands of trees will be felled. The disturbance created by movement of machinery and material as well as camping by a huge labour force may adversely impact the wild animals and habitats.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		Documents, Interaction with Managers and staff. Field visits	There is sufficient infrastructure for tourism but the maintenance of tourist facilities, especially those that are controlled by the TR management is poor. Garbage management is non-existent. Guides are good. There is no feedback mechanism or grievance redressal system is in place. The visitor data is not compiled, analyzed and used for managing tourists, facilities and interpretive programmes. The interpretation center is non-thematic and mediocre.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair	✓		
Tourism management plan is good and well monitored.	Good			
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

***Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor	✓	Interaction with villagers and TR staff	Local communities support in fire protection. PRT (community level institutions) constituted for conflict mitigation is supportive. Interaction with villagers leads to infer that they are not happy with the way of functioning of EDCs. 123 EDCs were constituted under JICA Project but majority of them are either dormant or defunct. There is no attempt to revive this institution. Management of the buffer zone is apparently not clear about the objective of the buffer zone and therefore there is no progress in the management of the buffer since last one year. During our visit to some EDCs the villagers expressed their dissatisfaction over non-payment of compensation for crop damage and cattle kills. Crop damage is a serious issue which has been poorly addressed so far. Some experimental attempt to deploy solar fencing has begun with the help of WWF.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	30	150 (46.9%)
2.	Planning	07	10	70	37.5	
3.	Inputs	05	10	50	20	
4.	Process	06	10	60	20	
5.	Outputs	04	10	40	22.5	
6.	Outcomes	05	10	50	20	
Total		32		320	150	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

11. Pilibhit Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Draft TCP of Core	Out of seven species of deer five species; Sambar, Cheetal, Hog deer, barking deer and Swamp deer are found in the Reserve. It is a home to vulnerable, endangered and critically endangered species such as Smooth coated otter, hispid hare, Bengal Florican, and white-rumped vulture . It still has an active connectivity with the Shukla Phanta Sanctuary in Nepal and through the Kishanpur sanctuary to the core area of Dudwa tiger reserve. The TR is also connected with Nandhaur WLS in Uttarakhand through which it is connected with Corbett landscape. It forms the catchments of Sarda river. Some study has been conducted by WWF-India to understand the status of these corridors.
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor	✓	Draft TCP of Core	The TCP mentions following threats to the TR – Poaching of prey species, silt load in rivers causing siltation in grasslands and roads and railways line traversing through Mala Range. The threats are not well documented and assessed. However, the team feels that sugarcane cultivation around the TR provides additional habitats to tiger which is a major reason for increased human-tiger conflict besides the horseshoe shaped core area that has inadequate width at several places, with fragmented and scattered buffer zone also contributes to frequent human-tiger/leopard conflicts. Poaching by bawaria tribe has occurred in the past and even retaliatory killings have taken place. Presence of several tar roads; porous international border with Nepal, recurrence of forest fire, invasion of grasslands and marshy area with woody species such as semul are some of the threats. The TR is without any functional buffer and villages are situated on both eastern and western sides aggravate the conflict situation. An area of 17.63 sq. km. notified as buffer in Sahjahanpur division is still not under unified control.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.3 Is the 'Core Area' of TR free from human and biotic interference* ?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Draft TCP of Core, Field visit of the team	There are no villages inside the notified core, but due to shape of the TR certain villages are surrounded by core zone from three sides. There are 350 villages within 3 kms of the core boundary of the TR. Data on human and cattle population in the periphery villages is not available. Not far back in time the forests of Pilibhit suffered from immense biotic an resource use pressures-, by approximately 3,34,000 people reside in the 350 villages outside the core. . Fuel wood from Pilibhit forests used to be transported to the district towns of Pilibhit and Puranpur.. A large number of grass and Grewia berry collectors, mushroom pickers, pilgrims and graziers used to visit the forests rampant cattle garzing was seen in the grasslands along the Khannot, Mala and Sharda Rivers.. But it seems that just a few years protection has been successful in mitigating these pressure to a large extent. During field visit it was observed that biotic pressure in not much visible in the interior of the core area. But the peripheral areas are still under pressure from grazing as we observed during the field visits. The grazing pressure is high along the Sarda river. Local people enter the core for collecting falsa (berries of Grewia asiatica) that is sold in the market during summer months. Wild mushroom is also collected by villagers in the rainy season. In order to augment better growth of mushroom the villagers set fire to the grasses around big trees causing a forest fire.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Documents provided by the TR	Notification of Core, Buffer and Tiger Reserve: 09.06.2014
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair	✓		Constitution of Tiger Conservation Foundation is under process. Proposal has been sent on 6.2.2016.
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			State level Tiger Steering Committee has not been formed.
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			The TCP is not approved by the NTCA. The draft TCP was sent to NTCA on 29.2.2016. The SoPs are known only up to the level of officials above Range Officer. Little effort has been made to train the staff about the implementation of SoPs.

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		Documents provided by the TR management.	Part of the Buffer (17.37 sq km) under Shahjahanpur Forest Division is still not under unified control. The remaining part of the buffer was part of the erstwhile Pilibhit forest division hence it is already under unified control.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair	✓		
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2. Planning
2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Draft TCP and documents provided by the TR.	Draft TCP was submitted to the NTCA on 29.2.2016. The NTCA has suggested few changes in it.
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Documents provided by TR Management.	Tiger Reserve has many threatened species like tiger, leopard, swamp deer, vultures, fishing cat, hispid hare, Bengal florican etc. BNHS is conducting ecological study on Bengal Florican since 2012. There is no other specific activity to safeguard the threatened biodiversity values. However, the ongoing protection and habitat improvement works of the TR might help in safeguarding these threatened species. There are 5 forest ranges and 52 beats for protection of the tiger and other biodiversity. However, the beats are larger in size (average beat size about 15 sq km). For the protection of the tiger reserve, there are 17 protection camps, 65 watch towers at strategic location for protection of the area. These are equipped with communication facilities (26 base stations, 55 mobile hand-sets, 10 vehicle wireless sets). Day to day monitoring is done by the beat guards and daily wagers. Daily patrolling is done. Senior officials also monitor the patrolling. Monthly meeting is organized with police (Superintendent of Police). Regular meetings are organized with District Administration. Co-ordination meeting with SSB every three months. Meetings with DFOs in Shukla Fanta, Nepal and management of Uttarakhand Forest department are also organized. Sharing of information on wildlife and crime with the counterparts in Nepal and Uttarakhand. Joint patrolling is also done with Uttarakhand forest department staff. To reduce the chances of spread of communicable diseases from domestic cattle to wildlife, cattle population around the TR is vaccinated. The TR management provides vaccines and facilitates the vaccination activities. GPS based patrolling is done by the staff. The tiger population is monitored regularly. The patrolling data comes to the division every month. To reduce dependence of villagers for firewood 1033 LPG connections have been provided to villagers in the last two years.
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor	✓	Interaction with TR officials	Except a few inputs from individuals, no opportunity was given to the stakeholders in the planning process.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Draft TCP of the TR. Interaction with TR managers.	The draft TCP suggests some interventions for habitat management / improvement. Removal of weeds from woodlands and wetlands, woody encroachments from grasslands areas, development and management of water hole are prescribed in the draft TCP. However, these prescriptions are not monitored. Grassland management and monitoring protocols are prescribed in the TCP, but most of these are not followed. Cool burning is prescribed to provide forage during the lean period. Monitoring of habitat management interventions has not been done so far.
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Documents provided by TR and interaction with staff.	Protection Plan, as a Theme Plan, is a part of the draft TCP. GPS based patrolling is done. Patrolling is done by frontline staff and flying squad. Special patrolling is done during monsoon. Dossier of habitual offender is being maintained at Range Office and DD
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

TR has a comprehensive and very effective PS and SA.	Very good		<p>Office. Constitution of a Tiger Cell has been prescribed in the TCP, but it has not been constituted. However, there is coordination with police and Uttar Pradesh STF for controlling the Wildlife Crime.</p> <p>In 2016, the TR conducted a successful seizure of tiger body parts and arrested 9 accused for which an appreciation letter was given to the authorities.</p> <p>The District Police has declared some wildlife criminals are repeat offenders / wildlife criminals.</p> <p>STPF has not been constituted and there is no proposal sent as of now.</p> <p>During 2014-17 altogether 31 cases of wildlife poaching were registered.</p> <p>Wildlife and habitat related Offence cases are as below:</p> <p>2014-15: 114 cases (Persons sent to jail: 57; 22 cases in court);</p> <p>2015-16: 78 cases (Persons sent to jail: 29, Cases in the court: 16);</p> <p>2016-17: 90 cases (Persons sent to Jail: 13, Cases in the court: 7);</p> <p>2017-18: 109 cases (Persons sent to jail: 33, Cases in court: 7)</p>
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**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Interaction with TR managers	<p>The tiger reserve is surrounded by agricultural fields and human habitations. As the core area is very narrow at many places, tigers use the sugarcane field around the TR as an additional space for feeding, resting and breeding. The conflict cases also occur in the adjoining Social Forestry Division. Conflict cases in the last three years is presented below;</p> <p>Human casualties</p> <p>2014-15: Death: 0, Injury: 1</p> <p>2015-16: Human death 1, Human Injury: 1</p> <p>2016-17: Death 11, Injury 3 (5 died in core)</p> <p>2017-18: Death 10, Injury 4 (6 died in core, 3 cases occurred about 25 km away from the TR boundary).</p> <p>In the last 4 years Rs. 58.39 lakh has been disbursed to the victim families.</p> <p>Cattle compensation for Pilibhit Division is</p> <p>2014-15: 4 cases (Rs.17000)</p> <p>2015-16: 10 cases (Rs.56000)</p> <p>2016-17: 17 cases (Rs. 1.04 lakh)</p>
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>From 2014 onward 2 leopards, 1 sloth bear and 4 tigers have been rescued from human dominated landscape. During the period, in about 8 cases tiger was driven back to the habitat successfully without much casualty to the animal and people. One tiger was declared man-eater and captured and sent to zoo in 2016-17. As per the GO, Crop compensation is paid only in case of damage caused by elephant and rhino. To reduce crop damage by wildlife 26 km long solar fencing in 12 villages has been done with funds from MP and MLA funds and NTCA grants.</p>
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***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Draft TCP of Core, Field Visit of the team	The corridors between the TR and other forest areas are identified. The TR has an active connectivity with the Shukla Phanta Wildlife Sanctuary in Nepal on one side and with Kishanpur Wild Life Sanctuary on another side. It is also well connected with the South Kheri Forest Division area. The area of Kishanpur Wild Life Sanctuary is a part of Dudhwa Tiger Reserve and the Forest of South Kheri Forest Division. Status of corridors has been assessed. At state level 11 wildlife corridors have been identified in the state in 2016, of which one corridor – Lagga Bagga – Tatarganj is under Pilibhit Tiger Reserve. It envisages formulating an Action Plan for restoring / strengthening of the identified corridors. However, no such plan has been prepared. Moreover, the western part of the TR is broken into two parts, the gap being about 1.5 km wide and 5 km long. Cultivation is done in the area. A study done in 2011-12 mentions movement of tigers between the two areas through the agricultural lands.
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Documents provided by TR	The personnel currently employed in the TR are as below; ACF 2 (2 vacant), Range Officer 9 (0 vacant); Forester 50 (28 vacant); Forest Guard 52 (10 Vacant); Driver 15 (12 vacant); Daily wagers 155 (26 wireless operator, 25 barriers, and 104 in beats). There are 15 forest guards who man multiple beats.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Documents provided by the TR management	Availability of resources: Vehicles: Four-wheeler 15; Tractor – 2; Motorcycle 30 Arms: .315 bore– 46 12 bore – 35 Rescue team: Tranquilizing gun- 3 Search light, cages, helmets, nets, jackets. Cages: 12 Transportation cage: 2 Communication equipment: Wireless: Fixed set – 26 Hand set – 55
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

::200::

				<p>Mobile handset – 8</p> <p>Research equipment: Camera trap – 175, Range finder – 5, GPS – 50, Binoculars etc. However, facilities in the protection camps are inadequate.</p> <p>Staff quarter, camps and residences are adequate.</p>
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**These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by TR Management. Interaction with FD	Budget allocated by NTCA in the last three years is as follows; 2014-15: Budgeted: Rs. 975.48 lakh, Sanctioned Rs. 466.10 lakh / Released Rs. 360.22 lakh (expenditure Rs. 360.22 lakh); 2015-16: Budgeted: Rs. 646.78 lakh, Sanctioned Rs. 257.166 lakh / Release Rs. 248.190 lakh (expenditure Rs. 248.90 lakh); and 2016-17: Budgeted: Rs. 1057.39 lakh, Sanctioned: Rs. 765.337 lakh / Released Rs. 466.27 lakh (expenditure Rs. 466.27 lakh) respectively. The sanctioned grant is much lesser than the budgeted / required grant. In general the CSS grants are sanctioned by July-August, state government releases it by September-October. Generally, second installment of the grant is not received.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.*

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents provided by TR Management Interaction with FD	The fund released by the State and its utilization in the last three years is given below; 2014-15: Sanction Rs. 97.98 lakh / Expenditure Rs. 97.98 lakh 2015-16: Sanction Rs. 51.31 lakh /
Some specific allocation for	Fair			

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

management of priority action. Funds are inadequate and there is some delay in release, partially utilized.				Expenditure Rs. 51.31 lakh 2016-17: Sanction Rs. 85.32 lakh / Expenditure Rs. 85.32 lakh. The released amount is utilized efficiently. CAMPAs funds are used for building maintenance, water resource development, road repair, survey and demarcation, base camp construction, fire line maintenance, watch tower construction etc. 2014-15: Sanctioned – Rs. 0 lakh, Expenditure – Rs.0 lakh; 2015-16: Sanctioned – Rs. 74.15 lakh, Expenditure – Rs. 74.15 lakh 2016-17: Sanctioned: Rs. 15.35 lakh, Expenditure – Rs. 15.35 lakh
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good		√	
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Documents provided by TR	WWF: Four wheeler – 2 Motorcycle – Uniform for staff, Mosquito nets, cycles. Support in tiger monitoring, training on wildlife crime and monitoring etc., assist in Phase IV monitoring. Wildlife Trust of India assists in human-big cat conflict in the region. A well-equipped team of veterinarian (for capture and post capture management of individuals in conflict; biologists (for tracking the animal in conflict) and sociologist (to work with communities educate them to avoid accidental encounters) is dedicated for capture of strayed out tiger and leopard in human dominated areas.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	√		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document (s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Documents provided by the TR management	One Range officer has completed Certificate Course from WII. All India Tiger Monitoring training is done for staff.
Some trained officers and few trained frontline staff, posted in	Fair	√		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

the TR.				WCCB has conducted two trainings on Wildlife Crime prevention for frontline staff.
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

***Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Documents provided by TR managers and interaction of the MEE team with staff.	There is linkage between the management objective and performance of the staff. However, there is no performance based promotion. Efforts of the Tiger Reserve have resulted into awards and appreciation by WCCB.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor	✓	Interaction with TR managers. Field visits and interactions with EDCs.	Due to frequent human-tiger conflict the communities are not much supportive to the TR management and cases on conflict between villagers and TR staff are common. JFM Committees were constituted under JICA project, but these are almost defunct now. One EDC is engaged in management of eco-tourism at Chuka. Otherwise, not much participation is visible on the ground. NGOs participate in tiger monitoring exercise.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

***The involvement of NGOs/ NGLs in population estimation may be taken into account)**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Documents provided by the TR. Interaction with TR management team.	There is online portal (Integrated Grievance Redressal System). Complaints are addressed within 15 days. Grievance Redressal Cell at Tehsil level under the monitoring of DM. The review of complaints is done at government level. The complaint register at DFO office has input of relevant information.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor	✓	Interaction with TR officials and field visit.	Joint Forest Management Committees were formed during 2012-13 under JICA project. Income generating activities. Cattle calves were given to the villagers with an idea to sell them once they get mature. Women SHGs were formed and seed money was given to them to start community farming. There was some success, but after notification of the TR these institutions are defunct. The JFMCs were changed into EDCs, which are non-functional now. Only a few villagers are involved in eco-tourism activities in Chuka.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor	✓	Documents provided by the TR; interaction with the TR officials	There is only one village (about 25 families) Musepur in Barahi Range which is inside the core area, it is a case of encroachment. Hence, NTCA is not providing funds. The TR is approaching the state authorities for relocation funding.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor	✓	Interaction with TR management	There is neither dedicated website of the tiger reserve nor publications on the TR for public.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Documents provided by the TR management. Interaction with officials, field visit.	There is not much tourist footfall in the TR. There are two entry gates – Mustafabad and Chuka. Chuka eco-tourism centre is the main centre having 6 huts (12 beds) and 1 FRH. Management of the hut is with Forest Development Corporation. Visit hours to Chuka centre is 11:00 AM-3:00 PM. For safari tourists the timing is 6-9 am and 3-7 pm. Private vehicles are not allowed for safari. Each vehicle is with a Guide. 55 local youths were trained as guides but currently 18 are working. Recyclable waste is sent to Mustafabad for further disposal. In Mahof and Chukha there are Nature Interpretation Centres but the facilities are very primitive. Tourist Carrying Capacity has been calculated. But, currently the flow of tourists is much below it. Tourism details 2014-15: Tourists 14172 2015-16: Tourists 17566 2016-17: Tourists 17360
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

*Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Documents provided by the TR management	The staff on patrolling records the signs and sightings of wildlife. The data is sent to the DD office on monthly basis. There is no system of daily monitoring. With the support of WWF Phase IV monitoring of tiger and prey is done on regular basis since 2015, but reports after 2016-17 is not available. There is no monitoring of habitat improvement interventions. There is no longterm plan for evaluating habitat status and implementing interventions. The major activity is harrowing and burning the grasslands but monitoring of the impact of these interventions is not done. Our field visit revealed that management is regularly assessing the water availability and taking measures to provide water to wild animals during the pinch period.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Interaction with TR Management	Inventory of the infrastructure and assets are in place. Maintenance schedule is maintained and is done as per the roster. Funds are made available from CAMPA.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor	✓	Documents provided by the TR.	There is no data available to compare the trend of threatened species. Hence, no idea about population trend of such species. Gharial that was once reported in this area is no more found in the rivers within the reserve, though this species is listed in the TCP. White rumped vultures are found but no systematic monitoring of this critically endangered species is being done. BNHS has been working on the ecology of Bengal florican for quite some time but till date no management recommendation has been provided to the management.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Phase IV results provided by the TR	As per the records provided, population of tiger is showing an increasing trend. 2014-15: 28+ 2015-16: 44+ 2016-17: 54+ Male to Female ratio is about 50:50. In the last two years there has been a marked increase in the number of cubs. Estimation of carrying capacity of tigers needs to be done.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good	✓		

***This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria																															
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																											
Threats to the TR have not abated but have enhanced.	Poor		Documents provided by the TR Management, Field visit impressions.	Data of last three years offences related to forest and wildlife are as follows- <table border="1"> <thead> <tr> <th rowspan="2">Key offences</th> <th colspan="3">Number of cases</th> </tr> <tr> <th>2014-15</th> <th>2015-16</th> <th>2016-17</th> </tr> </thead> <tbody> <tr> <td>Poaching</td> <td>28</td> <td>16</td> <td>14</td> </tr> <tr> <td>Tree felling</td> <td>29</td> <td>13</td> <td>18</td> </tr> <tr> <td>Encroachments</td> <td>2</td> <td>0</td> <td>0</td> </tr> <tr> <td>Fire</td> <td>0</td> <td>1</td> <td>0</td> </tr> <tr> <td>Others</td> <td>73</td> <td>48</td> <td>58</td> </tr> </tbody> </table> Collection of MFP has also gone down. Most of the threats show reduction but human-tiger conflict cases have gone up.	Key offences	Number of cases			2014-15	2015-16	2016-17	Poaching	28	16	14	Tree felling	29	13	18	Encroachments	2	0	0	Fire	0	1	0	Others	73	48	58
Key offences	Number of cases																														
	2014-15	2015-16			2016-17																										
Poaching	28	16			14																										
Tree felling	29	13			18																										
Encroachments	2	0	0																												
Fire	0	1	0																												
Others	73	48	58																												
Some threats to the TR have abated, others continue their presence	Fair																														
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓																													
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good																														

*Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		Visit of the tourists facilities and interaction with TR Managers	Tourism is in a nascent stage at present. A large number of tourists are from nearby towns and are day- visitors. Adequate facilities have been developed at Chuka. The UP forest Development Corporation manages most of the accommodations while catering and guiding is taken care by the EDC. The guides are trained but need regular yearly trainings to hone up their skills. Recyclable waste is sent to Mustafabad for further disposal.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair	✓		
Tourism management plan is good and well monitored.	Good			
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

*Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor	✓	Interaction with TR Managers	Most EDCs established during JICA project are defunct and therefore there is no platform for regular interactions with villagers. Due to increased human-tiger conflict the communities support is very poor. In the last two years
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good			
All local communities supportive of TR	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

management.				cases of human-tiger conflict has gone up and in about 10 incidents the staff have been manhandled.
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**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	22.5	167.5 (52.3%)
2.	Planning	07	10	70	37.5	
3.	Inputs	05	10	50	30	
4.	Process	06	10	60	27.5	
5.	Outputs	04	10	40	22.5	
6.	Outcomes	05	10	50	27.5	
Total		32		320	167.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.*

12. Corbett Tiger Reserve, Uttarakhand

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		TCP of the TR	Corbett TR is an important tiger conservation landscape in the country. It has highest density of tiger (9.4 tigers/100 sq km) in the world and hosts one of the very few Genetically Viable populations of wild tigers. It has one of the largest populations of Asian Elephants. The TCP includes detailed inventory of faunal diversity. The TR has 40 threatened species, of which 4 are critically endangered, 10 are endangered and 26 are vulnerable. It also hosts a significant population of gharial. Corbett is very rich in avifauna, approximately 550 species of birds are recorded. Other benefits of the tiger reserve include flood control, recharge of water table, soil fertility and sequestration of carbon. It has significant historical and cultural values too.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		TCP of the TR	The TCP documents poaching, fragmentation of habitat, human-wildlife conflict, disturbances in the corridor, tourism pressure, invasion of weeds in habitats, power line running through the TR, illicit fishing as key threats to the TR. Analysis of threats has been done and areas sensitive for various threats (Poaching, Felling, Encroachment, Fire and Human-Wildlife conflict) have been identified up to beat level in both the divisions of the TR. Sensitivity maps for poaching, encroachment, fire, illicit felling. Almost all the threats to the values of TR has been documented and assessed systematically.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good	✓		

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		TCPs of the TR, Interaction with TR officials	Four villages have been relocated from the Core – Laldhang, Jhirna, Dhara and Kothi Rau during 1994-2014. There were 157 gujjar families living within the Core Zone (Sonanadi WLS). These families have been relocated in 2015. The Kalagarh irrigation
The 'Core Area' has some human and biotic interference.	Fair			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

The 'Core Area' has little human and biotic interference.	Good	√		colony is surrounded by the core. There are cases of encroachment within this colony. The court has already ordered eviction of the illegal occupants. The human settlements in Uttar Pradesh on the southern border of the Core Area of Corbett TR exert biotic pressure on the periphery of the Core Area. The TCP highlights biotic pressure from 21 villages located in the buffer. Firewood collection pressure is within 500 meter of the core boundary. Tourism facilities in Dhikuli and Mohan areas though are not inside the Core of the TR, but they cause anthropogenic disturbance in the vicinity of the Core.
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Interaction with TR Managers; and documents provided by them	TCPs for Core, Buffer and Corridor have been approved by NTCA on 4.3.2015. Core and buffer of Corbett TR has been notified on 26.02.2010. State level Steering Committee has been notified. Tripartite MoU has been signed. Tiger Conservation Foundation has been constituted on 23.12.2010, last meeting of governing body held on 07.05.2018 The SOPs are complied with. Meetings with adjoining divisional officers, including those of the Uttar Pradesh are held and joint patrolling is being organized.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	√		

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		Interaction with TR managers. Notification of the Tiger reserve.	The Core and Buffer of the TR is under the unified control of the Field Director vide notification of the Core and Buffer of the TR.
Management of Core is under Field Director of TR	Fair			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

but Buffer is under partial control				
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	√		

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		TCPs of Core, Buffer and Corridor	TCP has been prepared by the TR and has been approved by the NTCA. The content is scientific and relevant. Stakeholder consultation was not done during the process of TCP preparation. The micro-plans of EDCs were prepared through participatory process.
TCP is under preparation	Fair			
TR has a relevant TCP	Good	√		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Interaction with TR Managers and documents provided by the TR, Field Visits of the Team	To protect the threatened biodiversity values the Core Area has been made human habitation free by relocating Gujjar families from Sonanadi WLS which is a part of the Core. Protection is one of the key activities that the tiger reserve has been doing. There are 103 Anti-poaching camps (48 in Kalagarh Div. & 55 in Ramnagar Div.) in the TR. To reduce threats from the southern boundary equipped and staffed APCs have been established at interval of about 1.5 km throughout the southern boundary. Twenty five percent of the habitat of the CTR is occupied by grasslands. However, the grassland habitat in the tiger reserve has become infested with weeds such as Parthenium, Cannabis, Lantana, Artemisia etc. and some parts are encroached upon by woody species. To manage the threat, weed removal has been done in 1080 ha area of the CTR in the last three years. Grassland burning has been stopped and strip cutting is done. Even the burning of
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	√		
TR safeguards all threatened biodiversity values.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

			<p>fire lines after cutting has been stopped to prevent accidental fires.</p> <p>Monitoring of most of the threatened species such as Gharial, vultures, otters, hog deer etc found in the TR is not being done regularly.</p> <p>865 encroachers still reside in the Kalagarh irrigation colony at Kalagarh. As per the order of the National Green Tribunal the area has to be evacuated. The concerned collector has to carry out the eviction.</p> <p>Several forms of patrolling besides beat patrolling are carried out regularly. Joint patrolling with the staff of adjoining divisions of the state as well as of UP is carried out regularly. All patrolling activities are reviewed at various levels 3 levels of hierarchy. Flag March is through villages is carried out to create awareness as well as to instill a sense of discipline towards forest and wildlife among villagers. This activity is done once in 2-3 months and is led by SDOs. Tourism activities are monitored and regulated. Dog squads (4 dogs) are used in wildlife crime detection. Drone is used for surveillance, especially for fire surveillance. A special patrolling team of women is constituted in Kalagarh Range. Toll-free numbers (1800-180-4033/9675942181) are available for public to report a crime/fire/ illegal activities</p> <p>Out of the original six elephants 3 have been retired but 9 more elephants have been added to the fleet. These elephants are deployed for patrolling.</p> <p>E-eye system was deployed in 2011 for surveillance along the southern border, but it is not fully functional now. The entire set-up has not yet been handed over to the reserve. A Special Operation Group (SOG) has been created under a range officer to detect wildlife crime and monitor habitual criminals and crimes. The criminal database is under preparation. This unit also analyses CDR information and liaise with the Central Wildlife Crime Control Bureau, New Delhi.</p> <p>Different types of barriers such as concrete wall, chain link fence, power fence have been created in some areas of the buffer boundary to protect the core against anthropogenic factors, but they are breaches at several places.</p> <p>To protect the threatened biodiversity against the threat of accidental fire about 1200 km of fire lines are maintained. There are 49 watch towers to keep surveillance on forest fire. No livestock grazing and fire was noticed during our three day field visits to various parts of the core and buffer.</p>
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* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				A tiger Cell has been established to monitor and analyses data from population estimation exercise, M-stripe surveillance and fire mapping and fire predictions. The temperature and moisture data is collected from various parts of the reserve every day and analyzed to predict fire sensitivity of different parts of the reserve.
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***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Interaction with TR Managers	Individuals and Institutions were not consulted during the planning process. There are 47 functional EDCs in the tiger reserve. Micro-plans of all EDCs for three years are prepared. The EDCs constituted in 2002 were renewed and no fresh election of members was done. The micro-plans have been made in consultation with the villagers.
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Site Specific Plans for Habitat improvement; TCP; Interaction with TR Officials	The TCP of the Core Area has a Theme Plan – Habitat Management that outlines the strategy for future management. The strategy includes maintenance of existing riparian habitat that consists of Chours. No new chours would be developed. The habitat monitoring attributes have been outlined in the TCP. The tiger reserve prepares Site Specific Plans (SSPs) for the identified chours and the management interventions in these areas. Burning of Chours have been discontinued and replaced with strip cutting (50 meter wide Strips). However, the outcome of management interventions on the grasslands are not systematically monitored. The change in grassland management was necessitated due to severe weed infestation and encroachment of the chours by woody species. Expert advice has been taken for planning the interventions. It would be wise to collect baseline information before making any habitat interventions so that parameters and indicators may be developed for systematic monitoring to assess the impacts of management interventions vis-a
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>–vis the objectives of those interventions. Water sources – both perennials and annuals are monitored to ensure year-round water availability to wildlife. The waterholes are maintained at every 2.5 sq km area. The waterholes are regularly monitored by staff.</p> <p>Habitat related issues in the Corridors are also identified however these corridors are still under various levels of threats, such as fragmentation, blockage, human disturbances etc.</p> <p>The reserve has lost two endangered species – Barsingha and dhole. The last of the Barasingha was seen in 1977 and the dhole vanished in late 2000. It would be worthwhile to find out the reasons for their disappearance from an apparently suitable habitat.</p>
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***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Documents provided by TR management, Interaction with TR officials	A Security Plan of the Tiger Reserve is prepared. The plan includes eight key components of protection in the TR. It includes, three layered patrolling duty (daily patrolling, Special Patrolling and Ambush Patrolling, Long Range Patrolling etc.). Elephants are used to patrol difficult areas where on-foot patrolling is not possible, drones are use to survey the inaccessible areas. There are 103 Anti-poaching camps (48 in Kalagarh Div & 55 in Ramnagar Div.) in the TR. To reduce threats from the southern boundary equipped and staffed APCs have been established at an interval of about 1.5 km throughout the southern boundary.
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>Poaching: 2014-15 (04), 2015-16 (02), 2016-17 (01)</p> <p>Illicit felling: 2014-15 (13), 2015-16 (11), 2016-17 (04)</p> <p>Encroachment: 2014-15 (0), 2015-16 (0) and 2016-17 (01)</p> <p>Fire: 2014-15 (0), 2015-16 (0), 2016-17 (01)</p> <p>Miscellaneous: 2014-15 (53), 2015-16 (63), 2016-17 (50)</p> <p>Status of offence cases: 2014-15 (Reported: 70, Investigation completed: 68, Complained filed: 02, Conviction: 02) 2015-16 (Reported: 76, Investigation completed: 73, Complained filed: 03, Conviction: 0) 2016-17 (Reported: 57, Investigation completed: 52, Complained filed: 05, Conviction: 0).</p> <p>As per the information provided by the DD no poaching has happened in the core area over the last 6 years.</p>
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Documents provided by the TR Management.	<p>The surrounding areas of Corbett witness many types of conflicts. Crop raiding, loss of life and property, cattle lifting etc. are the key conflicts between human and wildlife. The intensity of conflict varies along the boundary and with season. Crop damage by wild animals is prevalent in almost all areas but it is more pronounced in the southern and eastern fringes. Leopard-human conflict is frequent in adjoining divisions. The main species involved in conflicts are blue bull, elephant, wild pig and large carnivores.</p> <p>Details of conflicts in the last three year are given below;</p> <p>2014-15: Human death– 2; Injury – 7 (Total compensation paid – Rs.8.75 lakh); Livestock casualties – 106 (Compensation paid – Rs.13.952 lakh); Crop damage – 257 (Compensation paid – Rs. 2.7925 lakh)</p> <p>2015-16: Human death–3; Injury – 7 (Total compensation paid – Rs.10.75 lakh); Livestock casualties – 237(Compensation paid – Rs.28.03 lakh); Crop damage – 801(Compensation paid – Rs. 9.48457 lakh)</p> <p>2016-17: Human death–2; Injury – 10 (Total compensation paid – Rs.18.20 lakh); Livestock casualties – 379(Compensation paid – Rs.21.92 lakh); Crop damage – 129 (Compensation paid – Rs.1.75642 lakh)</p> <p>Compensation for snake bites is also given by</p>
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>the department. The compensation is paid within the time frame; there is some delay in crop compensation payment due to involvement of the revenue department.</p> <p>There is a veterinary unit in the reserve headed by a full time veterinarian attached to the wildlife rescue team. The tasks of this unit includes management of health of wild animals, human-wild animal conflicts (rescue and translocation), translocation of wild animals and camp elephants and education & training on these aspects. The vet attends the cases of conflicts in forest divisions adjoining the CTR. During 2015-18, altogether 20 wildlife rescues have been done and 14 leopards, 4 elephants and 2 tigers were rescued without any casualty. The vet is also responsible for the health management of camp elephants.</p>
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***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		TCP, Indicative Corridor Plan, press reports, Field observations by the MEE team.	An indicative corridor plan has been prepared. Following corridors are of critical importance for the long term viability of tigers in Corbett tiger reserve: 1. Rajaji National Park-Corbett passing through Shivalik Hills-Lansdowne Forest Division and the Shivalik foot hills forest of Haridwar Division 2. Kosi River Corridor (connecting Corbett Tiger Reserve to Ramnagar Forest Division) 3. Gadgadia –Terai Central (available forest connectivity through the plains) 4. Gola River corridor (North and South Kosi) 5. Terai East (Kilpura –Khatima corridor) 6. Corbett-Nandhaur-Pilibhit TR Unfortunately most of these corridors are facing severe anthropogenic pressures. The tiger reserve management and some voluntary organizations are proactively trying to contain further damage and reclaim some parts of the corridors in the Kosi corridor and Gola corridor. The Kosi corridor is threatened by expanding Ramnagar town, several villages, Sunderkhal encroachments and more than 100 hotels and eateries along the river bank. The court has recently ordered eviction of the Sunderkhal encroachers as well as the other 13 encroachments by some hotel owners. The
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>court has also ordered enforcement of strict regulation of sewage discharge into the river by hotels.</p> <p>Pollutions caused by hotels, resorts pose serious trouble for the wildlife as well as human being. To curb this menace, a 'silence zone' has been notified in 500 meters beyond the boundary of CTR under Environmental Protection Act. A committee has been formed by the State Government to check, prevent and prosecute the defaulters. But the MEE team noticed speeding by the vehicles and continuous honking of power horns by truckers on the road. There is also some attempt (with the help of a NGO – Waste warriors) to collect and dispose of garbage thrown by the commuters and eatery owners along the road inside core area, but the volume of garbage thrown by the roadside is enormous and requires law enforcement to stop this menace.</p> <p>The Local Advisory Committee (LAC) for regulation of tourism needs to be created / activated in order to ensure environment and wildlife friendly behavior and practices by the numerous hotels along the Kosi corridor.</p> <p>The encroachers and settlers at Kalagarh Hydroelectric project's colony are also to be evicted by the district administration. The courts have been extremely sensitive to wildlife issues and have been regularly passing orders that if implemented by the government may go a long way in securing the vital corridor linkages of Corbett tiger reserve. The Kotdwar –Lansdowne hill corridor is under extreme pressure from expanding town of Kotdwar and numerous villages. It would be imperative to secure at least the rivers and stream in this region so that the long ranging animals can have a safe passage along this corridor.</p>
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****Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?***

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Document provided by TR management, interaction with TR officials	The sanctioned and posted staff strength is as below; Ranger (Sanctioned – 19, Posted – 10) Forester (Sanctioned – 65, Posted – 63) Forest Guard (Sanctioned – 229, Posted – 142) All sanctioned positions of Chara cutter are lying vacant and instead daily wage workers are deployed as Chara Cutter. There are 325 daily wage workers, of which 25 are ex-army men. There is a huge gap in the sanctioned and posted frontline staff, mainly forest guards, strength. The smaller reorganized beats also necessitate deployment of additional guards. The staff deployed in the camps is provided with necessary resources. There are 35 four wheel vehicles for the officials and field duties. There are 642 buildings and the number is adequate.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

**This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)*

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Documents provided by the TR management, field visits.	There are 35 four wheelers and 26 two wheelers. There is an All-Terrain Vehicle. There are nine elephants under use. For communication there are 92 base stations, 312 handsets, and 3 repeater stations in the TR. There is sufficient number of monitoring equipment (range finders – 71; GPS-192; Camera traps-346)). Fire arms: 315 bore rifles: 56; 12 bore gun: 61; 32 bore rifle: 8; Pump Action Gun: 10. The wildlife rescue team is also equipped adequately but it would be useful to provide a customized transportation and Rapid response vehicle to the rescue team. The trap cages need improvement to prevent injuries to the captured animal. The mangers are satisfied with the availability of field resources.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

**These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents (Sanction and Utilization statements) provided by the TR management.	Budget allocated by NTCA is as follows; 2014-15: Budgeted: Rs. 600 Lakh. Sanctioned Rs. 441 Lakh. / Release Rs. 372.95 Lakh (expenditure Rs. 372.95 Lakh),
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	√		2015-16: Budgeted: Rs. 1000 Lakh. Sanctioned: Rs. 636.18 Lakh / Released Rs. 392 Lakh (expenditure Rs. 392 lakh) respectively.
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			2016-17: Budgeted: Rs. 1550 Lakh. Sanctioned: Rs. 1119.26 Lakh / Released Rs. 728.92 Lakh (expenditure Rs. 728.92 lakh) respectively.
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			There is a delay in release of the grant. The tiger reserve usually received released funds in the last quarter of the FY. There is also a gap in demanded and sanctioned amount. Funds received from Project Elephant 2016-17: Rs. 25 lakh 2017-18: Rs. 18 lakh Integrated Development of Wildlife (Expenditure) 2015-16: Rs. 6.7 lakh 2016-17: Rs. 4.74 lakh 2017-18: Rs. 9.98 lakh Tiger Conservation Foundation 2014-15: Expenditure –Rs. 48.57 Lakh 2015-16: Rs. 123.06 Lakh 2016-17: Rs. 177.50 Lakh. At present the TR gets just 20% of the funds generated from tourism activities. Recently the court has ordered that 100% of the receipts from tourism should be ploughed back into the foundation.

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents (Sanction and Utilization statements) provided by the TR Management	The financial resources provided to the TR by the state in the last three years is as follows; Plan head: 2014-15: Sanction Rs. 12.58 Cr / expenditure Rs. 12.29 Cr; 2015-16: Sanction Rs. 12.98 Cr / expenditure Rs. 12.98 Cr; 2016-17: Sanction Rs. 12.25 Cr./ Expenditure Rs. 11.66 Cr. CAMPA: 2015-16: Demanded Rs. 380.76 lakh / expenditure Rs. 166.43 lakh 2016-17: Demanded Rs. 946.73 lakh / Expenditure Rs. 526.53 lakh; 2017-18: Demanded Rs. 813.00 lakh / Expenditure Rs. 194.83 lakh. There has been a huge gap in the funds demanded from CAMPA and the actual allocation. Considering the assets and habitats of the PA that need regular maintenance there is a dire need to provide adequate CAMPA fund to the reserve.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Documents provided by the TR Management	WCT ,WWF,WTI have donated shoes, cycle, table, chairs , vehicles, night vision to Corbett staff. Indigo under their CSR program provided bags, caps, shoes, jackets, 70+ solar lights, toilets, training etc. WTI provided bike for staff There is good coordination with various NGOs and they are involved in various collaborative programs of TR. There is no financial dependence on NGOs for carrying out various activities of the park. WWF-India: helps in Phase IV Monitoring; Training; has done Solar fencing in Dhela. Traffic-India has given Legal Training Waste Warriors: Assists in waste management.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Document provided by TR management and interaction with TR Management	Field Director: Diploma in Wildlife Management from WII The TR has a training center at Kalagarh. Number of trainings in the last 3 years 2014-15: 27 trainings; 2015-16: 21 Trainings; 2016-17: 4 Trainings 837 personnel of various ranks have been trained over last three years. Staff trainings included Fire control, GPS, m-Stripes, wildlife population estimation, Crime investigation, Arms training, Snake handling, Tranquilization, Drone use, Wildlife Management etc. Besides, 211 EDC members, NGOs and guides have received training at this centre during the same period. Presently the Kalagarh training centre infrastructure is being renovated under a collaborative project with Japan.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Discussion with TR Management	All staff are subjected to annual appraisal. There is direct linkage of staff performance to the achievement of management objective. Performance of 37 percent of the staff has been in Excellent, 78 % scored very good and rest good.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good	✓		

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Discussion with TR management.	In the past 3 years good effort has been taken to revive and activate dormant EDCs. EDCs are involved in eco-development planning, information sharing, firefighting and
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation	Good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

in most of the relevant aspects of TR management.				reporting.
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			Tourism: Tourist Resort owners union are in regular touch with the TR Management. NGOs participate in population estimation. EDC Members and village children are occasionally given a free visit to the tiger reserve, Villagers participate in awareness programmes, study tour and trainings organized by the reserve on a regular basis.

*The involvement of NGOs/ NGLs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Documents provided by TR Management.	Complaints come through Samadhan Portal of the state government. The complaints are addressed timely. Visitors books/Suggestion Register are kept at tourism entry gates, but it is not monitored (e.g. complaint about stinking toilets appeared thrice - in 2014, 2016 and 2018 and was not attended to. The MEE Team also inspected the toilet and found it in bad shape.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	√		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Document provided by the TR Management and field visit of the team	Micro-plans have been prepared for the revived 47 eco-development committees. In 2016-17, 50 women were trained in jute garbage bag making. Two women's EDCs constituted in Dhela and Bijrani range. A special patrolling team of women is established in Kalagarh range is constituted. Over 500 people are engaged in safari vehicles. About 100 people are engaged as guide. To reduce crop raiding in agricultural
Few livelihood issues are addressed by TR management.	Fair	√		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				fields solar power fence and various combinations of solar fences, wall and mesh-wire have been erected in about 13 km length around farmlands. The data shows a marked reduction in crop loss in Dhela, Semal Khalia, Basitila, Sawalde, Hathidangar villages. (From 627 in 2014 -15 to 264 cases in 2017-18)
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***The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Discussion with TR managers	Gujjar settlement from Sonanadi WLS (CTH of Corbett) has been relocated in 2015. Now, there is no village in the CTH. The Kalagarh Ramganga Hydropower Project Colony is inside the Core area of the TR. Around 375 hectares land was illegally encroached upon by the individuals and organisations. The Supreme Court in 2013 while hearing a PIL directed the Uttarakhand government to clear the encroachments within six months. Following the order, 344.49 hectares of land was returned to the forest department but 31.78 hectares is still with encroachers. In 2016 the NGT has ordered to evict the encroachers and rehab legitimate dwellers from the area and the responsibility of relocation of the families living in the colony lies with the District Magistrate.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Discussion with TR management.	The TR does have a dedicated website that caters only to the requirements of Tourists and tour operators. Some Management related information is available on the state forest department Web
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			site (www.forest.uk.gov.in). The TR has published brochures and produced films on the tiger reserve.
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5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Documents provided by the TR Management, Field Visit of the MEE Team.	There are six tourist gates. Toilets and drinking water is available at all the gates. There are about 50 rooms in various forest rest houses in the CTR. There are over 140 hotels and resorts near the tiger reserve. The hotels are concentrated at Dhekuli, Savalde, Dhela, Mohan, Marchula, Chhoi. There are two Nature Interpretation Centres (Dhangarhi and Dhikala). Most of the infrastructure and facilities are well maintained and efficiently run.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good	✓		

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Documents provided by the TR.	Phase IV monitoring is going on. Elephant population monitoring is done every 2 years. The waterholes are monitored on weekly basis. Grassland monitoring has been started from 2016-17. Fire incidents are monitored. The Phase IV monitoring findings are used in planning protection strategy. Daily monitoring of staff movement, sightings and important incidents are done using GPS and analyzed on M-stripes platform in the Tiger Cell at the head quarter. The A Research and Monitoring Cell (Tiger Cell) has been established at the HQ to monitor and analyses data from population estimation exercise, M-stripe surveillance, fire mapping and fire predictions and analysis of tourist data. The temperature and moisture data is collected from various parts of the reserve every day and analyzed to predict fire sensitivity of different parts of the
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				reserve. The Tiger cell issues fire proneness alerts for the different parts of the reserve on daily basis and fire vulnerability maps are prepared.
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***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Documents provided by the TR management, and interaction with TR officials. Field visits	A meticulous inventory of all assets has been prepared. The budget for maintenance is demanded in the APOs as per the requirement. The MEE team found the roads, buildings and fire lines well maintained.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good	✓		

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Interaction with TR Management	Elephant population trend: 2014-15: 850 2015-16: 1035 (increasing) Though data on leopard is collected it has not been analyzed by WII. Present estimated populaiton is around 40 individuals, Vulture, Otters, hog deer, Gharial population trend is not being monitored systematically. The TCP mentions declining population of hog deer. Two endangered species (barasingha and wild dog) have disappeared; no effort has been made to ascertain the causes of their disappearance. Population of a few threatened species is monitored regularly.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Documents provided by the TR	Tiger population trend (Minimum no. based on Phase IV) 2013: 149 2015: 163 2017: 208 Estimated tiger population in adjoining divisions in 2016 are as under- Ramnagar: 38 Terai West: 32 Lansdowne- 40 Due to congestion and disturbance in corridors there is a problem in dispersal of tigers.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good	✓		

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Discussion with TR officials	Stringent protection measures are being taken to curb the poaching threats. In the last three years poaching cases have reduced from 04 in 2014-15 to 01 in 2016-17. Tree felling cases have also reduced from 13 in 2014-15 to 04 in 2016-17. The management claims that no poaching has been reported within the core since last 6 years. The efforts to protect the reserve and curb / manage human: wildlife conflict is very good. As per a Government Order, there could not be any change in land use within the 2 km boundary of the TR. This is likely to reduce further fragmentation of corridors. if enforced stringently. However, not many actions have been taken to make the corridors disturbance free despite several positive court orders as the land use related issues such as proliferation of hotels and upgradation of linear infrastructure outside the boundary of the reserve are not under direct control of the TR management.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

6.4 *Is visitor management appropriate?*

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor			<p>There are presently six Ecotourism Zones are available to tourists, of which certain areas of four ecotourism zones fall in the core area of Corbett Tiger Reserve. Dhikala is the most popular among them, followed by Bijrani and Jhirna. The others tourist zones are Sonanadi, Durgadevi and Dhela (opened in 2014). The Durgadevi and Dhela tourist zone lies in the buffer area. Only 19.85 sq.km of the core area is currently open to tourism.</p> <p>The TCP has excellent prescriptions for the management of tourism. The TCP visualizes a wide range of role the Local Advisory committee to curb/manage incompatible tourism related development and activities outside the core in non-forest land where the CWLW has no legal power to act. The LAC also has a role to monitor incompatible development of tourism infrastructure and resources use. In 2012 the state government has notified a "Silence Zone" of 500 metres beyond the boundary of CTR under The EPA 1986, following Hon'ble High Court order and constituted a regulatory committee under the SDM. However, the TCP prescribes more than one such committees to monitor and regulate noise pollution in hotels appeared along a 50 km stretch along the boundary of CTR.RO Ecotourism: is designated as Protocol Officer to take care of tourist related issues and VIP management. The law enforcement continues to be the responsibility of the protection staff. There are only 4 tourist accommodations where the Gharwal Mandal provides the catering services. The profit is equally shared with the Tiger reserve; in the rest the TR management does the catering. The garbage is strictly taken out of the core. All accommodations use either electricity or solar power. There are two interpretation centers in the reserve but both needs some revamping and better thematic treatment. There is also a need to integrate the guiding service to the Interpretation centers to make</p>
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good	✓		
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				interpretation a holistic programme rather than two separate activities. Tourism in Corbett continues to be tiger centric. Tourist rush to the spot when a tiger is within sight but fortunately the number of vehicles is not alarming as one sees in some other tiger reserves like Ranthambhore and Bandhavgarh. Speeding by tourist vehicles was observed. This needs to be curbed.
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***Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Discussion with DD and staff and Interaction with 6 EDC chairmen and some villagers.	The families who get direct benefits from tourism activities support the TR management during human-wildlife conflict, provide intelligence, and do not cause fire. Eco-sensitive Zone Sangharsh Samiti is fighting against ESZ, due to some misunderstanding about the concept of the ESZ. The management has engaged in dialogue with this group had has been successful in mitigating their resentment to a great extent.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	45	252.5 (78.9%)
2.	Planning	07	10	70	55	
3.	Inputs	05	10	50	37.5	
4.	Process	06	10	60	42.5	
5.	Outputs	04	10	40	35	
6.	Outcomes	05	10	50	37.5	
Total		32		320	252.5	

***Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

13. Rajaji Tiger Reserve, Uttarakhand

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Draft TCP of Core of the Tiger Reserve	The TCP is under preparation. However, Management Plan of Rajaji National Park for the period of 2012-13 to 2021-22 generally describes the values of the TR. It is also the north-western limit for the tiger in the Terai Arc Landscape. The eastern part of Rajaji is linked with Corbett, while the western portion is contiguous with forests of Saharanpur (Uttar Pradesh), Kalesar National Park (Haryana), Dehradun (Uttarakhand) and Sher Jang (Himachal Pradesh). Therefore, conservation of this area is important for the long-term viability of the tiger in the Terai Arc Landscape (TAL). It is important for tourism, interpretation, research opportunities, and conservation. Faunal species include 49 species of mammals and over 328 species of birds. Endemic and endangered plant species are mentioned in the TCP. It represents the north western limit of the distribution of the Asian Elephant, Tiger, Great Hornbill and King Cobra in India. The TR is a catchment of Song and Suswa rivers – the two major perennial sources of water along the northern border of the western flank of the reserve. The values are documented but, not fully assessed and monitored.
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Draft TCP of the Tiger Reserve, Management Plan of Rajaji National Park.	The draft TCP mention Forest fires, Illegal grazing and lopping, Illicit felling, Illicit collection of firewood, Encroachment, Poaching, Illegal fishing, Collection of non-timber forest products (NTFP), Illicit collection of Bhabar grass, Diseases and injury to wildlife and Pollution are identified as main threats that need protection. Large scale human induced changes, rapid urbanization of peripheral areas, Pollution of rivulets and , habitat owing to industrial effluents, ground-water extraction is done by the industries in SIDCUL, Threat from organized poaching and increase in pilgrim tourism are some of the threats identified in the draft TCP. The threats in the context of prey-predator relationship in the TR are also identified and the threat categories (High, Medium and Low) have been assigned to each of them. The key threats are – poaching, road/rail hits, disease transmission, loss of habitat, mortality due to electrocution and invasion of exotic weeds. However, the threats are not systematically assessed.
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor	✓	Draft TCP of Core and Management Plan of Rajaji NP. Field visits.	There are several chaks, gothias and one taungya village with 558 households within the National Park / Core of the TR. There were 1393 Gujjar families in the TR of which only 14 Gujjar families are still inside the TR (1 in Ramgarh Range and 13 in Gohri Range). Hazara Taungya having more than 150 households (over 1100 human and 300 cattle heads) is located inside the TR. There are two revenue villages - Gangabhogpur Malla and Gangabhogpur Talla enclaved in the Ghohri Range of the tiger reserve. More than 450 families, reside in these villages, spread over an area of 86 ha.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>There is no buffer in the western part of the Rajaji hence impact of the villages on the periphery of the TR is on the core zone. 69 villages in the zone of influence around the reserve with over 86000 human and 52000 livestock cause impact on the core area. There is regular ingress of timber thieves from the villages bordering the southern periphery. They don't hesitate to attack the staff when confronted.</p> <p>A settlement known as "Sapera Basti" is situated just on the boundary of the core area. It poses threat of poaching of wild animals inside the TR.</p> <p>Arms and ammunition dump is still present in the Chilla-Motichur corridor area. A new encroachment (a temple) is also present in the corridor.</p>
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***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor	✓	Interaction with TR Managers; and documents provided by the TR	<p>Notification of CTH and Buffer notification: 130/x-2-2015-19 (1) 2013, 18.4.2015</p> <p>TCF: Yet to be constituted (Under process).</p> <p>TCP is under preparation.</p> <p>No information was provided to the MEE team regarding constitution of the State Level Steering Committee:</p> <p>The MEE team was informed that Tripartite MoU has not been signed / Office was unaware of any such document.</p> <p>During the period of 23 March 2014 to 1 February 2018, a total of 11 leopards were captured after incidents of human casualties caused by them along the highway near Motichur and Raiwala (NH-72 and NH-58). Three captured leopards were sent to life-time care facilities, however in the capture and translocation of leopards (after human killing) the relevant SoP was not followed and the problem still persists, with latest death of a person on 21.05.2018.</p>
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

degradation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor	✓	Interaction with TR managers	The buffer has been notified but it is not under the unified control of the Field Director.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good			

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) +?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Draft TCP and interaction with TR officials and staff.	Draft TCP has been prepared by the Global Tiger Forum. The draft has yet to be submitted to the NTCA. Stakeholder consultation was not done during the process of TCP preparation.
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Interaction with TR Managers and documents provided by the TR, Field Visit of the Team	The Rajaji TR is beset with all sorts of issues that directly or indirectly affect habitat and wild animals. The linear infrastructure – railway track, highway, canals, power line passing through the TR fragments the habitat and possess significant threat to wildlife. Relocation of gujar families from the core has been a significant achievement but it may take a considerable time for the habitats to recover after about a century of abuse. Steps have been initiated to restore Chilla-Motichur Corridor, the 33 families in Khandgaon III village have been relocated but the army ammunition dump and encroachments in the corridor are still a
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>major hindrance. Hon'ble Supreme Court directed construction of three flyovers in the Chilla-Motichur, Laltapar and Teen Paani Corridors in 2011, deadline of completion of work was 2013, but it is still not completed and the work is stalled as of now.</p> <p>The railway line passing through the TR has been proved fatal for wild animals, especially elephants. During April 1987 to March 2018 altogether 24 elephants have died in train hit incidences. Efforts taken by stakeholders (NGOs, Rajaji TR and Railways) resulted into zero mortality of elephants almost for a decade (March 2002 to January 2013). But, after that 5 elephants have died in four incidences. Water bodies are developed for elephants. In the last three years 140 Gujjar families and 31 families from Khandgaon III village have been rehabilitated.</p> <p>For protection measures, 50 patrolling chowkies and camps are inside the TR. The camps are manned, but due to shortage of staff one beat guard is in charge of more than one beat. Many camps have been renovated. But, patrolling by the staff is not proper. Very few information pertinent to protection of the TR emanates from the regular or long-range patrolling.</p> <p>Weed removal is done to reduce threats on the habitat but no systematic information could be accessed.</p> <p>No specific measures are being taken to safeguard specific threatened biodiversity values.</p>
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**Remarks need to elaborate on the kind of safeguards and how they work or are intended to work*

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor	√	Interaction with TR Managers	Individuals and Institutions were not consulted during the planning process. The plan is being prepared by GTF. MEE team was informed that no participation of stakeholders was done.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

**The result of participation must show in the field and not merely reported as a routine exercise.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor	✓	Sanctioned APOs, Draft TCP and Field Visits	The habitat has suffered more than a century of abuse from human beings and therefore it may take nature several decades to recoup. From the point of view of tiger conservation the focus of management needs to be on maintaining and improving the riparian grasslands for attaining maximum productivity of the prey base. Unfortunately no systematic long-term plan has been prepared. Most grasslands have been infested by exotics and weeds, About 5500 ha of the forest areas and grasslands were planted with non-palatable exotic species between 1934. Habitat improvement plans in the TR are primarily focused to creation and maintenance of waterholes for wildlife. Little effort is being made on management and monitoring of riparian grasslands mainly restricted to Raus. The habitat management interventions are not monitored systematically.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

**This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.*

2.5 Does the TR has an effective Protection Strategy (PS)+ and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Draft TCP and documents provided by the TR	Chapter 10 of the TCP includes a comprehensive Security Plan (PROTECTION AND INTELLIGENCE GATHERING) for the Tiger Reserve. But, there is little analysis on the parts of the TR vulnerable to various kinds of threats. For protection measures, 50 patrolling chowkies and camps are inside the TR. The camps have been revamped and equipped and are manned, but due to shortage of staff one beat guard is in charge of more than one beat. All camps have been protected against
TR has an adhoc PS and SA.	Fair	✓		
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>elephants and carnivore by solar fence. The daily patrolling is only for 2-3 kms, and not methodical, hence ineffective. Fortnightly joint patrols are organized by the range officers, but without much documented aims and outcomes of the exercise. Monsoon patrols are carried out with the help of elephants. Elephant camp at Chilla is well maintained. Wireless network is functional and effective. Fire watchers are deployed in the villages along the periphery. Fire information is transmitted to the control rooms in respective ranges and HQ.</p> <p>Poaching: 2014-15 (15), 2015-16 (8), 2016-17 (3)</p> <p>Illicit felling: 2014-15(20), 2015-16 (58), 2016-17 (48)</p> <p>Encroachment: 2014-15 (8), 2015-16 and 2016-17 (0)</p> <p>Fire: 2015 (20), 2016 (61), 2017 (16)</p> <p>Miscellaneous: 2014-15 (143), 2015-16 (162), 2016-17 (126)</p> <p>Status of offence cases: 2014-15 (Compounded 118, Court-26) 2015-16 (Compounded,108, Court-6) The TR has hired two lawyers for assistance in the matter of court cases of the TR.</p>
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor	✓	Documents provided by the TR Management.	Leopard, tiger and elephant are the key species involved in the conflict. Cattle grazing by herbivores are common.
TR has been able to mitigate few human-wildlife conflicts.	Fair			2014-17
TR has been able to mitigate many human-wildlife conflicts.	Good			Tiger – No conflict Elephant – 3 persons killed, Rs. 9 lakh paid as relief; 1 injured, Rs. 15 thousand paid as relief; Property damage: 79 cases of crop damage, Rs. 2.30 lakh compensation given; 7 cases of building damage, Rs. 29000 compensation paid.
TR has been effective in mitigating all human-wildlife conflicts.	Very good			Livestock killing by carnivore: 61 cases during 2014-17, Rs. 1.82 lakh compensation paid Crop damage: 93 cases during 2014-17, Rs. 2.3 Lakh compensation. The Taungiya villages are not provided with any compensation. Human killed by leopard (2014-17) – 16 cases, 2 injuries. In 8 cases Rs.21 lakh

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

			<p>has been disbursed as compensation. Rests have not been given the compensation.</p> <p>Disbursement of compensation is delayed.</p> <p>In train hit 3 elephants have been killed. There is no database maintained by the TR on mortality of animals on the roads passing through the Core area. However, a recent study (5th September 2016 to 18th April 2017) conducted by researchers of Wildlife Institute of India in 30 km road stretch passing through the buffer area of the TR (Shyampur, Rasiyabad & Chidiyapur forest ranges of the Haridwar Forest Division, these ranges are contiguous with the eastern part of the Rajaji Tiger Reserve) reports 222 road-kills of four different taxa (reptiles, amphibians, birds and mammals). Total road-kills detected on the NH-74 comprised of 37 species (Reptiles= 8, Birds= 12, Mammals=17). In terms of number of road-kills, mammals (n=127) were detected the most followed by birds (n=56) and reptiles/amphibians (n=31). This shows the gravity of the problem.</p> <p>Staff is organized for rescue of animals. One trained veterinarian is posted in the reserve. There is no data on rescued animals.</p> <p>During 2014-18, 11 leopards were captured inside the TR near human habitation and 3 animals were sent to life-time care facility/rescue center. For human-elephant conflict mitigation the TR received and utilized Project Elephant funds for maintenance of solar fencing, creation of village level elephant squad and deployment of ex-army personnel for protection / patrolling on railway track between Kansro-Motichur and Haridwar.</p>
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***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Draft TCP of TR	Restoring connectivity between Eastern and Western portions of the core area is the key priority for the TR to facilitate movement of tigers and other wildlife in the landscape. Chilla-Motichur and Gohri Corridors are the two internal corridors identified for restoration. WII scientists have suggested ensuring connectivity of Rajaji National Park with Sonanadi WLS through Kotdwar to ensure movement of large animals between Rajaji and Corbett TR. Based on these information on corridors in the landscape initiatives have been taken in the Chilla-Motichur corridor. Recent relocation of Gujjars families (who had reoccupied the core) and Khandgaon III from the corridor are the two important initiatives to make the corridor disturbance free. The effort to build 3 flyovers to facilitate movement of animals between east and west part was begun in 2011 but not yet completed. No other effort has yet been made to establish secure connectivity between Rajaji and Corbett.
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

*** Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor	✓	Document provided by TR management, interaction with TR officials. Inspection of patrolling camps	The sanctioned and posted staff strength is as below; Ranger (Sanctioned – 14, Posted – 10) Deputy Ranger (Sanctioned – 16, Posted – 7) Forester (Sanctioned-49, Posted- 55; due to promotion of FG to Forester) Forest Guard (Sanctioned – 149, Posted – 86)
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of	Good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

specific TR management objectives.				There are 218 daily wage workers.
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			There is shortage of staff. Keeping in view the quantum of threats sanctioned staff strength is also inadequate. There is no Rapid Response Team. For patrolling near the roads from Teen Pani gate to Motichur gate deployment of workforce is desired. Position of Deputy Director was vacant for almost a year and half, the new Deputy Director has been transferred after about three months. There are 33 vehicles for the personnel deployed in the TR. There are 312 buildings. There is shortage of residential buildings against the sanctioned strength. The Director is apparently not fully utilizing the strengths of his Wardens and deputy director as we had the impression that it is a one-man show at present.

****This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)***

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Documents provided by the TR management and field visit	There are 10 four wheelers and 21 two wheelers. There are two adult camp elephants for the management work. There are four calf elephants rescued and kept in the elephant camp. There are 29 Fixed wireless stations, 166 handsets, 12 mobile units, 2 repeater sets, 127 guns of 12 bore, 55 rifles and revolvers 25. Information about other equipment are not available. However, the system of data storage and management is very poor. All the patrolling camps visited by the MEE team were found fully equipped. Camera traps are inadequate in number.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

****These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of***

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents (Sanction and Utilization statements) provided by the TR management.	Budget allocated by NTCA is as follows; 2015-16: Budgeted: Rs. 1031.50 Lakh. Sanctioned Rs. 376.077 Lakh. / Release Rs. 347.47 Lakh (expenditure Rs. 275.60 Lakh), and 2016-17: Budgeted: Rs. 1543.34 Lakh. Sanctioned: Rs. 428.05 Lakh / Released Rs. 182.89 Lakh (expenditure Rs. 182.85 lakh) respectively. Delay in release of the grant. There is gap in Budgeted and Sanctioned amount. The payment of wages to watchers is delayed by six months.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

⁺Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents (Sanction and Utilization statements) provided by the TR Management	The financial resources provided to the TR by the state in the last three years is as follows; Plan head: 2014-15: Sanction Rs. 77.29 lakh / expenditure Rs. 77.28 lakh; 2015-16: Sanction Rs. 38.15 lakh / expenditure Rs. 38.15 lakh; 2016-17: Sanction Rs. 111.96 lakh/ Expenditure Rs. 111.61 lakh. This is used for Fire control and protection works. The amount is grossly inadequate. The non-plan funds are basically for the salary of the staff.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Documents provided by the TR Management	WWF is involved in Tiger estimation exercise in 2018, and Tiger re-introduction in western part, 3 cameras. WTI is helping in Train hit mitigation project Relations with local NGOs are strained.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Document provided by TR management and interaction with TR Management	Veterinarian is trained in Wildlife Diploma from WII. The frontline staff have been given training on Elephant and Tiger estimation.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Discussion with TR Management	There is a linkage between the management objective and performance of the staff. However, there is no performance based promotion.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Discussion with TR management. Interaction with some members of EDC at Chilla and Chaurasi Kutiya.	There is not much public participation in the TR Management. There are 28 EDCs registered with the TR, but 15 are involved in different wildlife conservation and
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR	Good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

management.				management activities – mainly human-wildlife conflict mitigation and eco-development. Souvenir shop at Chilla is run by the EDC. Safari vehicle service for tourists is also managed by the EDC. Similarly, the canteen at Chaurasi Kutiya is also run by EDC.
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGIs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks												
Ad-hoc approach to handling complaints.	Poor	✓	Documents provided by TR Management.	Complaints come through Samadhan Portal of the state government. No other systematic method of complaint redressal. Visitor's books are kept at tourism entry gates, but it is not monitored. Year wise no. of complaint received and addressed are given below;												
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair															
Coordinated system logs and responds effectively to most complaints.	Good															
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good															
				<table border="1"> <thead> <tr> <th>Year</th> <th>Cumulative no. of complaints</th> <th>No. of complaints addressed</th> </tr> </thead> <tbody> <tr> <td>2014-15</td> <td>21</td> <td>15</td> </tr> <tr> <td>2015-16</td> <td>21</td> <td>12</td> </tr> <tr> <td>2016-17</td> <td>06</td> <td>00</td> </tr> </tbody> </table>	Year	Cumulative no. of complaints	No. of complaints addressed	2014-15	21	15	2015-16	21	12	2016-17	06	00
Year	Cumulative no. of complaints	No. of complaints addressed														
2014-15	21	15														
2015-16	21	12														
2016-17	06	00														

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor	✓	Document provided by the TR Management and field visits of the team. Interaction with some EDC members.	15 EDCs have been constituted in the TR. Some EDCs are involved in elephant driving. EDC members are involved in tourism at Chaurasi Kutiya and Chilla. The EDCs have been activated since 2017. No major input except mushroom culture and lemon grass cultivation on a very small scale has been made in Teera Taungya village. LPG connections have been given, but are not monitored.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

**The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Discussion with TR managers	There are 12 villages inside (Gohri Range 10 and 2 in Chilla Range) the CTH. Altogether, 1379 Gujjar families have been relocated at Pathari and Gaidikhatta. Around 500 families of gujjars had returned to the core area after relocation. They were evicted recently. Hazara Taungiya village relocation (140 families) is under process.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor	✓	Discussion with TR management.	The TR does not have a dedicated website. There is no information related to the TR on the state department website.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Documents provided by the TR Management, Field Visit of the MEE Team.	There are five tourist gates, of which two gates –Chilla and Motichur are most used. There is a hotel of GMVN at Chilla. Forest Rest Houses are at Chilla, Ranipur, Mohand, Beriwada and Motichur. Souvenir shop at Chilla is run by EDC. Wash rooms at Chilla and Motichur gates. Tourist bookings are done at the Office of Rajaji at Dehradun. There are 64 safari vehicles (Gypsy) – 14 in Motichur and 51 in Chilla
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction				Range.
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**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Documents provided by the TR. Interaction with managers and field visits	Wildlife Institute of India has conducted intensive research on effects of Gujjar rehabilitation from Chilla range on recovery of tiger. Long-term tiger estimation was done by the researchers of WII. Water holes are monitored. Habitat management interventions are not monitored. Phase IV monitoring has been started from 2017.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Documents provided by the TR management, and interaction with TR officials.	There is inventory of infrastructure, but maintenance schedule is not maintained. Buildings and assets are maintained as and when funds are available. Fire lines and
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for	Good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

maintenance schedule but funds are inadequate.				roads are repaired annually.
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor	✓	Interaction with TR Management	Elephant population trend: 309 in 2015; 366 in 2018. Other threatened species are not monitored. WII reports presence of 167 leopards in the reserve. Hog deer is locally extinct.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

*This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Reports of WII, Document provided by the TR management	The WII research team has conducted long-term monitoring of tigers in Chilla range post Gujjar rehabilitation from the range. During 2004 and 2012, tiger density in the range has increased from 3.1 tigers to 7.1 tigers per 100 sq. km. As per the documents provided by the TR; tiger numbers have increased from 24 in 2005 to 34 in 2016-17. However, there are only 2 tigers in the western part of Rajaji, while rest are in eastern part.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good	✓		
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

*This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.3 *Have the threats* to the TR being reduced/ minimized? Or is there an increase?*

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Discussion with TR Managers and documents provided by the management	The TR is facing threats from linear infrastructure resulting into hindrance in movement of wild animals. In the last three years relocation of Khandagaon III village from Chilla-Motihcur village is one of the key achievements. The train hit threat to elephants has resurfaced after a gap of more than a decade. The anthropogenic threats in terms of biotic pressure has got reduced to a great extent due to rehabilitation of Gujjar families from the core area, but pressure from revenue chaks, goth and gothiyas, taungiya and valmiki settlements in the core and numerous villages along the border still persists. As per the records there is a gradual decline in number of poaching cases; 15 in 2014-15, 08 in 2015-16, and only 03 in 2016-17. Similarly, tree felling and fire incidences have also reduced. The human-leopard conflict is on rise in the last couple of years. The TR does not have any Disaster Risk Management Plan to deal with emerging threats. In the last two years a lot of input has been made to revamp patrolling camps, revive closed camps and create new camps especially in the vulnerable areas. These camps have been equipped fully. Daily patrolling is carried by the camp staff but the effort is insufficient, fortnightly long joint patrolling is also carried out. The wireless system is fully functional. These efforts have certainly reduced pressure on the interior areas of the core. Adequate and innovative methods have been made to develop water sources in water deficient areas – this would certainly help reduce elephant-human conflict. Intelligence gathering, methodical patrolling skill and crime investigation skill is nun optimal among the staff. Ranipur, Berribada, Dholkhand, Chillawali villages with huge population are indulged in illicit
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>falling of teak and sal as their main source of earning. No effort had been made till recently to constitute EDCs and engage these villagers in alternate dependency reduction activities. This is also a hub of criminal activities. The decline of tiger population in the western part may have its roots in poaching- which either went undetected or unreported. No mitigation measures are in place to protect wild animals from road hits. A WII study reveals a total of 222 road-kills of four different taxa (reptiles, amphibians, birds and mammals) from 5th September 2016 to 18th April 2017. The Divisional record lists mortality of 26 leopards and 1 tiger in road hit over a decade.</p>
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***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		Discussion with TR officials and documents provided by the TR management	At present Tourism management is in the nascent stage. An area of around 154.66 sq.km. (18.87%) of the core critical tiger habitat is sunder tourism zone. The tourism zone is divided in 7 vehicular excursion circuits. There are 5 entry gates for tourists (Asarori, Mohand, Chilla, Motichur and Ranipur). Chilla-Mundal-Khara-Chilla route has the maximum tourist traffic hence needs special monitoring during peak tourist seasons to ensure compliance of regulations relating to tourism. Carrying capacity of 50 vehicles has been fixed. Only 14 registered guides are deployed at present - 10 at Chilla and 4 at Ranipur. At Chilla EDC runs the safari vehicle. Local youth are working as guides and taxi operator. From other gates private vehicles are permitted with or without guides. No visitor safety plan exists. Some Local youth run a canteen and a souvenir shop at Chilla- a part of profit is shared with EDC. The tourist number and has doubled from 23000 in 2012 to 47000 in 2017. The revenue has grown from Rs. 54 lakhs to Rs. 1 crore. Unfortunately this
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair	✓		
Tourism management plan is good and well monitored.	Good			
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				revenue is not recycled into the management of reserve as TCF has not been constituted, yet. Tourism department facility at Chilla and several hotels in Haridwar and Rishikesh and some of the rest houses are available for the tourists. At present there is no interpretation centre.
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***Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Interaction with villagers.	The TR-Community interface is weak on the ground. There are 15 EDCs on the ground and little efforts have been made to win the support of villagers. The Van Taungya villages are unable to get the benefits of the schemes for Revenue villages and at the same time they also do not get the benefits of being on the forest land. The taungya villagers do not get relief amount in case of crop depredation and cattle lifting by carnivores. Livelihood issues of communities dependent on the tiger reserve are meagerly addressed, though such interventions improve park-people relationship.
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	17.5	Score: 142.5 (44.5%)
2.	Planning	07	10	70	27.5	
3.	Inputs	05	10	50	25	
4.	Process	06	10	60	30	
5.	Outputs	04	10	40	17.5	
6.	Outcomes	05	10	50	25	
Total		32		320	142.5	

***Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.**

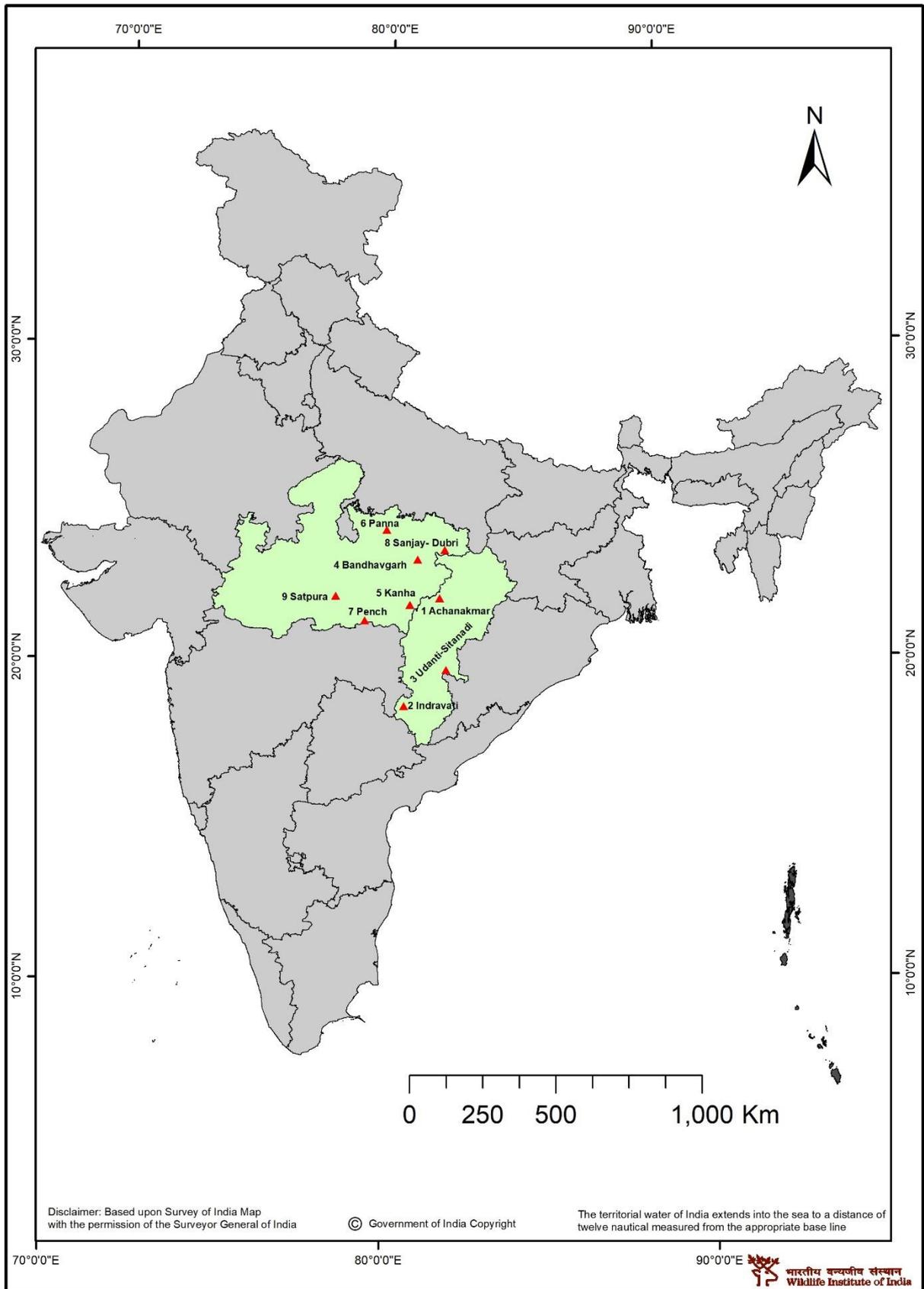
*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

CLUSTER

TWO

List of Tiger Reserves included in Cluster Two

1. Achanakmar Tiger Reserve, Chhattisgarh	253
2. Indravati Tiger Reserve, Chhattisgarh	268
3. Udanti-Sitanadi (USTR) Tiger Reserve, Chhattisgarh	281
4. Bandhavgarh Tiger Reserves, Madhya Pradesh	296
5. Kanha Tiger Reserve, Madhya Pradesh	309
6. Panna Tiger Reserve, Madhya Pradesh	323
7. Pench Tiger Reserve, Madhya Pradesh	339
8. Sanjay -Dubri Tiger Reserve, Madhya Pradesh	355
9. Satpura Tiger Reserve, Madhya Pradesh	369



* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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1. Achanakmar Tiger Reserve in India

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1. Achanakmar – Amarkantak Biosphere Reserve – Report by Tropical Forest Research Institute Jabalpur 2. Tiger Conservation Plan (TCP) of Achanakmar Tiger Reserve has been accepted by the NTCA vide letter no. F.No.1.10/2012NTCA dated 24/09/2015 3. The Educational Guide to Birds of Achanakmar Tiger Reserve 4. 40 formats (attachment no. xxx, p#547-586) are being monitored on a regular basis 5. Phase IV monitoring report 2015 (p# 323), 2016 (p#345), 2017 (p# 316). 6. Documentation of grass species in ATR (p# 462) 7. Report on waterbodies of ATR (p# 395)	1. 40 formats for biodiversity monitoring have been prepared and are used regularly based on the survey carried out by TFRI. 2. Phase IV monitoring has been carried out in 2015 – 2017. 3. TCP of ATR is available which has documented biodiversity values of ATR 4. Nature guides are regularly recording birds of ATR
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1. Map and list of villages inside the core and along the periphery of ATR are available (p#169-186). 2. List of forest fire occurrences (p#189-229). 3. List of stray dogs/ maps. 4. List of poaching cases (p#230)	1. Presence of 19 villages inside the core area of ATR is perceived as a threat. Assessment of livestock in those villages have also been listed. 2. Villages present within 10km periphery from buffer of ATR have been perceived as threats and documented. 3. Forest fires have been recorded of threat, occurrences of last four years have been listed. 4. Stray dogs from the villages inside the park have been listed. 5. List of poaching cases are available. 6. Threats have also been documented in the TCP.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

⁺This assessment should be based on number, nature and extent of threats

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		1. Map and list of villages inside the core and along the periphery of ATR are available (p# 169-186). 2. Order of road closure vide order no. 561/2017 of 19/01/2017 from the District Collector, Bilaspur (p#187). 3. List of POR (p#230) 4. List of compartments for villages (p#17) 5. List of weekly markets, details of sellers and visitors (p#21) 6. Vehicle monitoring along the Kota-Keonchi road along with map (p#23)	1. No, 19 villages are still located in the core area of ATR. 2. Kota – Keonchi road passes through the core of ATR. The road has been closed for public vehicle from 20 Jan 2017. 3. List of POR/ poaching cases also available.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones-by under the Field Director would also be taken into account.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		1. Letter no. F8.43/2007/10-2 dated 20/02/09 in Chattisgarh Gazette Notification dated 06/03/2009 (p#232) for delineation of core and buffer of ATR 2. Letter no. 113/2009-2010 in Chattisgarh Gazette Notification dated 16/10/2009 (p#236) 3. Tiger Conservation Plan (TCP) of Achanakmar Tiger Reserve has been accepted by the NTCA vide letter no. F.No.1.10/2012NTCA dated 24/09/2015 4. CG Govt. notification no. F8-21/2007/10-2 dated 30/05/2008 (p#247) 5. Three SOPs translated are - (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses,	1. Legal delineation and notification of core and buffer of ATR. 2. Tiger Conservation Foundation has been established. 3. Tiger Conservation Plan exists and has been approved by NTCA. 4. State level Steering Committee exists 5. All 7 SOPs are available and 3 SOPs have been translated into Hindi
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

+Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		1. Mentioned in TCP	1. Yes, the Field Director manages the Core & Buffer <i>except for transfer and recruitment, posting.</i>
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) +?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		1. Tiger Conservation Plan (TCP) of Achanakmar Tiger Reserve has been accepted by the NTCA vide letter no. F.No.1.10/2012NTCA dated 24/09/2015 (p#159-161)	1. TCPs of core, buffer, corridors have been approved by NTCA.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

+The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		1. Security plan as part of TCP of Achanakmar Tiger Reserve has been accepted by the NTCA vide letter no. F.No.1.10/2012NTCA dated 24/09/2015 (p#159-161) 2. Dog squad was seen by the Committee 3. Weed eradication carried out in areas, details in p#494.	1. Security plan of ATR exists. 2. Dog squad exists 3. As per security plan, STPF patrolling, daily patrolling, barrier checking and recording, monsoon patrolling, weekend check-drill, joint operations along with territorial forest divisions, elephant patrolling in remote areas, and maintenance of wireless network are there, as per discussion with FD & DFD of ATR and field verification. 4. Weed eradication is regularly carried out. 5. No ecotourism set-up are running within the core/ buffer of ATR, as per discussion with FD & DD. 5. Buffer of ATR is a narrow strip and does not encompass the entire core area.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

⁺Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		1. Local Advisory Committee headed by Commissioner, Bilaspur vide meeting minutes. 2. Minutes of LAC meeting dated 14/03/2015 (p#259-274), 22/12/2016 (p#275-277) 3. Minutes of TCF are attached	1. Stakeholders include – local communities, district administration, veterinary department, members of the Local Advisory Committee 2. Regular meeting of TCF is conducted
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

⁺The result of participation must show in the field and not merely reported as a routine exercise.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		1. Grassland survey report with prescriptions for future management (p#462-493). 2. List of waterbodies (p#395-412).	1. Habitat management is being carried out as per recommendations made in the TCP. 2. Grassland management is being done as per prescription. 3. Management of waterbodies are planned as per the report and recommendations. 4. No species specific habitat management plans are there. 5. Tiger habitat management is done based on daily patrol records, in M-STriPES format.
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		1. As per discussion with the FD, DD and SDO of ATR. 2. TCP. 3. STPF details needed 4. Offence records of 2014-2016 (p#230) 5. Prosecution and conviction lists.	1. Security Plan is part of the TCP. 2. Protection strategy includes monsoon patrolling, STPF roster, patrolling by elephants, weekend check-drills, joint patrolling with territorial forest divisions and dog patrolling. 3. Security Audit is yet to be done.
TR has an <i>ad-hoc</i> PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		1. List of cattle lifting cases - 34 cattle lifting cases in 2014-15; 50 in 2015-16; 63 in 2016-17 (p#56)	1. HWC includes cattle lifting. It is managed by timely (within 2 weeks) payment of all <i>ex-gratia</i> . 2. No human casualty or wild animal death has been recorded.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		1. Letter no. 9/16/99-CS/BR dated 30/03/2005 notifies ATR as part of AABR (p#309) 2. ESZ proposal submitted.	1. ATR constitutes core of the Achanakmar – Amarkantak Biosphere Reserve. 2. ATR is part of the Central India Satpuda Maikal Landscape. Connectivities include Kanha – Achanakmar, Bandhavgarh – Achanakmar 3. Corridors are identified by WII – NTCA. 4. Kanha – Achanakmar corridor assessment has been carried out with WWF-India, provides as baseline. 5. Forest Working Plans and FDC Plans have not documented corridor conservation plans yet. 6. ESZ proposal has been sent to NTCA, pending approval. Landuse rationalization is included in the ESZ plan. 7. SGI is not needed for the only road passing through the core of ATR as vehicular movement along the Kota-Keonchi road has been restricted only for departmental and government vehicles.
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		1. As per discussion with authorities of ATR and list provided (p#62)	1. Field Director – 1 (filled) 2. Dy. Director – 1 (filled) 3. Assistant Director – 2 (filled) 4. Range Officer – 9 (6 are filled, 3 are vacant); as of 18 Nov 2017, only 2 RO positions are filled, and 7 posts are vacant. 5. Range Asst – 31 (28 filled) 6. Forest Guards – 108 (66 filled, 44 vacant), as of 18 Nov 2017, 82 are filled. 7. 2 Paidal/ Foot Guards per beat (total 216 PGs) 8. 6 STPF members per Range (total 7 teams, and 42 personnel) 9. 35 barriers have 70 daily wagers 10. 19 permanent wireless sets have 38 daily wagers 11. 11 patrolling camps have 22 daily wagers 12. 5 residences cum watch towers have 10 daily wagers 13. Elephant mahouts – 6 Majority of the frontline staff have access to GPS, wireless handheld units, compass, binoculars, digital camera, range finder
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

*This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		1. As per discussion with authorities of ATR and list provided (p#64-65)	1. Resources are adequate as per the list mentioned below - <u>Vehicles</u> a) Maruti Gypsy – 1 b) Scorpio – 1 c) Car – 1 d) Bolero – 6 e) Bolero camper – 4 f) Ambulance – 1 g) TATA 407 – 3 h) Water tanker – 1
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

management objectives.				i) Motor cycles - 26 <u>Instruments</u> a) GPS – 99 b) Compass – 101 c) Range Finder – 86 d) Wireless handsets – 137 e) Digital camera – 52 f) DSMD – 6 g) Fixed wireless sets – 19 h) Binoculars – 9
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* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is <i>ad-hoc</i> , funds are inadequate and seldom released in time and not utilized.	Poor		1. UC of FY15 vide letter no. 1455 dated 24/07/2015 from the FD, ATR	1. Funds received from NTCA in FY15 was Rs.478.432 Cr, and amount utilized was Rs.469.759 Cr.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair		2. UC of FY16 vide letter no. 1361 dated 23/06/2016	2. Funds received from NTCA in FY16 was Rs.370.466 Cr, utilized amount was Rs.314.518 Cr.
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓	3. UC of FY17 vide letter no. 1716 dated 11/05/2017	3. Funds received from NTCA in FY17 was Rs.497.102 Cr, utilized amount Rs.384.237 Cr.
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good		4. As per discussion with the authorities of ATR.	4. Funds received from NTCA in FY18 is Rs.470.220 Cr, utilized amount till date is Rs.239.570 Cr. - Funds are related with priority actions. - Funds were not adequate. - Fund release was delayed (FY17 funds were related in Sep) - Full amounts have not been released ever, in the last three years.

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is <i>ad-hoc</i> , funds are inadequate and seldom released in time and not utilized.	Poor		1. UC no. 983 dated 21/05/2015 of FD, ATR 2. UC no. 1112 dated 16/05/2016 3. UC no.1054 dated 05/04/2017 4. Sanction letters and UC of NREGA funds	<u>State funds for ATR</u> 1. State funds received in FY15 was Rs.400.270 Cr and amount utilized was Rs.399.310 Cr 2. State funds received in Fy16 was Rs.426.210 Cr and amount utilized was Rs.426.053 Cr 3. State funds received in FY17 434.72 Cr and amount utilized was Rs.434.57 Cr. 4. State funds received in FY18 was Rs.249.830 Cr and amount utilized till date is Rs.93.770 Cr <u>NREGA funds</u> 1. Received amount in FY16 was Rs.298.930 lakh amount spent was nil 2. Received amount in FY17 was Nil, and amount spent was Rs.62.890 lakh 3. Received amount in FY18 was Rs.253.560 lakh, amount spent till date is Rs.16 lakh
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		1. List of support from NGOs is attached	1. WWF-India provided following support – a) Documentation of avi-fauna of ATR b) Field vehicle c) Technical support 2. Support received from Nature Club, Bilaspur 3. WTI provided technical and equipment support
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		1. Discussion with the park management	1. No staff have required training from WII. However, regular orientation courses on Phase IV monitoring of tigers, co-predators and prey have been attended by more than 50 frontline staff of ATR. 2. Forensic training has also been attended
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc . The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		1. Discussion with officials of ATR.	1. Staff motivation has been moderate. 2. Awards and recognitions for the frontline staff have been given by the Field Director, ATR.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		1. Discussion with the authorities of ATR.	1. Effective participation of EDCs have been noted. 2. Public participation in fire management has been reported. 3. Population estimation of key species is done regularly in participation with local public. This helps in getting local knowledge of trails and tracks, and also helps in
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				brining in credibility of the findings. 4. Closure of vehicle movement along the Kota-Keonchi road was supported by all villagers of ATR. This has reduced vulnerability of road kill, fire incidences and other wildlife offences.
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**The involvement of NGOs/ NGIs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		1. Discussion with the authorities of ATR.	1. Visitors book is kept at entry gate, Achanakmar, which are seen occasionally by the senior management of ATR. 2. Website of ATR shows email ID for suggestions, however, nothing has been received so far. 3. Year-wise break-up of RTI.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	✓		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		1. Discussion with the authorities of ATR.	1. Skill development of local community members carried out. 2. Compensation for non-collection of <i>tendu-patta</i> has been provided
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

**The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		1. Discussion with authorities of ATR. 2. Letter (p#169-186) of village-wise list. 3. Letter on new set up.	1. Planning process of relocating all 19 villages are ongoing. 2. Funds for 3 villages are awaited, and rest have been requested for. 3. New set up for facilitating voluntary village relocation is being sought from the State.
Plans have been made but no implementation	Fair	✓		
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		1. Baghba magazine copies, distribution list.	1. A quarterly magazine from ATR, named Baghba showcases achievements and steps taken for conservation. Circulation of the magazine is around 550. 2. Tourism Brochure of ATR is available.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		1.	1. Moderate facilities for accommodation available. 2. 22 rooms available at Shiv Tarai for stay 3. 16 trained guides 4. 3 Maruti Gypsy vehicles are available for tourists 5. Online booking facility available for tourists accommodation at Shiv Tarai 6. Visitor facilities include toilets, drinking water for tourists at 3 points.
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		1. Discussion with the authorities of ATR. 2. Grassland report (p#462-493)	1. Research carried out by TFRI has been carried out as part of AABR included ATR as its core area. 2. Phase IV monitoring is being carried out by the management of ATR. 3. One-time bird survey was carried out by WWF-India in 2015. 4. Extensive research & monitoring have not been carried out by any external agency. 5. Grassland management is carried out with research inputs from Prof. Muradkar, Amravati University.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		1.	1. Weekend check-drill is carried out for physical assets and protection. 2. Difficulties in vehicles are major, as budgets are not released on time.
Inventory maintenance is <i>ad-hoc</i> and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		1. Phase IV estimation records and discussion with authorities of ATR.	1. Herbivore population estimation data shows that populations of spotted deer, gaur, sambar & barking deer have increased.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		1. Phase IV estimation records and discussion with authorities of ATR.	1. Minimum tiger numbers from Phase IV monitoring are 4 (2015); 5 (2016); 5 (2017). Three tiger cubs have also been recorded in 2017.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair	✓		
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		1. Discussion with management of ATR.	1. Threats have been decreased by putting STPF, monsoon patrolling, deployment of dog squad, foot-guards, closure of Kota-Keonchi road, manning of barriers, relocation of 6 villages and 3 in the pipeline, effective wireless communication, smooth movement. 2. Annual fire management plan is prepared based on previous three years' data.
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

6.4 Is visitor management appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely ad-hoc.	Poor		1. Discussion with ATR management.	1. Carrying capacity of ATR has been done, and present visitor number is less than 10% of CC.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair	✓		
Tourism management plan is good and well monitored.	Good			
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

+Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		1.	1. Yes, local communities are generally supportive, but disgruntlement is nurtured by few local elements and some organizations.
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	40	Score 202.5 & 63%
2.	Planning	07	10	70	50	
3.	Inputs	05	10	50	35	
4.	Process	06	10	60	30	
5.	Outputs	04	10	40	22.5	
6.	Outcomes	05	10	50	25	
Total		32		320	202.5	

***Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2. Indravati Tiger Reserve, Chhatisgarh in India

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1. Tiger Conservation Plan (TCP) submitted to CWLW & PCCF (WL) vide letter no. DM/412 dated 16/02/2017 for the period of 2013-2014 to 2017-2018. Approval from NTCA is awaited as it had sought comments from the CWLW, Chhatisgarh (vide letter No. FN 1-4/2011-NTCA dated 20/04/2017).	1. Some values are documented in the TCP Chapter I (1.3). 2. Assessment or monitoring of values have not been done.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1. TCP section 7.2.2.3 identified threats.	1. Threats have been identified but documentation and assessments are to be done. Actions for mitigating threats are lacking. 2. Presence of Maoists inside the core of the Tiger Reserve is a challenge.
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor	✓	1. List of villages – 56 in the Core and 81 in the Buffer. Process of relocating the villages to outside the forests have not started yet. 2. Details of livestock presence in the Reserve are attached.	1. The Core and Buffer are not free from human and biotic interference.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones by under the Field Director would also be taken into account.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		1. Core and Buffer Gazette Notification via F8-43/2007/10-2 dated 20 th Feb 2009.	1. Core and Buffer are legally delineated.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair	✓	2. TCF via gazette notification no. F8-20/2007/10-2 dated 6 Sep 2012.	2. Tiger Conservation Foundation is existing.
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good		3. Tripartite MoU was submitted to the PCCF vide letter no. WL/Exp/1004 dated 10/04/2017.	3. Tripartite MoU is existing.
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			4. State Level Steering Committee exists. 5. SOPs are not translated, no action has been taken regarding that.

*Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		1. Letter no. 2974/2940/2012/10-2 dated 24/08/2012	1. Core and Buffer are under unified control of the Field Director
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		1. Tiger Conservation Plan (TCP) submitted to CWLW & PCCF (WL) vide letter no. DM/412 dated 16/02/2017 for the period of 2013-2014 to 2017-2018. Approval from NTCA is awaited as it had sought comments from the CWLW, Chhatisgarh (vide letter No. FN 1-4/2011-NTCA dated 20/04/2017).	1. TCP was submitted by Indravati Tiger Reserve personnel to the CWLW, Chhatisgarh, and thereafter it was forwarded to NTCA. NTCA has sought clarifications and approval of TCP is not in place yet.
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.2 Does the TR safeguard the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor	✓	1. As per discussion with the Field Director and the Dy. Director.	1. Threats have been identified. It does safeguard last remaining population of wild buffaloes.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		1. Proposal for constituting a Local Advisory Committee is in place, however, final nod is awaited. Letter no. GB/ 2007 dated 20/07/2014.	1. 35 EDCs are constituted and are functional. 3. Revolving funds from the CCF are used for loans from time to time. 3. Functionality of LAC is needed.
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		1. Discussion with the Dy. Director of ITR.	1. Habitat management programmes are planned, as per the Annual Plan, especially for grassland, waterbodies.
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

*This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as *Lantana sp.*, *Mikania sp.* etc. would be examined.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor	✓	1. Discussion with the Dy. Director. 2. List of POR from FY15-16 with 14 cases; 16-17 nil; 17-18 – 16. Total 30 cases in three years.	1. Protection Strategy is present in the TCP. However, a comprehensive strategy to tackle all kinds of threats is lacking, due to massive inadequacy in the protection infrastructure on the face of Leftist Extremist Groups. 2. Security Plan is not existing. 3. Security Audit has not been done. 4. STPF is not constituted.
TR has an <i>ad-hoc</i> PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		1. Documents shown by the Dy. Director of ITR.	1. Total number cases of human injury from 2014-2017 was 7, and Rs.177,381.00 has been spent for ex-gratia. 2. Total number of cattle death from 2014-2017 was 45, total amount paid for ex-gratia Rs.621,000.00
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		1. Discussion with the Dy. Director. 2. Report titled: Study of Netwrk of Wildlife Reserves in Eastern Madhya Pradesh using Remote Sensing Data” by S. S. Parihar, N. Chaturvedi, S. Panigrahy & P. C. Kotwal.	1. Corridors linked with ITR have been identified between Indravati and Kanha – Achanakmar linkage. There is also linkage between Indravati and Sitanadi-Udanti.
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use ‘Smart Green Infrastructure’?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		1. Discussion with Dy. Director, Indravati.	1. Sanctioned post of Field Executives is 110, and 09 posts are vacant. This is alright under the present circumstances.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

*This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		1. Discussion with the Dy. Director, Indravati Tiger Reserve.	1. Total vehicles – 9; including one water tanker and one rescue van. 2. Digital camera – 29; GPS – 58; camera traps – 71; Compass – 48; Binoculars – 39; Rangefinder – 9; Night Vision Device – 1; triangular sampling monitoring scale – 75; local scale – 26; Pedometer – 1; Power bank or charger – 20; Computer 13. Wireless is not functional. These are sufficient in the present circumstances. List of buildings – 75 nos, in buffer and headquarters.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair	✓		
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is <i>ad-hoc</i> , funds are inadequate and seldom released in time and not utilized.	Poor		1. As per progress report.	1. FY 2016, Central allotment was Rs.1299.07 lakh and expenditure was Rs.1246.76 lakh; FY 17, Central allotment Rs.1600.968 lakh and expenditure was Rs.1,535.589 lakhs; FY 18 Central allotment was Rs.1591.622 and expenditure was Rs.1546.163
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally, funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is <i>ad-hoc</i> , funds are inadequate and seldom released in time and not utilized.	Poor		1. As per progress document	1. FY2016 State allocation was Rs.1132.572 lakh and expenditure was Rs.1080.278 lakh; FY17 Rs.1300.761 lakh and expenditure was Rs.1265.583; FY18 Rs.1260.202 and expenditure was Rs.1214.772 2. CAMPA funds from FY16-FY18, allotment Rs.449.402 lakh, and expenditure was Rs.118.890. (Rs.202.010 lakh was allotted in the month of March 2018).
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor	✓	1.	1. NIL support
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		1.	1. FD, DD and ROs are not trained in wildlife conservation but 17 Game Guards/ Forest Guards are trained in wildlife conservation at SFSRI, Raipur in a six months course.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc . The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		1. Discussion with the Dy. Director.	1. Awards are provided to the frontline staff by the Field Director on special occasions.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		1. Discussion with Dy. Director of Indravati.	1. EDCs and LAC members are helpful for TR management.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGLs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		1. Complaint Register.	1. Complaint register is being maintained and one complain was registered between 2015 – 2017; enquiry is in progress.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	✓		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		1. Discussion with the Dy. Director of Indravati TR.	1. Rs.500,000.00 was received from CAMPA and was distributed among ladies during 2018 for Kosha silk development. This was provided through the EDCs. 2. Rs.240.6 lakh was given to nine EDCs for eco-development & infrastructure development purposes. 3. EDC members are given loans at 4%
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			per annum interest from Development Funds; a total of Rs.13.50 lakh was provided. 4. 34 persons were engaged as patrolling labourers. 5. Mandays used for FY15-16 254,930; 16-17 292,171; 17-18 212,960.
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***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor	✓	1. List of villages – 56 in the Core and 81 in the Buffer. Process of relocating the villages to outside the forests have has not started yet. 2. Details of livestock presence in the Reserve are attached.	1. The Core and Buffer are not free from human and biotic interference.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor	✓	1. Discussion with Dy. Director and Field Visits by the team.	1. ITR website itrbijapur.in.glovis.in is not operational at this point of time.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor	✓	1. Discussion with Dy. Director, Indravati.	1. Two information centers are being constructed. 2. Much facilities are not required as tourists are not visiting due to socio-ethnic problems in the surrounding areas.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor	✓	1. Discussion with the Dy. Director.	1. No research activities are carried out in the Reserve. 2. Immunization of livestock has been done for 7221 animals in 2016; 5117 animals in 2017 and 6141 animals in 2018.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		1. APOs and documents.	1. A total of Rs.53 lakh was allotted and Rs.52.98 lakh was spent for 75 buildings (buffer & headquarter) in FY16 – FY18.
Inventory maintenance is <i>ad-hoc</i> and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		1. Population estimation records.	1. Trend between 2014 & 2018: Leopard – reducing trend; wild buffalo – increasing; hyaena – increasing; guar – increasing, wild dog increasing; spotted deer – decreasing.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		1. Population estimation records.	1. Tiger population has increased from 12 in 2014 to 14 in 2018. 2. Scat samples have been sent to WII for identification of different individuals during March 2018.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair	✓		
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

***This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		1. Discussion with the Dy. Director. 2. List of POR from FY15-16 with 14 cases; 16-17 nil; 17-18 – 16. Total 30 cases in three years.	1. Threats have not reduced. Protection Strategy is present in the TCP. However, a comprehensive strategy to tackle all kinds of threats is lacking, due to massive inadequacy in the protection infrastructure on the face of Leftist Extremist Groups. 2. Security Plan is not existing. 3. Security Audit has not been done. 4. STPF is not constituted.
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely ad-hoc.	Poor	✓	1.	1. Visitors are not going to Indravati presently.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good			
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

+Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		1. Discussion with Dy. Director	1. Local Communities, particularly the EDC members are supportive of TR management. 2. Targeted awareness programme, Parad Utsav was organized by the Forest Dept. to discourage local tribal communities from hunting wildlife, including archery, dancing, etc.
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	30	152.5 & 48%
2.	Planning	07	10	70	32.5	
3.	Inputs	05	10	50	27.5	
4.	Process	06	10	60	27.5	
5.	Outputs	04	10	40	12.5	
6.	Outcomes	05	10	50	22.5	
Total		32		320	152.5	

*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.

3. Udanti-Sitanadi Tiger Reserve, Chhatisgarh in India

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1. Tiger Conservation Plan-Core Chapter 1, Point 1 (B), page No. 2-4 and Point 1.3 Page No. 27-31.	1. From tiger landscape point of view this Tiger Reserve shares boundary with Sunabeda wildlife sanctuary of Odisha state and towards the West it has connectivity with Kanker and North Kondagaon Forest Divisions which extends further up to Indravati Tiger Reserve in Bastar region forming Udanti-Sitanadi-Sunabeda-Indravati Landscape.
Values generally identified but not systematically assessed and monitored.	Fair		2. TCP-BUFFER Chapter-1, point 1.2 and pages 21 and 22.	While this landscape has one of the finest tiger habitats in India, it also is a home to India's largest scheduled tribe population, most of which are amongst the poorest in the country. Incidentally, this is also the area with the highest concentration of minerals (Especially Diamonds) and thus mining interests of the area (Narain et al. 2005) in future could make conservation a major challenge in the area.
Most values systematically identified, assessed and monitored.	Good		3. The TCP of the tiger reserve has been approved by NTCA vide F.No. 1-6/2013-NTCA dated 22-12-2015.	The area is located in the 6C bio – geographic zone of India and represents typical flora and fauna of this zone. The area has excellent Sal, Teak and miscellaneous species.
All values systematically identified, assessed and monitored.	Very good	✓		The reserve is also known as the breeding ground for the few last living population of peninsular hard-ground Asiatic Wild Buffalo in this part of the state. Apart from tiger other large mammalian species includes Indian wolf, leopard, hyena, gaur, sloth bear, sambar, spotted deer and nilgai.

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1. TCP Chapter 2, Point 2.5, Pages 60.	1. The major threat in the area is Human-Wildlife Conflict resulting in human death, livestock death and crop depredation by wild animals.
Threats generally identified but not systematically assessed.	Fair		2. Chapter 3, Point 3.4, page No. 77-81.	2. In Core 1 Udanti 17 and in Core 2 Sitanadi 34 villages and in buffer area 46 villages are located. The biotic pressure due to these villages is immense in the core area resulting in degradation of habitat of wild buffalo and other wild-animals.
Most threats systematically identified and assessed.	Good	✓	3. Chapter 6, Point 6.4, page No. 118.	The population of wild buffalo is on the verge of extinction.
All threats systematically	Very good		4. TCP-BUFFER Chapter-2, point 2.4 and pages No. 54-56.	The District of Gariaband and Dhamtari are LWE affected districts of Chhattisgarh. Due to left wing extremism (LWE) activities in the area patrolling work, infrastructure related work (patrolling camp,
			5. Chapter 5, Point 5.4, page No. 86.	

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

identified and assessed.				<p>patrolling path, watch tower etc.), Relocation of villages is difficult in the present circumstances. However, efforts are being made to solicit the support of these villagers in the management of the tiger reserve through Forest Management Committees (FMCs).</p> <p>3. Due to presence of numerous villages in USTR, threat of transmission of diseases from domestic livestock to wild ungulates Cattle vaccination camps with the help of Veterinary Department and NGOs are regularly conducted for the village cattle. (Annexure No. 12)</p> <p>4. Since the area is inhabited by tribes like Kamars & Bhunjia's who were traditional hunters in the past, poaching for sustenance cannot be ruled out in the area. Occasional cases of poaching are recorded in the Core area of Tiger Reserve. The offences are mostly done by local tribal population for the purpose of meat only.</p> <p>5. Destruction of habitat is mainly due to biotic pressures like; grazing, girdling of trees for encroachment, poaching of small animals for meat, fire, etc. After the promulgation of FRA act there is significant increase in incidences of encroachment for agriculture purposes.</p> <p>6. Rampant grazing by village livestock is one of the major problems of the area due to presence of villages within the Core area (Ref: Details of area sensitive towards grazing in Annexure No.41 in Appendices).</p>
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***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		1. TCP Core - Chapter 5, pp 104-105. 2. TCP Buffer – Chapter 5 pp 84-85.	1. SUTR has a total of 51 villages in the core area and 46 villages in the buffer area causing immense human and biotic pressure. 2. As per TCP-Core and buffer, Monthly reports generated, Periodic cases registered on the encroachments, and NTFP collection report from the buffer area.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones-by under the Field Director would also be taken into account.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		1. State Govt. gazette notification No.F8-43/2007/10-2, Dated; 20th February, 2009	1. Legal delineation and notification of Core and Buffer Areas have already taken place. The geographical area of the Tiger Reserve is 1842.54 Sq. Km out of which 851.09 Sq. Km is core area and 991.45 Sq. Km are buffer area. 2. Establishment of Tiger Conservation Foundation; has already taken place 3. Development of a Tiger Conservation Plan. 4. Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister 5. All seven SOPs issued by NTCA have been reprinted in sufficient quantity and distributed to all frontline staff of the tiger reserve.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair		2. State Govt. Order No.F-8-20/2007/10-2 dated 30th September 2010 for constitution of TCF.	
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied	Good	✓	3. TCP approval of NTCA vide F.No. 1-6/2013-NTCA dated 22-12-2015.	
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good		4. State Level Steering Committee constitution has taken place vide state govt. order no. F-8-21/2007/10-2 dated 13th May, 2008.	

*Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		1. Minutes of Meeting dated 15/07/2013, Raipur, approval by APCCF – Working Plan	1. Core and buffer of the USTR are under unified control of the Field Director. Field Director has administrative and financial control over core and buffer area of the Tiger Reserve.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		1. Letter of NTCA F.No. 1-6/2013-NTCA dated 22-12-2015.	1. TCP of Core and Buffer exist and has already been approved by the NTCA.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.2 Does the TR safeguard the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		1. Security Plan of Tiger Reserve 2. TCP of Core Chapter 4, section 3 and Chapter 10, section 1-6, pp181 3. TCP of Buffer Chapter 7, section 7.2.2.1 pp 117-118.	1. Security Plan of the Tiger Reserve details protection measures to be taken up for safeguarding the threatened biodiversity values. 2. TCPs of Core and Buffer also describe protection strategy of threatened biodiversity values.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		1. Discussion with FD, DD and other staff of the USTR.	1. There is great degree of involvement of local people and EDC members in management of the USTR like in fire protection work, barrier keepers, wage laborers, and involvement in tracking of wild animals. However, there involvement in planning process is in nascent stage and is limited to drawing their attention and seeking their informal opinion in planning.
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		1. Discussion with Management and stakeholders. 2. Tiger conservation plan of core and buffer. 3. APO works.	1. Yes, habitat management programs are systematically planned and implemented via Annual plan of operations which are submitted to the NTCA and get approved every year. 2. Some of the habitat management works planned and executed annually include creation of water holes, planting of fruit bearing species, grassland development, removal of invasive species/ weeds, tank construction and deepening, and stop dam construction.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

*This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as *Lantana sp.*, *Mikania sp.* etc. would be examined.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		1. Security Plan of Tiger Reserve 2. TCP of Core Chapter 4, section 3 and Chapter 10, section 1-6, pp181 3. TCP of Buffer Chapter 7, section 7.2.2.1 pp 117-118.	1. Yes, Tiger Reserve has effective protection strategy and Security Plan. 2. There are 15 watch towers, 20 barriers and 34 patrolling camps for ensuring the protection of USTR. 3. The major threats are fire and insurgency and minor threats include poaching, encroachments, roads, electricity lines, primitive tribe etc., there is need of ensuring coordination at the ground level between Police Department, Electricity Department, Irrigation department, and armed forces in overcoming any untoward incident. 4. LWE activity is hampering the establishment of new patrolling camps, construction of watch tower, augmentation of wireless network in the area and also hampering the front line operations related to the protection like overcoming encroachments, managing fire, and poaching.
TR has an <i>ad-hoc</i> PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		1. TCP of Core - Chapter 5, and Buffer - Chapter 5: updated list of ex-gratia 2. Monthly reports and annual reports.	1. Yes, USTR is effectively mitigating human-wildlife conflict. The Management has taken up the initiative to pay the compensation for human killing, human injury, cattle killing, crop damage to the victims in a timely manner. 2. The Chhattisgarh Government has made adequate provisions for compensation to the villagers in case of human injury and killing, cattle killing, crop damage as follows; human death Rs. 4 lakh, human injury Rs.59,100/- max., livestock death Rs.30,000/- max. and crop damage – as per assessment. An amount of Rs.43.45 lakh has been paid against 515 cases between FY13 to FY18. 3. Recently radio collars have been deployed on 4 wild buffaloes and 1 gaur, which is helping in overcoming the human wildlife conflict of the area. we have also been in place a well coordinated tracker system for the wild buffalo human conflict management.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

**The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.*

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		1. Indicative Plan for Adjoining Area Providing Connectivity/ Corridors. 2. Discussions with FD and DD and other staff. 3. Eco-sensitive zone draft of USTR has been submitted to the MoEF&CC, Govt. of India.	1. There is ample scope of opportunities at the landscape level. Tiger Reserve shares boundary with Sunabeda wildlife sanctuary of Odisha state and towards the West it has connectivity with Kanker and North Kondagaon Forest Divisions which extends further up to Indravati Tiger Reserve in Bastar region forming Udanti-Sitanadi-Sunabeda -Indravati Landscape. 2. The area of Udanti-Sitanadi-Indravati Corridor falls in Kanker, North Kondagaon, East Bhanupratappur and Narayanpur forest divisions. Revenue area 33195.99 hectare includes 21150.00 hectare of Abhujmad area of Narayanpur and Bijapur Forest divisions, which are unsurveyed area. The total area of this corridor is 91970 ha. 3. Thus, the situation of Tiger Reserve becomes significant since it also has 'Corridor' value to help maintain the gene pool of the spillover population of Tiger & other Wildlife from the Reserve.
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		1. Verification of records in the office of DD office of USTR.	1. There are many vacancies in the frontline staff as follows; Forest Ranger 2 posts are vacant against sanctioned posts of 8; Dy. Ranger 7 posts are vacant against sanctioned post of 30; Forest Guards, 59 posts are vacant against sanctioned post of 85. 2. In 2017-18 recruitment of 20 Forest Guards has been done. 20 more Forest Guards will be recruited in the FY 2018-19. 3. The presence of adequate no. of staff is necessary to counter the threats like smuggling, poaching and forest fire. Some of them do not have adequate facilities to stay in their quarter and they stay in far off places. It is strenuous for them to travel to their work place every day, which could be 10 to 35 Km. Yet they do their best for protection and development of the Sanctuary which is very much on line with achieving the objectives of the management.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		1. Discussion with FD, DD and his subordinates	1. There are 12 light vehicles, 400 camera traps, 150 GPS, 50 Rangefinders, 10 Binoculars, 64 wireless handsets and base sets and 200 compasses. 2. There are 91 buildings for accommodation of staff, which are inadequate.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair	✓		
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is <i>ad-hoc</i> , funds are inadequate and seldom released in time and not utilized.	Poor		1. Verification in DD office and discussion with FD and DD USTR.	1. Budget is being provided by NTCA under the head 3730 Project Tiger budget provided last three years are as follows - In FY16 budget received was Rs.93.04 lakh and entire amount was spent; in FY17, budget received was Rs.222.47 lakh and entire amount was spent; in FY18, budget received was Rs.162.790 Lakh and entire amount was spent. 2. The fund released from NTCA is often delayed. In above three years first installment was received in the month of August, September and September of the respective years.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is <i>ad-hoc</i> , funds are inadequate and seldom released in time and not utilized.	Poor		1. Discussion with the FD & DD of USTR.	1. State Govt. is not only actively contributing state share of the scheme 3730-Project Tiger, but also providing adequate financial resources for State budget itself. State share provided for the scheme '3730'- Project Tiger' in last 3 years is as follows; FY16, Rs.16.28 lakh, FY17 Rs.187.36 lakh and FY18 Rs.136.27 lakh and full amounts were spent. 2. Budget provided by the State Govt. from its own budget include Rs. 775.43 lakh in FY16, Rs.1050.71 in FY17 and Rs.997.40 lakh in FY18 and entire amounts have been spent. 3. Financial resources are also mobilised from scheme like MNREGA at district level.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		1. Discussion with FD & DD of USTR. 2. Reports of WTI on the support provided.	1. WTI (Wildlife Trust of India) is providing resources and helping USTR in wild buffalo recovery plan. A wild buffalo breeding center has been established in village Jugad. Radio collaring of 4 wild buffalo and 1 Gaur has been done successfully using satellite collar and their movement is continuously monitored by WTI. WTI is providing manpower for daily tracking of wild buffaloes as well. WTI has provided insurance cover (1 Lakh) to all the frontline staff of USTR. WTI is also providing quality training to the frontline staff for "Wildlife Crime Prevention and Law Enforcement" every year. Field
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				gears like raincoat, jacket, water bottle, backpack are provided by WTI to field staff every year. 2. NOVA nature welfare society is another NGO, which is helping significantly the tiger reserve in Phase IV monitoring programme including camera trapping, human-wildlife conflict mitigation and tracking programmes.
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4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		1. Discussion with the Management. 2. DD USTR office documents.	1. 6 Forest Rangers, 30 Dy. Rangers and 85 Forest Guards have been trained in Wildlife Conservation. 2. In the year 2017-18, 25 forest guards have been provided 6 months exclusive wildlife based 'game guard training' by SFRI, Raipur and Forest School Mahasamund. Again 20 more forest guards are undergoing 6 months training at Forest School Mahasamund from 1st May-30th October 2018. 2 days tranquilising Training (6-7 Dec.) was organised at Nandankan Zoo, Bhubaneswar. 2 days man-animal conflict training (25-26 March) was organised with the help of Wildlife-SOS focusing on sloth bear.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

⁺Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		1. Discussion with FD & DD USTR	1. The good performance of any member of the staff is recognized at the Division level and state level. They are honored in public function during wild life week celebration etc. with a certificate and souvenir
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		1. Field Visits and interaction with members of the public.	1. In spite of being LWE affected, public participation is encouraged in various activities of tiger reserve. Fire protection work is undertaken with the active participation of JFMCs. For patrolling work and animal tracking work. Youths from Primitive tribes like Kamar, Bhujia are selected. NGOs like Nova Nature Welfare Society is involved in mitigation of man-wildlife conflict specially rescue of snakes. In resolving of compensation cases regarding killing of cattle or crop damage, amount of compensation is decided with the help of local Panchyat. 2. For reducing pressure on forests for fuelwood, WTI has trained and provided smokeless improved chulhas to 2 villages- Karaljhar and Nagesh. Now 2 more villages Jugad and Devjhamli are also selected and introduction of smokeless chulha is being started with active participation of villagers.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGIs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		1. Verification of records in the office of FD and DD USTR Gariyaband.	1. Complaints are received from the aggrieved persons at Deputy Director level, Field Director level and HQ level. Complaints are forwarded to the subordinates and resolved. Normally compensation cases of of cattle killing, human injury, crop damage & claim of forest rights are received. Review is done regularly, Every year a month long "Jan Shikayat Nivaran programme launched by state govt. in which camps are held at village panchyat level, application are invited and then they are resolved with intimation to applicant. Under this programme review meeting takes place at the district HQ by HCM in presence of secretary level officers of state govt., HODs, Collector etc. This programme was done in March 2018.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		1. Discussion with stake holders and Management	1. There are 51 villages in the core and 46 villages in the buffer having fairly large number of human and Cattle population, which are forest dependent. TR management has been providing livelihood support to them by giving employment in different forestry work like habitat improvement, construction and deepening of tanks, fire protection works, patrolling work etc. In Buffer area MFP collection especially tendu leaf also takes place, which supports livelihood of local people substantially. Mandays generated in last 3 years are as follows; FY 16 Rs.884.75 lakh & 3.36 lakh mandays; FY 17 Rs.1460.49 lakh and 5.01 lakh mandays and FY 18 Rs.1296.46 lakh and 3.22 lakh mandays were created. 2. In addition to the above some fund is received from district level in the MNREGA scheme. In the FY 2015-16 = 38.36 lakh, FY 2016-17 = 0, FY 2017-18 = 85.19 lakh. 3. In Chhattisgarh Tendu leaf is the most important MFP planning crucial role in the livelihood of Tribal people. In core area collection of MFP is banned, so as to compensate them, USTR is providing Rs.2000/- per family as compensation for non-collection of Tendu leaf since last 2 years. A total of 92.64 lakhs was distributed in FY 2016-17 and FY 2017-18 to the 4632 families living in core area in each year. 4. Under Pradhan-Mantri Ujjwala Yojna also 4632 families living in core were supported by TR by providing beneficiaries component of Rs. 1395/- per family.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		1. Discussion with FD & DD of USTR.	1. There are 17 villages in core 1 and 34 villages in core 2. Some villages in core like Chamedra, Bhiragaon have given their initial consent for relocation and consent of Gramsabha of that village, is pending. In some villages only few families are interested in relocation. TR is trying to expedite the matter. The package for relocation is still 10 lakh per family, which is also sufficient.
Plans have been made but no implementation	Fair	✓		
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		1. Brochure and website maintained by the PCCF (WL) office.	1. The information about the sanctuary is available online and can be accessed in forest department website (www.cgforest.com). 2. Brochure is prepared, which contains vital publicity information regarding USTR.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		1. Discussion with FD & DD USTR.	1. At present lodging and boarding facilities are provided by USTR through informal means at its rest houses located at Koyba, Jugad, Tourenga and Sankra. 2. Area being LWE affected and far from populated places, number of tourists coming is very low, however, facilities available with TR is adequate. 3. Eco-centre is present, needs to be renovated as an interpretation centre.
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		1. All India Tiger estimation reports published by NTCA and WII in 2014. 2. Phase IV Monitoring reports of summer and winter season. 3. Central India Wild Buffalo Project, Annual Report 2016-2017 by CH Forest Dept and WTI.	1. Systematic and routine Tiger survey related works like All India Tiger estimation and phase IV monitoring are carried out by the TR with the support of Wildlife Institute of India, Dehradun. In this monitoring the important data of all seasons are brought out and compared. 2. A research article on occurrence of mouse deer in USTR was published in the International Journal of Fauna and biological studies (www.faujournal.com) 3. A study of birds found in USTR was also done and published. A detailed survey of reptiles was also done by Nova Nature Welfare Society. 4. Research on wild buffalo jointly with WTI.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		1. Records in Division Office and discussion with the management	1. For management of infrastructure/assets sufficient budget is being provided by the State Govt. in different Non-Plan budget heads such as 2900- Sanctuary area, 4349-Maintainance of road and bridges, 6218-repairing of buildings, 3531-assisted regeneration of bamboo etc. Budget provided by State govt. in non-plan head is as follows; FY17 Rs.577.96 lakh and FY18 Rs.521.67 lakh
Inventory maintenance is <i>ad-hoc</i> and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		1. Phase IV Monitoring reports of 2015-16 and 2016-17. 2. Central India Wild Buffalo Project, Annual Report 2016-2017 by CH Forest Dept and WTI.	1. Comparing the reports of successive phase IV monitoring reports it is observed that there are increased camera trap evidence of threatened species like mouse deer, otter, Indian fox, rusty spotted cat etc. 2. Population of wild buffalo is also increasing.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		1. Phase IV Monitoring reports of 2015-16 and 2016-17.	1. Comparing the reports of Phase IV monitoring of 2015-16 and 2016-17 indicates almost stable population of tigers (minimum number of tigers 2, unique individuals through camera trap results)
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair	✓		
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		1. Discussion with FD, DD and their field officers.	1. Threats on forest land and habitat is increasing because of ever increasing claims under Forests Rights Act. The presence of human and livestock in the sanctuary always pose threat of illicit cutting of trees, encroachment, grazing, fire and poaching of wild animals. 2. TR has been engaging local tribal youths in patrolling, fire protection and other works.
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.4 Is visitor management appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely ad-hoc.	Poor		1. Visitors Register 2. Discussion with FD & DD, USTR	1. There is a low scale of visitation to the TR area due to LWE affected area and also due to far away distance from the highly populated regions
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair	✓		
Tourism management plan is good and well monitored.	Good			
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

+Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		1. Discussion with FD, DD and his subordinates.	1. By and large local communities are supportive of TR management. 2. Many claimants under Forest Rights Act, whose claims may be repeatedly rejected, are dissatisfied with the management. Further villages in the core area continue to depend on the forests and they support management actively. Lot of encroachment are also reported. 3. TRs new scheme of paying compensation (Rs. 2000/- per family/year) to the families of core area for non-collection of tendu leaf has helped a lot in making community supportive of TR management.
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

*There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	40	215 & 67%
2.	Planning	07	10	70	50	
3.	Inputs	05	10	50	37.5	
4.	Process	06	10	60	35	
5.	Outputs	04	10	40	25	
6.	Outcomes	05	10	50	27.5	
Total		32		320	215	

*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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4. Bandhavgarh Tiger Reserve, Madhya Pradesh in India

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1. TCP of Bandhavgarh submitted to NTCA vide letter no. 894-24/7-15 and response of NTCA available. 2. TCP chapter 1 & 5 have list of streams & species, respectively. 3. Reference of book by Mr. Choudhury. 4. WII publication	1. Five key species have been identified, i.e. tiger, pied hornbill, rusty-spotted cat, honey badger, spotted deer. 2. Tiger Reserve has water recharge system for nearby villages. Water storage takes place on top of the hill. 3. Book written by Mr. L. K. Choudhury on Bandhavgarh. 4. Publication on gaur relocation. 5. Deer distribution in the park
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1. TCP of Bandhavgarh submitted to NTCA vide letter no. 894-24/7-15 and response of NTCA available. 2. Security plan in the TCP 3. Discussion with the Field Director of BTR	1. TCP has documented sensitive/ vulnerable beats; areas for fire hazards; fire plan; review of patrolling register; security plan
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		1. Discussion with the Field Director and document shown by the authority.	1. Core area has total of ten villages, namely Gadhpuri, Bagdari, Saijwahi, Gangital, Kushmah, Kothiya, Bamera, Kaseru, Badwahi & Baghaia; boundaries have been mostly fenced. 2. Process of relocating of Gadhpuri and Saijwahi villages is underway.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones-by under the Field Director would also be taken into account.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		1. Notification of Govt. of MP is available.	1. Legal notification of Core & Buffer areas are carried out. 2. MP Tiger Conservation Society is the TCF, carrying out similar functions. Bandhavgadh Workers Society runs welfare schemes for the staff and daily wagers. 3. NTCA's letter on TCP available. 4. Information on meetings conducted by the Steering Committee is available.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair		2. Tiger Conservation Foundation is at a state level.	
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓	3. TCP not yet approved by NTCA	
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good		4. State Level Steering Committee exists for all TRs in MP, vide letter no. F-15-2-2009-X-2, Bhopal dated 20-03-2009. 5. All 7 SOPs are in place, vide discussion with the FD.	

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		1. Letter on unified management of core and buffer available.	1. Yes, the core and buffer are under unified management of the Field Director.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair		2. Discussion with the Field Director and Dy. Director	
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) *?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		1. TCP of Bandhavgadh submitted to NTCA vide letter no. 894-24/7-15.	1. TCP was prepared submitted to the NTCA in 2015, approval is awaited.
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.2 Does the TR safeguard the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		1. Copies of patrolling plan and fire plan attached. 2. Discussion with the FD and other officials of the TR.	1. Patrolling plan and fire plan are in place. 2. Anti-poaching plan also has intelligence gathering system. Necessary funds are allocated from development funds.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		1. Discussion with FD and DD of BTR. 2. Meeting minutes with village council, EDCs 3. Document on 33% Gate Collection to the EDCs. 4. Document on meetings with hoteliers, gypsy operators and guides.	1. Meetings are conducted in every village in Buffer area for decision taken on community development. 2. 33% of Gate Collection is distributed among the 150 EDCs. 3. Regular meetings with hoteliers, gypsy operators and guides.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely ad hoc.	Poor		1. Discussion with the FD, BTR. 2. Copy of Grassland Management Plan is available.	1. Grassland development is being carried out, following non-burning of grasslands and use of small grassland development enclosures. 2. Strip management of grasslands have been carried out, that has resulted in selective augmentation of ungulates. 3. Waterholes have been developed next to each grassland, to ensure equal distribution of ungulates. 4. Grass seed collection plot is available at a 25ha plot. 5. Weed eradication programme is done systematically.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good	✓		

*This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as *Lantana sp.*, *Mikania sp.* etc. would be examined.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.5 Does the TR have an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		1. Discussion with the Field Director and his team.	1. Security Audit has been completed recently, in March 2018. 2. Annual plans for Security enhancement is done for three themes, maintaining waterholes within the park, fire control and patrolling. 3. Monsoon patrolling plans are also carried out.
TR has an <i>ad-hoc</i> PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		1. Discussion with the FD and other officers of BTR and reference to official records.	1. Human Wildlife Conflict is at its peak around Bandhavgad Tiger Reserve. 2. Ex-gratia for cattle death is paid within 20 days, and that for human death is made within second day. 3. Amount paid for ex-gratia due to human injury in FY18, Rs.687,400/- for 71 cases. A total of 2,206 livestock kills, amount paid Rs.1,77,60,855/- 4. Forest Dept. is working with Last Wilderness Foundation for village level awareness programme and documents of those are available. A total of 3,000 kids have been met with. 5. <i>Anubhuti</i> programme is being carried out since 2017.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

**The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.*

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		1. Meeting with the Field Director, BTR. 2. Corridor conservation plan was part of the TCP.	1. BTR is linked with Sanjay Dubri Tiger Reserve. 2. Jet Airways is funding corridor development between Bandhavgad and Sanjay Dubri, The Corbett Foundation is implementing this on the ground. A MoU to this effect has already been signed between Jet Airways, Bandhavgad TR and Sanjay Dubri Tiger Reserve.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

+Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		1. Discussion with the Field Director and his officers.	1. Sanctioned posts in BTR 338, and 289 posts are filled, 79 posts are vacant. Tiger Protection Force has 45 members, with 2 ex-servicemen and rest of them are from nearby villages. TPF members are involved in rescue operations for wild animals. 2. 538 labourers are there with forest guards in the Core and Buffer. 3. Number of employees are not adequate.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

+This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		1. Discussion with the Field Director and his officers.	1. A total of 43 four/ more wheeler vehicles and 31 motorcycles are available in the park for official work. Number of vehicles are manageable, and old vehicles are to be replaced on time. More motorcycles are needed, in fact each of the 150 plus beat guards should have motorcycles. 2. Number of wireless sets is not adequate. 3. 155 units of GPS, 66 Range Finders, 358 camera traps are available with the BTR. 53 firearms are available.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

+ These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is <i>ad-hoc</i> , funds are inadequate and seldom released in time and not utilized.	Poor		1. Details of funds received from NTCA and TFC are given. 2. Funds were released in a timely manner.	1. NTCA funds received in FY 15-16 was Rs.466.59 lakh, spent Rs.466.59; in 16-17 funds received was Rs.3009.83 lakh and spent Rs.2997.18 lakh; in FY 17-18, fund received was Rs.933.92 lakh and spent Rs.904.06 lakh. 2. In FY14-15, amount received was Rs.110.00, and same amount was spent under Thirteenth Finance Commission.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is <i>ad-hoc</i> , funds are inadequate and seldom released in time and not utilized.	Poor		1. Funds have been adequate and have been released on time.	1. State Funds in FY15-16 amount received was Rs.1534.91 lakh, and expenditure was Rs.1534.90 lakh; in FY16-17, amount received was Rs.1634.262 lakh and expenditure was Rs.1633.949 lakh; in FY17-18, amount received was Rs.1719.525 lakh and expenditure was Rs.1719.13 lakh.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Discussion with Field Director and Dy. Director.	1. WCT support was received in 2015.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		1. Discussion with Field Director and his officers.	1. Two Range Officers have completed three months Certificate Course from WII on wildlife management. 2. 7 Frontline staff from BTR are getting trained in Tala Biodiversity Training Centre. 3. Field Director attended a 45 days course in WII on wildlife management.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc . The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		1. Discussion with Field Director and his officers.	1. Yes, best workers get wildlife awards, and also get out of turn promotions. State level appreciations have also been received by three staff members in the last three years. In 2015, BTR was awarded best veterinarian management.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			
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4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		1. Discussion with the Field Director and his officers.	1. 150 EDCs are given opportunities to take part in TR management. EDCs meet every month and grievances are addressed in those meetings. About 100 EDCs are active, and interactions between the Park management and EDCs are positive. EDCs are also into small scale industries development. 2. Local people are also involved in providing tourism services and they are also involved in joining Tiger Protection Force. 3. Villagers have come in support of tiger conservation, even if for stray tigers. They help in rescuing big cats and herbivores. Public participation is positive.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

The involvement of NGOs/ NGIs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		1. Discussion with the Field Director and his officers.	1. Complaint register is maintained in the Hq. 2. Complaints and suggestions received from the CM helpline are also addressed on time. 3. Suggestions register are maintained in the tourism gates.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	✓		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		1. Discussion with the Field Director of BTR.	1. SHGs are present in 40 EDCs and they have been linked with the District Collector's development schemes. Small Scale home-based Industries are also supported. 2. 33% of the Park Development Funds are spent for Eco-Development activities.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

**The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.*

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		1. As per discussion with the Field Director and his officers. 2. As mentioned in the TCP	1. Out of 14 villages in the CTH, 4 have been relocated already. Two more villages will be relocated shortly. 2. Post relocation successes do not apply.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

**Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.*

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		1. As per discussion with the Field Director	1. website of Bandhavgad is www.bandhavgadhtigerreserve.mp.gov.in where all information are put up. 2. Pamphlets and brochures are available 3. Information has been disbursed through MP Tourism Dept. and their resorts.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information	Good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

provides detailed insight into major management issues and condition of public assets.				
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		1. As per discussion with the Field Director.	1. Improvement of ticketing centre is being constructed. 2. Interpretation centre is available. 3. Visitor points have public convenience facilities. 4. An ambulance is on standby for services to the tourists visiting the Park. 5. Complaint register for tourists to bring up any issue with the guide/ taxi operator is available at gates.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		1. WII report on gaur reintroduction.	1. Research on gaur reintroduction has been carried out. 2. For equal distribution of herbivores, WII researchers have done a study. 3. Water quality of waterholes have been checked through professional service. 4. Phase I & II, Phase III and Phase IV monitoring are regularly going on as per NTCA protocol. 5. M-STriPES is not being done here. GPS based monitoring is weak among all patrol teams, and coordinates of patrols are not regularly kept.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		1. Listing of assets are there.	1. Assets are maintained based on priority, and availability of funds, starting from the frontline staff. 2. Sufficient funds for maintenance are available.
Inventory maintenance is <i>ad-hoc</i> and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		1. Population estimation figures.	1. Population of gaur increased from 49 to 150. 2. 70 nesting colonies of vultures, white-backed vulture, king vulture, Egyptian vulture and long-billed vulture are present in the park. 3. Population of honey badgers is increasing.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		1. Population estimation figures from the survey reports.	1. Tiger population is increasing as per Phase III and IV estimations, increased from 65 in 2014 to about 80 adult tigers presently.
Population of tiger is showing a declining trend and the reason is identified	Fair			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

and options to reverse are in place				
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good	✓		

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		1. As per discussion with the Field Director and his officers.	1. Threats have been minimized due to public participation, patrolling and waterhole management.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely ad-hoc.	Poor		1. As per discussion with the Field Director	1. NTCA guidelines for restricting tourism in 20% of the Tiger Reserve area are followed. 2. Visitor expectations are mostly satisfactory.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good	✓		
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

+Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		1. As per discussion with the Field Director	1. Local communities are supportive of the TR management.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	37.5	235 & 73.44%
2.	Planning	07	10	70	52.5	
3.	Inputs	05	10	50	40	
4.	Process	06	10	60	37.5	
5.	Outputs	04	10	40	27.5	
6.	Outcomes	05	10	50	40	
Total		32		320	235	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5. Kanha Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1. Tiger Conservation Plan of Kanha Tiger Reserve 2. IIFM report on ecosystem services of Kanha Tiger Reserve 3. Shaping Kanha by J. S. Chouhan & Rakesh Shukla 4. A book, Kanha Tiger Reserve by Kanha TR. 5. Corridor Management Plans of Kanha – PENCH, Kanha – Achanakmar & Kanha – Navegaon Nagzira corridors.	1. Biodiversity is documented in TCP, ESZ proposal & publications 3 & 4. 2. Tourist inflow is monitored on a monthly basis. 3. Flagship species monitoring is done intensively, also through Phase III & Phase IV monitoring of tigers, co-predators and prey. 4. Documentation of other wildlife is done through M-STRIPES, transect monitoring & bird & butterfly surveys. 5. Documentation, assessment & monitoring of grass & herb species for grassland recovery is carried out on a regular basis. 6. Values of connectivity with other tiger habitats in the Central India Landscape are well documented in the TCP as well the Corridor Management Plans referred in (5).
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1. Threats to the TR values are documented in the Eco-Sensitive Zone proposal document. 2. Tiger Conservation Plan of Kanha Tiger Reserve. 3. Security Plan for Kanha Tiger Reserve, 2016. 4. Document on power transmission line monitoring, by Kanha TR & MP Electricity Board.	1. Threats to the Kanha Tiger Reserve values are well documented in the Security Plan (Reference Document 3) with recommendations on mitigation of those threats.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good	✓		

*This assessment should be based on number, nature and extent of threats

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		1. Letter from Addl. PCCF, Wildlife, Govt. of MP, dated 20/9/2016 on completion of village relocation from the core (CTH) of Kanha Tiger Reserve.	1. Core (CTH) of Kanha TR comprises of 917.43 sq.km, and six ranges, namely Kisli, Kanha, Sarhi, Mukki, Bhaisanghat and Supkhar. 2. No human and biotic interference have been seen during field visits by the MEE teams at all the above ranges.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good	✓		

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones-by under the Field Director would also be taken into account.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		1. Notification of Govt. of MP is available, as shown by management of the TR. 2. Tiger Conservation Foundation is at a state level, document needed. 3. Approval of Tiger Conservation Plan is in place, vide letter dated 21/03/2013 of IG, NTCA. 4. State Level Steering Committee exists for all TRs in MP, vide letter no. F-15-2-2009-X-2, Bhopal dated 20-03-2009. 5. All 7 SOPs are in place.	1. Legal notification of Core & Buffer areas are carried out. 2. MP Tiger Conservation Society is the TCF, carrying out similar functions. All other development activities are conducted by Kanha Vikas Nidhi. 3. Acceptance from NTCA on TCP is in place. 4. Information on meetings conducted by the Steering Committee is to be sent by FD, Kanha 5. SOPs are followed regularly for relevant cases, and interstate meeting with Achanakmar TR is being carried out from time to time.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	✓		

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		1. GO on unified management 2. TCP of buffer	1. Core & Buffer of Kanha TR are under unified management of the Field Director.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) *?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		1. Approval of Tiger Conservation Plan is in place, vide letter dated 21/03/2013 of IG, NTCA.	1. TCP has been approved by NTCA. 2. Mid-term review & adaptive management measures already undertaken are to be included in the revised TCP.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

**The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.*

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		1. Tiger Conservation Plan of Kanha Tiger Reserve. 2. Security Plan for Kanha Tiger Reserve, 2016.	1. Targeted recovery of Barasingha has been carried out successfully, as a pioneering effort in the country. 2. Kanha TR is acting as a source population of Gaur & Barasingha for other PAs in the Central India Landscape. 3. Zero biotic interference & highest level of protection in the Core of the TR ensure that threatened biodiversity values are taken care of in an objective manner. 4. Additional measures have been taken up for conservation of blackbuck in the TR.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good	✓		

**Remarks need to elaborate on the kind of safeguards and how they work or are intended to work*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		1. Meeting minutes with Admin and EDCs were shown to the team. List provided.	1. Stakeholders are District Administration including District Planning Committee, MP State Electricity Board, PWD, Local Communities, Tourism Department, Tourism Service Providers, Dept. of Health,
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good	✓		

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		1. TCP of Kanha Tiger Reserve 2. List of corridor identified for movement between local population units of herbivores. 3. Long term monitoring of prey species carried out by WII.	1. Habitat management for Tiger and Barasingha is carried out routinely. 2. Corridor habitat management within buffer is carried out. 3. Movement corridors between local population units of herbivores are routinely identified, assessed, managed. 4. Habitat managed based on density surface of prey species. 5. Habitat recovery in areas vacated by village relocation is taken up routinely.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good	✓		

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		1. Security Plan is in place. 2. Document on power transmission line monitoring, by Kanha TR & MP Electricity Board.	1. Security Audit is being done in partnership with GTF.
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good	✓		

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		1. Letter from Agriculture Dept. for allocation of Rs.4.5 crore for power fencing in buffer of Kanha TR. 2. Ex-gratia provided vide GO no. /F15-13/2007/10-2 dated 20 th April 2016 3. Letter on constitution of regional wildlife squad issued by the FD, Kanha, MP, dated 08/05/17	1. Human ex-gratia and cattle compensation provided.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good	✓		

**The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.*

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		1. TCP of Kanha TR. 2. Corridor Management Plan for KP, KA & K-NN corridors. 3. Corridor management plan for entire state. 4. WWF-India document on Satpuda Maikal Landscape 5. Climate Fund project document	1. Kanha is integrated fully in the Satpuda Maikal Landscape Conservation plan of WWF-India and stakeholders 2. Kanha is part of the Climate Fund project at a landscape level
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good	✓		

**Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		1. Information provided by FD	1. All sanctioned posts of Forest Guards are filled. 2. Gaps are reported in the posts of Foresters & Dy. Rangers 3. Adequate number of patrolling camps are reported from both Core and Buffer of the TR.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		1. Field visit by the MEE team 2. Discussion with the park management	1. Adequate resources are available, however, some vehicles need to be replaced. 2. Physical infrastructure like anti-poaching camps & living quarters of frontline staff are very well maintained. 3. Family hostels for staff posted in patrolling camps are available.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		1. Information provided by the FD, Kanha TR.	1. Funds are generally released on time & utilized.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		1. Information provided by the FD, Kanha TR.	1. Funds are generally released on time & utilized.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		1. Document provided by the FD, Kanha TR.	1. NGOs are supportive of conservation efforts.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Internal training provided, list attached.	Internal training for field staff conducted.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

***Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc . The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		1. Discussion with the management & Frontline Staff of Kanha TR.	1. Staff motivation is commendable. 2. Staff received state level awards. 3. Kanha TR received national award from the Hon'ble PM in 2016 for active management. 4. Winner of the India-UNDP Biodiversity Conservation Award 2014.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		1. LAC notification vide no. /F19-26/2010/10-2 dated 24 Sep 2013 2. Discussion with the park management and general public	1. Local Advisory Committee Constituted, headed by the Divisional Commissioner. 2. Active involvement of volunteers, in annual Kanha – Pench walk, bird surveys, awareness and publication material development, camps, etc.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGLs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		1. Discussion with FD, Kanha.	1. An email ID and contact details are provided for registering complaints. 2. All complaints recorded in the office are maintained in the Complaint Register and are addressed to in a timely manner.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good	✓		

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		1) Management plan.	1) 336,000 mandays of employment generated during FY 15 – FY 17 2) Skill development of 414 village youth in hospitality has been carried out.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		1. Letter from Addl. PCCF, Wildlife, Govt. of MP, dated 20/9/2016 on completion of village relocation from the core (CTH) of Kanha Tiger Reserve. 2. Field visits to select areas within CTH by the MEE team. 3. Interaction with rehabilitated communities.	1. All villages from the CTH have been relocated.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good	✓		

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		1. Website of Kanha Tiger Reserve 2. TCP uploaded on the website. 3. List of publications	1. Information is provided to public as and when asked for, other than information which is available on the website, as written in the Reference Documents.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good	✓		

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		1. Documents provided by the FD, Kanha and field visits by the MEE team to check visitor facilities.	1. Interpretation Centre is well equipped and properly maintained. 2. Visitor facilities are adequate are widely available in the tourism zone.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good	✓		

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		1. Research and Monitoring activities are carried out as per the list provided by the FD, Kanha. 2. Active management through regular interaction between park officials over wireless network. 3. Status report of tigers, co-predators and prey of Madhya Pradesh, published by SFRI, MP. 4. IIFM publication on economic valuation of Kanha TR.	1. Prey density surface, as prepared by WII is routinely referred to for management purposes. 2. Habitat restoration and invasive species management is carried out based on scientific research. 3. Tourism management is based on trends.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good	✓		

⁺Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		1. As informed by the FD, Kanha.	1. Annual maintenance schedule is available. 2. Pro-active checking maintenance of scientific equipment is carried out.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		1. Documents seen with FD, Kanha on population trends.	1. Populations of Barasingha, Gaur & Spotted Deer are increasing.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good	✓		

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		1. Status report of tigers, co-predators and prey of Madhya Pradesh, published by SFRI, MP.	1. Tiger population is increasing. 2. Density of tiger is less than carrying capacity.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good	✓		

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Discussion with park management.	Discussion with park management.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4 Is visitor management+ appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		1. Eco-tourism plan of Kanha TR (not approved yet by NTCA). 2. Tourism part in TCP of Kanha	1. Tourism is carried out within NTCA guidelines and within carrying capacity
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good	✓		
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

+Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism

6.5 Are local communities supportive of TR management?

Assessment criteria+				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		1. Discussion with FD, Kanha.	1. Most of the local community groups are supportive of TR management.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card+

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	50	305 & 93%
2.	Planning	07	10	70	70	
3.	Inputs	05	10	50	42.5	
4.	Process	06	10	60	52.5	
5.	Outputs	04	10	40	40	
6.	Outcomes	05	10	50	42.5	
Total		32		320	297.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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6. Panna Tiger Reserve in India

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1. Approved Management Plan is not available.	1. Indicative plan has documented geological & biodiversity values.
Values generally identified but not systematically assessed and monitored.	Fair		2. Indicative plan of PTR –letter from FD, Panna no.2013/997 dated 13 May 2103; letter of R. S. Murthy, Member Secretary, MP State Biodiversity Board, no. 2016/1947 dated 17 Oct 2016 to the CWLW & PCCF (WL) on Conservation Plan of Core of Panna TR being prepared; Indicative Corridor Plan 2016-2024, sent to Member Secretary, NTCA, vide letter no. 1/5367 dated 5 Aug 2017 from APCCF(Wildlife), Govt. of Madhya Pradesh.	2. Camera trap monitoring is carried out throughout the year for checking presence/ absence of animals.
Most values systematically identified, assessed and monitored.	Good	✓		3. Phase IV & Phase III monitoring are being carried out as per schedule.
All values systematically identified, assessed and monitored.	Very good		3. Vultures of Panna, book by Mr. Bholu Mondhe (2015) 4. Approximately 300 PIPs are monitored throughout the year, except monsoon for checking presence/ absence of tigers. 5. 200+ camera traps are monitored 24X7 throughout the year for assessing presence of wild animals 6. 11 radio-collared are monitored 24X7 by 11 dedicated teams, in addition to six supervisory teams.	4. Grassland management with species focused intervention is well documents. 5. Annual vulture estimation reports.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1. SWOT analysis is present in the Indicative Plan (pp 127, 136, 140) of PTR. 2. Challenges mentioned in the Relocation Plan Phase II. 3. Dossier on Pardhis in and around the PTR	1. Threats have been documented, there is a need to put them in one dossier and proper security assessment, on the lines of NTCA suggestions need to be in place.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		1. Relocation plan Phase II of PTR available. 2. Letter from DM/ 2017/ 401, Panna dated 17 Feb 2017 from JD, Panna TR to PCCF (Wildlife) and CWLW on village relocation from core of Panna TR.	1. Core area has three villages. 13 out of 16 villages of PTR have been relocated. The three remaining villages are covered in the submergence of proposed Ken-Betwa link project.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones by under the Field Director would also be taken into account.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		1a. Legal delineation and notification of core, vide Gazette no. F15-31-2007-X-2 dated 24 Dec 2007, declared by the Govt. of Madhya Pradesh.	1. Legal notification of Core & Buffer areas are carried out.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			2. MP Tiger Conservation Society is the TCF, carrying out similar functions.
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓	1b. Legal delineation and notification of buffer by Gazette no. F15-21-2010-X-2 dated 9 Aug 2012 and F15-21-2010-X-2 dated 24 Jul 2014.	3. Indicative TCP is in place. PTR also has a Corridor Management Plan.
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good		2. Tiger Conservation Foundation is at a state level, letter from the PCCF, no. 405 dated 30 Jan 2009. 3. Indicative plan of PTR – letter from FD, Panna no.2013/997 dated 13 May 2013; letter of R. S. Murthy, Member Secretary, MP State Biodiversity Board, no. 2016/1947 dated 17 Oct 2016 to the CWLW & PCCF (WL) on Conservation Plan of Core of Panna TR being prepared; Indicative Corridor Plan 2016-2024, sent to Member Secretary, NTCA, vide letter no. 1/5367 dated 5 Aug 2017 from APCCF(Wildlife), Govt. of Madhya Pradesh. 4. State Level Steering Committee exists for all TRs in MP, vide letter no. F-15-2-2009-X-2, Bhopal dated 20 Mar 2009. In addition Letter no. 1104, Panna 10 Aug 2009 for Tripartite Agreement between State Govt., Field Director & NTCA. 5. All 7 SOPs are in place.	4. SOPs are followed regularly for relevant cases, and interstate meeting with Achanakmar TR is being carried out from time to time. 5. SOP for active management of tigers at a landscape level (SOP no. V) has been put in place with a particular request from PTR.

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

degradation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		1. MP Govt. GO no. F-15-21/2010/10-2 dated 9 Aug 2012, and letter of PCCF (WL) no. DM/335/Bhopal dated 17 Jan 2013 and PCCF & CWLW's letter no. DM/4241 dated 12 Jul 2013.	1. Core & Buffer of PTR are under unified management of the Field Director.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) +?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		1. Indicative plan of PTR –letter from FD, Panna no.2013/997 dated 13 May 2103; letter of R. S. Murthy, Member Secretary, MP State Biodiversity Board, no. 2016/1947 dated 17 Oct 2016 to the CWLW & PCCF (WL) on Conservation Plan of Core of Panna TR being prepared; Indicative Corridor Plan 2016-2024, sent to Member Secretary, NTCA, vide letter no. 1/5367 dated 5 Aug 2017 from APCCF(Wildlife), Govt. of Madhya Pradesh	1. Indicative TCP has been submitted to the office of the CWLW & PCCF (WL) 2. IIFM, PTR officials and local communities in buffer areas were involved in preparing the TCP.
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		1. Technical Report prepared by the FD, PTR dated 26 May 2015 on Vulture Population Estimation, for the period 2011 – 2015.	1. Seven species of vultures, which reside in the TR, have been given protection, annual monitoring is also carried out.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

TR safeguards all threatened biodiversity values.	Very good			2. Special project on reptiles has been taken up.
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**Remarks need to elaborate on the kind of safeguards and how they work or are intended to work*

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		1. Meeting minutes/ records with Tour Operators dated 30 Sep 2014, 02 Feb 2016, 29 Jun 2016, 9 Jan 2017, 11 Jul 2017; with Local Communities dated 27 Jun 2013, 26 Apr 2014, 18 Jan 2017; interaction with Judiciary officials, report dated 22 Jan 2017. 2. Letter no. 2016/5166 dated 21 Jun 2016 signed by Field Director, Panna TR on constitution of Local Advisory Committee including the following – MLA of Rajnagar, Panna, Bijawar, Hata; CCF Chattarpur; DM/ Collector of Panna, Chattarpur & Damoh; DFO of North & South Panna, Chattarpur & Damoh; RM MP Tourism Dev. Corp. Ltd; Dy. Commissioner, Tribal Welfare Dept., Sagar; SDM, Panna; Sarpanch, Hinauta & Madla; Dr. Raghu Chundawat; and civil society representatives. 3. Discussion with the PTR FD and Jt. FD.	1. Stakeholders are Judiciary, State Police, District Administration, Political leaders, National Mineral Development Corporation, Education Dept., MP Tourism Development Corporation, MP Tribal Welfare Dept., Hoteliers, Guides, Tour operators.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

**The result of participation must show in the field and not merely reported as a routine exercise.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		1. Visual assessment by MEE Team of grassland management work.	1. Yearly sanction of funds for grassland management
Limited planning and monitoring programmes are in place for habitat management.	Fair		2. DPR of grassland management.	2. Waterholes are regularly managed on an annual basis. Water conservation structures have been constructed, artificial water supply to waterholes during dry season is being done.
Habitat management programmes are generally planned and monitored.	Good		3. Waterhole management report documents 166 waterholes, with details of water availability.	3. Weed eradication is being done as part of grassland management.
Habitat management programmes are thoroughly planned and monitored.	Very good	✓		4. Regular check is done to prevent migratory cattle camps in buffer areas. Rotational grazing with a closure period of 5 years is being practiced in buffer areas.

**This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.*

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		1. There is no one Protection Strategy.	1. STPF is not there.
TR has an adhoc PS and SA.	Fair		However, there are fire management plans, monsoon patrol plans and regular patrol documents.	2. Security Audit is to be done in future.
TR has a generally relevant PS and SA but is not very effective.	Good	✓	2. Security Plan is not in place.	3. Available documents include Forest Offence Reports, Flying Squad register, Records of Patrolling Camps and Watchtowers, Barrier records, Wireless Communication analysis and River Post records.
TR has a comprehensive and very effective PS and SA.	Very good			

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		1. Govt. Order no F15-13/ 2007/10-2 dated 29 Apr 2016 on <i>ex-gratia</i> for human wildlife conflict cases. 2. Revenue Book Circular 6.4	1. Cattle depredation cases are addressed at the level of Range Officers.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		1. Indicative TCP has brief mention of the landscape. 2. Corridor management plan for PTR is in place & has been submitted to NTCA. Corridors are identified. 3. Proceedings of meeting with forest officials of neighboring forest divisions, dated 19 Dec 2016. 4. WWF-India's report titled 'Connecting Habitat Corridors for Panna Landscape' documents importance of corridors.	1. Panna landscape comprises of PTR, Satna FD, South & North Panna FD, Chhatarpur FD, Noradehi WLS, Damoh FD. 2. Preparation of Panna Landscape Management plan is being done by WII, as part of the Ken-Betwa River Linking project.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		1. Meeting with the Field Director, PTR and other officials and documents provided therein.	1. 31 out of 174 sanctioned posts of Forest Guards & 37 out of sanctioned posts of 83 Foresters posts, 8 out of 14 sanctioned posts of Range Officers are vacant. None of the sanctioned posts in the Core are vacant, most of the vacancies are in the buffer areas.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		1. Field visit by the MEE team & discussion with the PTR officials. 2. List of buildings – patrolling camps, barriers, watchtowers, river posts; list of weapons, list of vehicles; wireless equipment; boats; cycles; field equipment like compass, rangefinder, GPS and digital camera and rescue vehicles.	1. Adequate resources are available.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is <i>ad-hoc</i> , funds are inadequate and seldom released in time and not utilized.	Poor		1. Funds provided by NTCA include the following - <ul style="list-style-type: none"> • 4-1(9)/2014-PT dated 29 Oct 2014 for INR437.8 lakh – utilized INR354.19 lakh 	1. Funds are generally released on time since 2016 onwards (Jun), most of the funds have been spent.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives.	Good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Generally funds released with not much delay and mostly utilized.			<ul style="list-style-type: none"> • 4-1(9)/2015-PT dated 16 Sep 2015 for INR321.16 lakh – utilized INR301 lakh • 4-1(9)/2016-PT dated 30 Jun 2016 & 4-1(9)/2017-PT dated 28 Mar 2017 for total INR377.988 lakh – utilized INR376.95 	
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is <i>ad-hoc</i> , funds are inadequate and seldom released in time and not utilized.	Poor		1. Allotments vide various letters from the state government, as discussed with the PTR management.	1. Fund allocation is adequate, and release is timely. It is also combined with development funds at times.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		1. Discussion with the PTR management, vide email of donor NGOs.	1. WCT provided a vehicle in 2014-15
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good		2. INR equivalent of donations provided to the MP Tiger Conservation Foundation.	3. Saving Tigers, Kolkata provided raincoats in 2014-15 & 15-16, along with other field equipment.
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good	✓		
				4. WWF-India provided support for organizing nature camps, jackets and uniform for 800 daily-wage staff in 2015-16. WWF-India provided two tractor

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				trolleys and tankers in 2017. 5. Support received from NGOs is adequate.
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4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		1. Discussion with PTR management.	1. Two ROs have undergone Wildlife Certificate Course in WII. 2. JD, has completed Wildlife Diploma Course in WII. 3. Phase I & Phase IV monitoring training is being done. 4. Workshop on wild animal rescue & wildlife crime control (with WCCB), with Judiciary on wildlife offences.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc . The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		1. Discussion with the management & Frontline Staff of Panna TR.	1. Staff motivation is commendable as far as tiger monitoring is concerned. Staff members' services & performances are recognized during locally organized functions. 2. Staff received state level awards; National award to Nature Camp resource persons, Excellence Award to the Park by TripAdvisor. 3. Saheed Amrita Devi Bishnoi Award (2015) to Dr. Sanjeev Gupta,
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				veterinary officer of Panna; RBS Earth Hero Award to S. Murthy, FD of Panna (2015); Wildlife Conservation Award (2015) to R. P. Ahirwar, Range Officer; Wildlife Conservation Award (2016) to Amar Singh, Dy. Ranger.
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4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		1. Discussion with PTR management.	1. Public participation in vulture estimation.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			2. Engagement of tourism service providers in decision making.
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		3. NGOs are involved in eco-development work.
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGIs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		1. Discussion with Panna TR management.	1. Regular meetings with tour operators, and guides.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			2. Complaint registers kept at gates, for tourists & tourism service providers.
Coordinated system logs and responds effectively to most complaints.	Good	✓		3. Feedback forms collected from tourists. Email ID has also been provided for collection of feedback.
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			4. www.pannatigerreserve.in is the website for providing suggestions.

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		1. Discussion with management of Panna TR.	1. Mandays generated – 2014-15: 354,000 2015-16: 404,000 2016-17: 364,000
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓	2. Letter no. 1705, Panna, dated 28 Sep 2016 from FD, PTR to PCCF, JFM on hospitality training for local community members.	2. 98 local community members from buffer villages have been given vocational training.
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

**The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.*

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		1. Letter from JD, Panna no. DM/2016/1659 dated 14 Sep 2016 to PCCF (WL) & CWLW on village relocation.	1. Panna TR is located in three districts, but the CTH is located in two districts, Chattarpur and Panna. Initially Panna TR had 16 villages and a total of 13 villages have been relocated creating inviolate space for tigerls.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

**Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.*

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		1. Website of Panna TR, www.pannatigerreserv e.in has all management outputs	1. All special management related events are informed through regular Press Notes.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Publicly available information provides detailed insight into major management issues and condition of public assets.	Good		available online.	
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good	✓	2. Press Notes. 3 Nature Camps.	

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		1. Letter of FD, PTR no. 863 of 23 May 2016 on Swadesh Darshan, with details of tourism facilities available within the park. 2. Letter from MP Ecotourism Development Board, no. 270 dated 15 Feb 2017 on the subject of collaboration with the PTR authority for maintenance of tourism facility.	1. Visitors register is available at all tourist entry gates. 2. Interpretation Centres are located at Madla and Hinauta. 3. Jungle cottages and restaurant are available at Hinauta gate. Online reservation facilities available. 4. New tourist watch towers being constructed. 5. Sanction of work under Swadesh Darshan.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good	✓		

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		1. Letters from the CWLW on different research projects. List attached.	1. Research projects sanctioned include - - Proximate drivers of human – tiger interface and conflict in Panna TR (2014-2016) by WII - Collection of scat of tigers from Panna core & buffer for dietary preferences of tigers (2015-2016): Shekar Kolipaka - Inventory of biodiversity value status and strategies for conservation of sacred groves of central India (2015) by HSG Univ, Sagar
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				- Forensic importance of glow-flies on carcass of wild animals in Panna TR (2016) by NDBCVVV, Jabalpur. - Study of diversity & ecology of herpetofauna of Panna TR (2017) by WII.
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***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		1. Annual maintenance schedule with budget allotment.	1. Funds for annual maintenance are in place, allocation from Development Fund is also taken into account. 2. Necessary human resources are also put in place for maintenance of electronic equipment and vehicles.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		1. Vulture estimation document.	1. Population of vultures has shown stable trend. 2. No regular exercise is done for assessing population trend of other threatened species.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		1. Phase IV monitoring of Tigers, Co-predators and Prey for last three years.	1. Tiger numbers are showing an increase over the years.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good	✓		

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		1. CVD control plan. 2. Forest Fire management plan and satellite based fire alert messaging system. 3. Plan for engaging and surveillance of hunting communities, usage of dog squad.	1. Threats include prevalence of CDV, forest fire, prevalence of nomadic hunting communities. 2. All threats are effectively reduced, more than 50% area around the TR have been covered in CDV vaccination; innovative techniques are undertaken for forest fire control and regular surveillance of hunting communities around the TR is being done.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely ad-hoc.	Poor		1. Press Note dated 11 July 2017 on tourism services and facilities available in Panna TR.	1. Visitor facilities provided by the TR are inadequate, mostly for day tourists. 2. Visitor management is done through guides, regular vigil on the tourists, scrutiny of the feedback forms, etc.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good			
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good	✓		

+Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		1. Meeting minutes with local communities, EDCs – monthly meetings with the Range Officers.	1. Local communities are generally supportive, however, there might be disgruntlements based on the community members' personal requirements. 2. Local communities provide critical information on stray tigers, movement of other wild animals and for fire protection.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	40	257.5 & 80%
2.	Planning	07	10	70	52.5	
3.	Inputs	05	10	50	42.5	
4.	Process	06	10	60	45	
5.	Outputs	04	10	40	35	
6.	Outcomes	05	10	50	42.5	
Total		32		320	257.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

7. Pench Tiger Reserve, Madhya Pradesh

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1. Tiger Conservation Plan, p5, Chapter 1.3 (Core) & p8 Chapter 1.3 of the Buffer Plan and p1, Chapter 1.1 in the Indicative corridors plan 2. Forests of the Central Highlands. 3. Economic benefits of tourism by Raghu Chundawat 4. <i>Publication on Gond culture</i>	1. Yes, the values of Pench TR are well documented. 2. Ecological values are monitored through M-StrIPES & Phase IV assessments 3. Cultural values also documented in a publication
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1. TCP Chapters 6.5.2 & 6.5.4 of Core, Chapter 6 (II) & (IV) of Buffer, and Chapter 4.5 of Indicative Plan for Corridors. 2. Security Plan 3. <i>Charbaha Sammelana</i>	1. All threats are systematically identified and assessed as per protocols mentioned in the TCP & Security Plan. 2. Major threat is electrocution of wild animals using illegal wiring from the power line passing through the TR. Poaching of tiger and prey by poisoning livestock kills/ carcasses is also a threat. 3. Poaching of wild animals using snares in summer. 4. Infestation of grasslands by <i>Parthenium</i> , woodlands by <i>Lantana</i> is a threat. 5. Registration of firearms from area within 5km from the boundary of NP has been carried out.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good	✓		

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		1. TCP 2. Final Notifications of the National Park as well as the Sanctuary	1. No human habitations or rights are present in the core area. Strict protection ensures that there is no human and biotic interference in the Core Area.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good	✓		

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones by under the Field Director would also be taken into account.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		1. Legal notification of the core area issued vide GoMP, Forest Department notification No. F.15-31-2007-X-2 dated 24-12-2007. and that of the buffer zone was issued vide GoMP, Forest Department notification No. F.15-8/2009/10-2 dated 05-10-2010 2. Tiger Conservation Foundation is at a state level, letter from the PCCF, no. 405 dated 30 Jan 2009. 3. TCP has been approved for the core and buffer and the corridor by the NTCA vide letter no. F. No. 1-21/2009 NTCA Dated 18-06-2015 4. State Level Steering Committee exists for all TRs in MP, vide letter no. F-15-2-2009-X-2, Bhopal dated 20 Mar 2009. In addition Letter no. 1104, Panna 10 Aug 2009 for Tripartite Agreement between State Govt., Field Director & NTCA.	1. Legal notification of the core area (411.330 sq.km) and buffer zone (768.302 sq.km) 2. State Level Tiger Conservation Foundation of Madhya Pradesh is present. 3. Tiger Conservation Plan is in place and approved by NTCA 4. The last meeting of the State Level Steering Committee was held on 22-09-2015 5. SOPs i-iv are on the website of the Madhya Pradesh Forest Department www.mpforest.gov.in
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	✓		

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		1. Notifications available	1. Yes, Core and Buffer of Pench Tiger Reserve are under the unified management of the Field Director.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) *?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		1. TCP & Indicative Plan have been approved for the core and buffer and the corridor by the NTCA vide letter no. F. No. 1-21/2009 NTCA Dated 18-06-2015	1. TCP and Indicative Plans have been approved
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		1. Discussion with the Field Director of the TR 2. MSTriPES sheets, camp registers, files containing analysis of data and maps, TCP and Security Plan	1. Yes, PENCH TR safeguards threatened biodiversity values. Information from MSTriPES are meticulously monitored and good performers in the field rewarded and slack performers are pulled up. 2. Season wise plans (fire plan, monsoon operations) for protection of biodiversity are implemented. 3. Two Flying Squads are operational and routes are decided by the Jt. Director and disclosed at the beginning of patrolling.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good	✓		

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		1. Letters on meetings with local stakeholders 2. Letters/ minutes on inter-departmental & inter-state meeting 3. GO on LAC & copy of new proposal for new committee 4. Sharing of proceeds with local people	1. Yes, local people are engaged in planning process. 2. Monthly meetings of Village level committees and other stakeholders including Park guides, Vehicle owners, Resort owners and managers, other departments, NGOs and interdepartmental meetings with adjacent territorial divisions including that in Maharashtra state. 3. There is a local advisory committee headed by the Commissioner, Jabalpur wherein all stakeholders are represented. 4. Unanimous support of the local communities for creation of the buffer zone is a testament to the relationship between local people and TR management. 4. One third of the proceeds from tourism are given to the villages for use by the village committees.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good	✓		

*The result of participation must show in the field and not merely reported as a routine exercise.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		1. Field visit by the MEE committee members and discussion with the officials of Pench TR. 2. Range wise water regime monitoring document. 2. Report by Prof. Muradkar	1. Extensive activities have been carried out for management of grasslands created mostly by the submergence of the Totladoh reservoir and the relocation of villages. In addition, water regime development has been a focus of management and the creation of over 60 earthen dams in the core has improved the water regime drastically. The creation of about a dozen dykes in the submergence area has been one of the most effective innovations in this regard. Monitoring of the water regime is done on a weekly basis. 2. Grassland management protocol developed by Prof. Muradkar.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good	✓		

**This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.*

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		1. TCP 2. Security Plan, Fire Protection Plan, Monsoon Plan examples. 3. Beat Inspection records & Beat rosters 4. Court Cases files 5. MSTRIPES data sheets	1. Security plan has been recently updated and there are separate Plans for Monsoon, Fire Protection Plan, Dog Squad, Flying Squads. 2. There are specific targets with regard to foot patrolling and beat inspection. 3. Data from MSTRIPES are systematically assessed regularly and changes made accordingly. 4. There is an effective system in place to monitor Court Cases, especially those that involve poaching. There is a legal advisor who visits the Park for two days each month and is available always for consultations. All cases in the courts are being meticulously followed with the concerned files being updated regularly with the statements of the
TR has an <i>ad-hoc</i> PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

			witnesses as they happen in court. 5. Security Plan will be carried out in 2018 in partnership with NTCA, GTF & WWF-India.
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		1. Cattle Kill Record, <i>ex-gratia</i> record, MoU with WWF-India 2. "Charwaha" records, Crop protection parties	1. An effective system is in place for the early detection of livestock kills. All efforts are made to ensure the timely payment of <i>ex-gratia</i> . The MP Public Service guarantee Act lays down a maximum time period of one month. A scheme to provide the affected cattle owner immediate monetary relief of Rs. 1200 is in Place with support from the WWF-India. 2. There are regular "Charwaha Sammelan" programs, which are outreach programmes wherein the cattle grazer in each village is sensitized and some equipment/other materials are provided to him and his school children like Umbrellas, school bags Water bottles etc. 3. Crop depredation compensation is being undertaken by the Revenue Department and needs to be improved in partnership with the Forest Department.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		1. Indicative Plan for the corridors 2. BCRLIP project documents 3. UNFCC Climate Adaptation Fund Project document 4. Coordination meetings minutes and joint action	1. The Indicative plan for the corridors identifies all aspects of the corridors and its weak linkages. 2. BCRLIP project in the entire Satpura-Pench Corridor is being implemented by the Forest Dept. 3. Pench-Kanha Corridor a new UNFCC-GEF project under the climate adaptation fund is to be implemented from FY17, through RBS. 4. There are regular meetings and action between the various forest and corporation divisions in the region as well as in Maharashtra state.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good	✓		

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		1. Letter of sanctioned strength 2. Discussion with the FD & JD of Pench TR.	Most of the positions are filled. Average age of Forest Guards is about 33 years. The staff has been assigned specific roles based on specific management objectives. Field Director - 1 (filled) Jt. Director - 1 (filled) ACF – 3 (filled) Range Officer – 14 (9 filled) Deputy Ranger – 15 (14 filled) Forester – 51 (43 filled) Forest Guard – 170 (159 filled)
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

**This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a-vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)*

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		1. Discussion with officials of Pench TR 2. List is present in the TCP	1. There are 113 permanent patrolling camps; all are strategically located and well supported. 2. There are 74 temporary camps. 3. There are conveniently located rest houses and camping facilities. A visitor and interpretation centre is located at the main entrance at Turia gate. All gates and barriers are manned with effective control procedures. There are well established Range, Circle and Beat HQs with facilities to store equipment. 4. There are 17 fixed wireless stations, 20 vehicle mounted wireless sets and 154 handheld sets; 5. Among vehicles there is a staff car, sixteen 4WD vehicles including 6 Bolero
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				campers, 1 Mini Bus, 5 Gypsy vehicles & a tractor. There is one rescue vehicle, one mini bus and one mini truck. There is a customized animal transport truck as well as a vehicle for the dog squad. All Range Officers have a 4WD vehicle each and each of the range assistants has a motorcycle though not all Foresters. There are a total of 17 motorcycles. There are 4 boats to patrol the in Totladoh reservoir including one with a boat trailer.
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*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is <i>ad-hoc</i> , funds are inadequate and seldom released in time and not utilized.	Poor		1. NTCA fund sanction letters, fund utilization certificates 2. Park Development Fund Usage audited statement	1. Funds received & (utilized) from NTCA include the following FY14-15 INR657.61 lakh (INR466.31 lakh); FY15-16 INR412.76 lakh (INR405.06 lakh); FY16-17 INR988.69 lakh, (INR702.00 lakh); 2. The entire receipts from tourism are available to the Park as the Park Development Fund. This has been the arrangement since 1996 in the state of Madhya Pradesh. There is a lot of flexibility in the use of these funds and all proposals for use of these funds are processed by a high level committee constituted for the purpose at the state level. Since they are with the Park manager, there is no delay in their release. PDF FY14-15 Opening balance INR461.66 lakh, receipt INR228.86 lakh, expenditure INR112.60 lakh; FY15-16 receipt INR313.47 lakh, expenditure INR304.03 lakh; FY16-17, receipt INR 293.89 lakh, expenditure INR346.20 lakh
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is <i>ad-hoc</i> , funds are inadequate and seldom released in time and not utilized.	Poor		1. Budget allocation & expenditure documents available	1. There is proper planning and allocation that meets the most important objectives. Generally, funds are released with not much delay and mostly utilized. Funds from the state are released every quarter. The allocation appears on the central server of the state which is accessible online. After this the treasury issues the cheque. The follow up with the treasury takes some time.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		1. MoU, equipment UC & Receipts	1. NGO support has been actively sought for several activities and problems that the reserve faces. These include support for camp equipment, vehicles, field gear, including health frontline staff, monitoring activities, including camera trapping and MSTRIPES. alternative form of tourism and skill development. 2. The NGO "Saving Tiger" has built permanent walls for 36 open wells, sponsored diving trainings to two divers; they have also helped in the formation of crop protection squads. WCT, a Mumbai based NGO has been providing vital support for the collection and analysis of MSTRIPES data from the field. They have also organized intensive health camps, conducted the Phase IV camera trapping operations in the buffer, provided replacement batteries for the solar lights They had originally donated for the camps. Likewise, WWF-India has provided a Bolero Camper for patrolling. WWF-India provides immediate financial assistance in case of cattle kills to the affected villagers. WWF-India
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				has also provided vehicles and materials like Hunter Shoes, Bags, Rain Coats, Water Bottles and torches to the frontline staff. The NGO Wild lands conservation Trust has been the agency behind the establishment of the Village tourism project "Tiger Tribes". They have also opened a sewing school and are training the village women in sewing and the making of souvenirs. That are then put on pale at the park souvenir shop.
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4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		1. Discussion with the officials of Pench Tiger Reserve	1. The Field Director, DD (2014-16) & the veterinarian are trained under the PG Diploma course in wildlife management at the Wildlife Institute of India (WII) at Dehradun. Three staff members completed Wildlife Certificate Course from WII. 2. There are regular trainings with emphasis on field craft, Monitoring techniques, wildlife crime prevention, and prosecuting court cases for the staff. 3. Game guards are trained specifically in the Training School, Tala, with special focus on wildlife management. 4. Two ACFs completed fortnightly vertical integration course.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good	✓		

***Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc . The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		1. Discussion with Field Director and other officers of Pench TR. 2. TCP, Security Plan, MSTRIPES protocol assessment	1. Staff are motivated and are performing their duties. 2. Out of turn promotion has been received by three frontline staff through the state government processes. 3. The newly introduced MSTRIPES is meticulously analysed in order to ensure that the effort put in is consistent with the management objectives. 4. State level awards have been received by three staff members. 5. District level awards have been given to
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good	✓		staff which helps in recognizing their efforts.
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4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		1. Minutes of LAC meetings, those with village EDCs; monthly meetings with resort managers, Park guides and Drivers	1. There are frequent meetings, consultations, and sessions for opinion seeking with local communities that has resulted in maintaining the trust between people and managers. LAC meetings are organized regularly. EDC meetings are conducted at least once in six months. Decisions on fund disbursement through the Park Development Fund are taken up in EDC meetings. 2. There are monthly meetings with the stakeholders including park guides, Vehicle owners/drivers, lodge owners/managers. An exhibition of the results from the camera trapping exercise has been up for the visiting at the Turia Gate. 3. Coordination with the villagers is working well for assessment of crop damage due to natural calamities. Payment of ex-gratia for crop damage due to wildlife depredation is not working well through Revenue Dept.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGLs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Feedback form analysis doc.	All complaints are recorded are followed up at respective levels. These are monitored and resolved. Complaint & suggestion register and boxes are maintained at Turia & Karmajhuri gates. Feedback forms are provided to every tourist group and filled forms are collected & analysed regularly.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair		Complaints registered on the Chief Minister's Helpline	
Coordinated system logs and responds effectively to most complaints.	Good		Website with Frequently asked Questions, and emails and their responses	
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good	✓	www.penchtiger.co.in	

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.5 Does TR management addresses the livelihood issues+ of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		1. Discussion with officials of the Pench TR.	1. Various activities are taken in all the 107 villages in the buffer starting from the India Eco-development project. BCRLIP project in the western part of the buffer and new project under the UN Climate adaptation fund in the Pench-Kanha Corridor are also present. 2. People from the villages regularly employed as watchers of which there are about 550. A total of 305,327 mandays were provided in FY14-15; 238,569 mandays in FY1516; 304,337 mandays in FY16-17. In addition, the park is an important one for the local economy with the tourism sector providing employment to the locals including 115 guides, over 150 vehicle owners and drivers etc. 3. Providing the appropriate skills to the villagers especially women is important and in view of this many have been trained in sewing, driving, JCB operations, Hospitality trades, Masons etc.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good	✓		

+The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria+				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		1. TCP	1. There are no villages in the core area. 2. Villages which were relocated earlier in (1992-93) are still looked after. In FY2017, INR500,000/- was provided to each relocated village.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good	✓		

+Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		1. website www.penchtiger.co.in 2. Visit to Nature Interpretation Centre. 3. Pench Stripes 4. Brochures	1. website www.penchtiger.co.in 2. Nature Interpretation Centre is present at Turia gate. 3. Pench Stripes, a bi-annual magazine is circulated widely (500 print copies & website circulation) 4. Brochures are available to tourists
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			on demand.
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good	✓		

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		1. Discussion with the park officials and visits.	1. There are 3 entry gates for visitors. The facility of online booking is available and is extensively used. There are clear instructions about visitor capacity and what chances visitors might have in the absence of booking entry in advance. 2. A maximum of 44 vehicles are permitted per round, 34 from the Turia gate, 06 from Karmazhiri gate and 04 from the Gumtara gate. The rounds are defined. 3. There are 88 trained local guides to accompany each vehicle inside the TR. Taking a guide is mandatory. 4. There are forest rest houses at Karmajhiri, Ghatkohka and Jamtara. 5. There is a well appointed interpretation centre at Turia gate which has recently been refurbished. 6. The visitor facilities at the gates and the rest houses have been recently upgraded and the main toilet at Alikatta renovated. 7. Drinking water & toilet facilities are available at Karmajhuri, Jamtara, Alikatta & Turia gates. Temporary toilets are available at 4 other sites. 8. Six nature trails are set up in the buffer areas. One late-evening safari at Khawasa is in place. 9. Four riding elephants are available on request.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good	✓		

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		1. Research report & publications	1. Following research projects have been undertaken by WII, Dehradun (i) Ecology of gaur (ii) Ecology of dhole (iii) Ecology of tiger. 2. The State FRI at Jabalpur has undertaken the following research (i) Floristic survey involving vegetation description, conservation status and distribution of rare and endangered plant species and communities (ii) ethnobotanical studies for documentation of traditional knowledge of local communities. 3. The Zoological Survey of India, Jabalpur has undertaken two projects (i) faunal survey focusing on insects, fishes, reptiles and amphibians, the status and distribution of rare and endangered species, developing an illustrated field guide and for making contribution to museum collection. (ii) Study of wetlands and riparian systems with focus on status and diversity of fishes, waterfowls and mammals. 4. There is an ongoing research project on the effect of <i>Lantana</i> toxicity on herbivores being conducted by veterinary college Jabalpur. Further there is a project on Pangolins by the SFRI and on the National Highway no. – 7 by WII. 5. Lesser cats research project being conducted by NCBS.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		1. Budget records and Park Development fund records 2. TCP	1. The infrastructure assets are maintained regularly and any shortage of funds is made up with proposals under the Park Development Fund which is the accumulated gate receipts.
Inventory maintenance is <i>ad-hoc</i> and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good	✓		

6. Outcomes

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		1. Discussion with the Field Director and other officials of Pench TR 2. SFRI report, Jabalpur (2016) 3. Phase IV monitoring report	1. Population of gaur, leopard & wild dog is stable. Population of wolf is not known.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		1. SFRI report 2016 and NTCA-WII report 2014	1. Tiger population is increasing. Pench is now recognized as an important source population of tigers in Central India whereas it was considered a sink not so long ago. The tiger population was recorded as 43(35-49) in 2014 while it was recorded as 53(51-63) in the 2016 SFRI report. The number of unique individuals captured during the Phase IV exercise was 36 in 2013 and 50 in 2016.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good	✓		

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		1. TCP, Camp registers, Security plan	1. Threats to TR due to electrocution & poisoning of wild animals is still on and regular patrolling is being carried out to mitigate this threat. 2. Threats are not increasing.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely ad-hoc.	Poor		1. Registers with remarks of visitors at Turia gate, the online reservation system, the interpretation center records.	1. The visitor management system is well organized and monitored. The routes are well planned. A Tourism Manager has been appointed in May 2017. 2. The visitor remarks as recorded or conveyed in person to any staff are acted upon to rectify glitches if any to improve visitor experience. 3. Guides are trained to control littering by visitors, maintenance of decorum in the park, which help in visitor management.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good			
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good	✓		

+Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		1. Discussion with the Field Director and other officers of the Park. 2. Document on Charwaha Sammelan	1. Villagers are by and large supportive of the management. Because of the excellent support of the local communities the consent for constitution of the buffer zone went forward without a hitch. The work done during the India Eco-development project and continued thereafter has been responsible. 2. Local communities are involved in Charwaha Sammelan & for managing crop loss.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	50	Score 300 & 94%
2.	Planning	07	10	70	67.5	
3.	Inputs	05	10	50	45	
4.	Process	06	10	60	57.5	
5.	Outputs	04	10	40	37.5	
6.	Outcomes	05	10	50	42.5	
Total		32		320	300	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

8. Sanjay Dubri Tiger Reserve, Madhya Pradesh

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1. Values of the SDTR are documented in the TCP, chapter 1.3.(e), p-41. 2. TCP submission letter no. 7886 dated 29/12/2017 from FD, SDTR. Approval from the NTCA is awaited. 3. Any other document citing the cultural or other values of SDTR 4. Ethnicity of Grasses of Sanjay Dubri Tiger Reserve by Dr. Deleep Kmar, 2017; Biodiversity of Sanjay – Dubri Tiger Reserve, 2017 and Click at the Grid, Sanjay Dubri Tiger Reserve by Dr. Deleep Kumar, 2017.	1. SDTR was the birthplace of the white tiger, named Mohan, during 1951. 2. Madwas, buffer was the capital of the ancient Balendra kingdom. 3. Giddha Pahar, near Majholi has large nesting colonies of vultures, and has been documented 4. Fossils of ungulates are found in Dubri Range. 5. Turanath Temples in Tamsar Buffer. 6. Baghmanda Temple.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1. Security Plan of the SDTR, as part of the TCP. 2. Discussion with the FD, SDTR.	1. Security plan of the SDTR is part of the TCP and it documents the threats to the Tiger Reserve.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		1. Village relocation plan as part of the TCP, p-311, appendix 20. 2. Appendix 80 for Linear Infra passing through SDTR.	1. The Core Area of SDTR has some human and biotic interference. 2. Total 42 villages were inside the Core Area of the TR, and 8 were relocated. 13 more villages out of the remaining villages will be relocated shortly. 3. 27km railway track passes through SDTR, with two stations, Dubri & Kanchanpur. 4. 11KVA power line passes through 18 beats of the SDTR.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

**This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones by under the Field Director would also be taken into account.*

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		1. MP Gazette Notification No. F-15-31-2007-10-2 Bhopal dated 23 Feb 2011, for Core and No.F-15-1-2011-10-2 Bhopal dated 7 Feb 2011 for Buffer. 2. ESZ notification vide Gazette of India, No.1277(A) New Delhi 31 March 2016. 3. MP Tiger Foundation notified through Order No. F-14/108/95/10/2 Bhopal dated 27 March 1997. 4. Steering Committee vide Gazette Notification no. F-15-02-2009-10-2 Bhopal dated 19 August 2014. 5. Local Advisory Committee is present. vide MP Govt. order no. F-19-26/2010/10-2 Bhopal dated 24 September 2013.	1. Legal delineation of Core and Buffer is done. 2. ESZ notification is also completed. 3. 2. MP Tiger Foundation is the TCF, carrying out similar functions. 4. State Level Steering Committee is present. 5. Local Advisory Committee is present. 6. SOPs in Hindi are available.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

**Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		1. MP Gazette Notification No. F-15-31-2007-10-2 Bhopal dated 23 Feb 2011, for Core and No.F-15-1-2011-10-2 Bhopal dated 7 Feb 2011 for Buffer.	1. Yes, Core and Buffer are under the unified management of Field Director.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) *?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		1. TCP submission letter no. 7886 dated 29/12/2017 from FD, SDTR. Approval from the NTCA is awaited.	1. TCP has been submitted but not approved yet.
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

**The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.*

2.2 Does the TR safeguard the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		1. Security Plan of the SDTR, as part of the TCP. 2. Discussion with the FD, SDTR.	1. Security plan of the SDTR is part of the TCP and it documents the threats to the Tiger Reserve. 2. Monsoon patrolling is planned annually
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

**Remarks need to elaborate on the kind of safeguards and how they work or are intended to work*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		1. Discussion with the FD, SDTR. 2. Minutes of Meeting of EDCs, where payments for patrolling are paid through the EDCs.	1. Yes, EDCs are involved in planning process. A total of 58 EDCs are present in SDTR. 2. EDC members are involved in patrolling, which safeguards the biodiversity values. 3. Discussions for relocations are carried out through the Gram Sabha.
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

⁺The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		1. Village relocation plan. 2. Discussion with FD, SDTR 3. TCP Appendix 14, detailing list of waterholes 4. TCP Chapter 4.2.(A) & 4.2.(B) & 4.2.(C) detail grassland management, invasive species management plan and water management plans respectively. 5. Appendix 27 of TCP details weed management issues.	1. Village relocations are done as part of habitat management. 2. Grassland development is being undertaken in areas cleared by relocating villages within the Core area. 3. Waterhole development is carried out regularly. Total 177 waterholes in Core and 336 waterholes in Buffer. 4. Invasive species eradication focuses on <i>Sida</i> sp.
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

⁺This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as *Lantana* sp., *Mikania* sp. etc. would be examined.

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		1. Security Plan. 2. TCP Chapter 4.3. has details of protection measures and local level intelligence gathering mechanisms. 3. TCP Chapter 4.4. has details of fire management strategies.	1. SDTR has a Security Plan. 2. Security Audit has been completed recently. 3. Anti-poaching team is present under the Satna Division. 4. Sniffer Dog squad is present. 5. 40 Ex-servicemen are present as supervisors and gunmen in the Reserve. However, TPF or STPF is not
TR has an <i>ad-hoc</i> PS and SA.	Fair	✓		
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				present.
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

***Score: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		1. List of HWC cases are in Appendix 26 of TCP.	1. Human wildlife conflict is a major issue as far livestock kills are concerned. Human injury & death due to bear attacks are reported.
TR has been able to mitigate few human-wildlife conflicts.	Fair	✓		
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		1. TCP has a corridor management plan. 2. TCP p-11 details the existing corridors of SDTR.	1. A corridor management plan exists. 2. Connectivity with Guru Ghasidas National Park, with Bagdara Sanctuary and with Bandhavgad National Park are existing.
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		1. Discussion with the Field Director and his officer.	1. Personnel is not adequate. 2. Sanctioned post – 198, out of which 143 are filled, and 55 are vacant. Post of JD, 1 post of ACF, 8 posts of Range Officers and 8 posts of Dy. Rangers are vacant, in addition to those at the frontline level.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

**This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)*

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		1. List of vehicles, equipment and building are provided.	1. Resources are inadequate. 2. 17 four/ six wheeler vehicles and 2 two-wheelers. 3. Residential quarters are sufficient.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair	✓		
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is <i>ad-hoc</i> , funds are inadequate and seldom released in time and not utilized.	Poor		1. Discussion with FD and his officers.	1. Project Tiger grants for FY17-18, sanctioned amount was Rs.13,787.832 lakh and amount spent was Rs.13,703.994 lakh. Data of FY15-16, FY16-17 are needed. 2. Received Rs.127 lakh under Swadesh Darshan in FY 17-18, and amount spent was Rs.54.82 lakh. 3. Funds were adequate but fund release was not timely, as funds got sanctioned and released from NTCA only in November.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is <i>ad-hoc</i> , funds are inadequate and seldom released in time and not utilized.	Poor		1. Discussion with FD and his officers.	1. Amount received from the state in FY17-18 Rs.2340.045 lakh and amount spent was Rs.2098.99 lakh. 2. Funds were adequate and were released on time by the state.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		1. Discussion with FD and his officers.	1. WCT provided resources worth Rs.3.35 lakh during FY 17-18 for supporting foreign training of a veterinary officer. 2. FY15-16, three radio-collars were provided by WWF India; FY16-17, one vehicle and few posters was received from WCT, 40 solar home light systems were provided by Edwitt Foundation and 26,500 small lamps & 1,000 water filters were provided by Eco-Solutions; FY17-18, TCF provided 1000 first-aid kits among frontline staff daily wagers and villagers, carried out 2 bore-well construction in corridor area. 3. TCF provided training for guides and for small livelihood development & cattle vaccination. 4. Saving Tiger Society has provided a sniffer dog to SDTR. 5. Training conducted by NGOS include sewing training to 20 village women. 49 guides attended the Guide Training course. Various other capacity building programmes were also organised.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		1. Discussion with the Field Director.	1. 1 SDO and 3 ROs are trained in Wildlife Conservation. Veterinary doctor has got trained in South Africa for capture and tranquilization training.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc . The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		1. Discussion with FD and his officers.	1. Frontline staff are recognized for their contributions during Wildlife Week or 15 th August celebrations.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		1. Discussion with FD and his officers.	1. EDC members are empowered to take charge of the funds they receive for tiger and habitat conservation. 2. LAC members representation
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGIs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		1. Discussion with FD and his officers.	1. Complains from CM Helplines are addressed within a month. 2. Public Grievance cell from the MP Govt. sends complains to the FD office and then those are addressed within a month. 3. Complaints from all levels are addressed as and when received.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	✓		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor			1. Through the MP Eco-tourism Board, 154 youths were trained in guide, hospitality and service industry.
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

**The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.*

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		1. Discussion with the FD and his officers. 2. Appendix 20 of the TCP, and section 4.7.	1. Total 42 villages were inside the Core Area of the TR, and 8 were relocated. 13 more villages out of the remaining villages will be relocated shortly.
Plans have been made but no implementation	Fair	✓		
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

**Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.*

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		1. Discussion with the FD and his officers, as well as hard copies of publications.	1. The website www.sanjaytigerreserve.in has information on management initiatives, needs to be updates. MP Online site for booking gives information on SDTR. 2. www.Facebook.com/sanjaytigerreserve 3. Pamphlets and brochures are available, on active management, eco-development and information on tigers.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		1. Discussion with the Field Director and his officers.	1. Online booking centre is available at Parsili Tiraha. 2. Visitor facilities are available at Dubri and Parsili. MPT has a resort at Parsili. There is no interpretation centre, 3 pagodas and 2 watch-towers are there for visitors 3. Water sports facilities are available at Jamdhar dam.
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		1. WII study and discussion with FD and his officers.	1. Sanjay being a newly notified Tiger Reserve, not many studies have taken place. 2. Evaluation of prey availability and habitat suitability for tigers and its ranging patterns in Sanjay Tiger Reserve, by WII in 2016-17. 3. Phase IV monitoring results are used for management improvement. M-STRIPES has been launched.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		1. Discussion with the Field Director and his officers.	1. Funds are received from the state, Project Tiger, CAMPA and development funds for maintenance of assets.
Inventory maintenance is <i>ad-hoc</i> and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		1. Systematic data on species populations are to be sent by the FD.	1. Vulture numbers are stable. 2. Wolf population is apparently stable. 3. Number of Chowsingha is possibly declining. Sambars are increasing. 4. Sloth bears are increasing; hyaena populations are increasing.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		1. Discussion with the FD and his officers.	1. Tiger population is stable.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair	✓		
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		1. Discussion with the FD and his officers.	1. Threats are being reduced as villages from Core areas are being relocated. Regular patrolling is taking place, and new patrolling camps are being set up. Incidences of human-herbivore conflict is on a reducing path.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

+Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely ad-hoc.	Poor		1. Discussion with the FD and his officers.	1. Number of visitors is increasing and online booking system was launched in Nov 2017. 125 bookings have taken place in the last four months. 2. Tourism plan is available as part of the TCP. 18.5% area of Core zone and most areas in Buffer zone are to be allocated for tourism.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair	✓		
Tourism management plan is good and well monitored.	Good			
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

+Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		1. Discussion with the Field Director, and his officers.	1. EDCs are mostly supportive of the TR management. Some villages from within the Core have shown interest to get relocated. They help in fire extinguishing; and have been providing valuable intelligence to stop poaching or any other wildlife or forest crime.
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	37.5	192.5 & 60%
2.	Planning	07	10	70	37.5	
3.	Inputs	05	10	50	37.5	
4.	Process	06	10	60	30	
5.	Outputs	04	10	40	22.5	
6.	Outcomes	05	10	50	27.5	
Total		32		320	192.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.*

9. Satpura Tiger Reserve, Madhya Pradesh in India

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1. TCP Annexure 6 documents values of the Satpura Tiger Reserve. 2. The book, 'Highlands of Central India' documents values of Satpuda region.	1. Annexure 6 of TCP gives a list of PA values in a total of 9 points.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1. Chapters 4.3; 6.3 & 6.4. of TCP of Satpura Tiger Reserve document the threats. 2. Discussion with the Field Director (FD) and Jt. Director (JD)	1. Yes, threats are documented in the TCP. 2. Offence reports record threats on an annual basis.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good	✓		

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		1. Discussion with the FD and JD. 2. Progress report of village relocation sent to NTCA 3. Offence report	1. Core Area of Satpura Tiger Reserve comprises of 1339 sq.km, which has six villages. A total of 37 villages have been relocated outside the TR. 2. Fishing in Tawa reservoir is one of the challenges. Camp and boats of local fishermen were seen by the MEE team.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones by under the Field Director would also be taken into account.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		1. Notification no. F-15-31-2007-X-2 dt 24 December 2007 and No. F-15-20-2010-X-2 dt 03 January 2011 by Govt. of MP. 2. The Madhya Pradesh Tiger Foundation Society was registered on 15-01-1997 under the Madhya Pradesh Society Registration Act, 1973 (No. 44 of 1973). 3. Tiger conservation Plan of Satpura Tiger Reserve was sanctioned by NTCA vide letter no. F.No.1-22/2009-NTCA Dated 27.01.2015. 4. Govt. of Madhya Pradesh has constituted a state level steering committee for ensuring coordination, monitoring, protection and conservation of tigers, co-predators and wild animals in the state. Constitution of the steering committee was notified vide letter No. F-15-2-2009-X-2, Bhopal dated 20-03-2009. 5. Discussion with FD & JD.	1. Yes, the Satpura TR has legally delineated Core & Buffer areas. 2. State level Tiger Conservation Foundation is in place. 3. TCP is in place and has been approved by NTCA. 4. State Level Steering Committee is in place. 5. All seven SOPs have been distributed among the Range Officers, and those are also available on the website www.mpforest.org
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	✓		

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		1. MP Govt. order No.F-15-20/2010/10-2 Dated 03-10.2012	1. Yes, Core and Buffer of the Satpura Tiger Reserve are under unified management of the FD.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) *?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		1. Tiger conservation Plan of Satpura Tiger Reserve was sanctioned by NTCA vide letter no. F.No.1-22/2009-NTCA Dated 27.01.2015.	1. TCP is in place and has been approved by NTCA in 2015 and comprises of Core, Buffer and Corridor plans.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguard the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		1. TCP chapters 2.6 to 2.10 discuss about the TR's initiatives for safeguarding threatened biodiversity. 2. Pachmarhi Biosphere Reserve Report.	1. Yes, the Satpura TR safeguards threatened biodiversity values, as per strategies documented in the TCP. 2. Pachmarhi Biosphere Reserve Report. TR is home of many rare & endemic plant species. Apart from this, 26 Himalayan & 42 Western Ghat sp. have been reported.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		1. Minutes of EDC meetings 2. Minutes of lodge owners, vehicle owners 3. As per NTCA direction, Local Area Advisory Committee (LAC) meetings are regularly held under the Chairmanship of Commissioner Hoshangabad on dates 27/06/14, 24/09/14, 08-10/12/14, 03/03/15, 12/05/16, 28/07/16, 27/10/17. Proceedings of meetings attached.	1. Information on EDC meetings held in the Tiger Reserve. 2. Information on meetings held with lodge owners, vehicle owners and guides 3. LAC meetings are regularly held.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		1. TCP Annexure 19, 20, 21, 22	1. Yes, habitat management programmes are systematically planned and monitored which were found to be effectively contributing to conservation of tigers and other threatened species 2. Those are carried out under State Plan, Project Tiger, CAMPA, Park Development Funds.
Limited planning and monitoring programmes are in place for habitat management.	Fair		2. Grasslands in relocated sites 3. CAMPA Progress Report	
Habitat management programmes are generally planned and monitored.	Good		4. Budget allocation document for FY 2018.	
Habitat management programmes are thoroughly planned and monitored.	Very good	✓	5. Discussion with FD, JD & Assistant Director (AD).	

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		1. Documents are part of TCP. 2. Copy of monsoon & fire protection plans. 3. Map M-28 4. Annexure 44 5. Annexure 78 6. Annexure 46 7. Annexure 70 8. Chapter 12 of TCP	1. Protection Strategy is a part of TCP. 2. Security Audit will be carried out in 2018. 3. Locations of patrolling camps in the TR, they are well equipped. 4. List of Forest Roads available. 5. List of Barriers. 6. List of Wireless stations available and those stations are equipped. 7. List of Pardhi settlements and habitual offenders in place. 8. Sniffer Dog squad in place. 9. Monsoon and fire protection plans are prepared annually.
TR has an <i>ad-hoc</i> PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good	✓		

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		1. List of human – animal conflict cases 2. Discussion with FD, JD & AD.	1. Information on human-animal conflict available with the TR management. 2. Constitution of Wildlife Rescue Squad 3. Logistics of the wildlife rescue squad 4. Govt. order regarding <i>ex-gratia</i> for human
TR has been able to mitigate few human-wildlife conflicts.	Fair			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

TR has been able to mitigate many human-wildlife conflicts.	Good		3. Adhinyam copy 4. Financial Progress Report.	injury/ death & cattle kill 5. Enactment of the Madhya Pradesh Lok Sewaon Ke Pradan Ki Guarantee Adhinyam, 2010 6. Amounts spent for ex-gratia related with human wildlife conflict management were Rs.10.73 lakh in FY 2014-15; Rs.20.27 in FY 2015-16 and Rs.32.70 in FY 2016-17.
TR has been effective in mitigating all human-wildlife conflicts.	Very good	✓		

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		1. Discussions with FD, JD & AD 2. BCRLIP project progress report 3. TCP of Satpura Tiger Reserve 4. Scheme no. 6349 (budget head doc.) for Wildlife Conservation outside Protected Areas	1. Satpura TR is integrated in the Central Indian landscape, and constitutes one part of Satpura - Pench & Satpura - Melghat corridors. 2. BCRLIP project aimed to improve livelihood in the Satpura – Pench corridor. 3. Corridors have been identified in the TCP and a section has been dedicated in the TCP for planning conservation actions in the corridors. 4. SGI is not needed as linear infra projects are not passing through the TR. Since corridors are not under the control of FD, SGI has not been included there.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		1. Discussion with FD & JD. 2. Field visit by MEE team in at least 8 patrolling camps and meeting with the frontline staff members.	1. Protection Personnel are sufficient. Vacancies are in Forest Guard category, 56 vacant posts out of 235 sanctioned posts; in Forester category, 25 vacancies out of 81 sanctioned posts; at Dy. Ranger category, 9 vacancies out of 25; 6 vacancies out of 9 sanctioned posts. 2. Field personnel were found to be motivated and alert.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		3. Personnel have access to sufficient resources for protection.
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		1. List of vehicles is provided. 2. Discussion with FD, JD & AD as well as as field visit by MEE team.	1. Adequate number of vehicles are available for FD, JD, AD & Range Officers. Minimum two vehicles are available in each Range for protection purpose.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is <i>ad-hoc</i> , funds are inadequate and seldom released in time and not utilized.	Poor		1. Progress Report/ March Financial Closing report (Form 7B) 2. Discussion with FD & JD.	1. NTCA sanctioned Rs.6,96,67,800.00 in FY14-15 and amount spent was Rs.6,43,91,060.00; Rs.2,94,82,220.00 in FY 15-16 and amount spent was Rs.2,95,65,000.00; and Rs.17,34,32,000.00 in FY16-17, and amount spent was Rs.16,98,85,000.00. 2. Project Tiger funds released were perceived to be inadequate
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		for such a large Tiger Reserve. Funds were sufficient for protection, however, habitat development & infrastructure strengthening needs additional funds from Project Tiger.
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*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is <i>ad-hoc</i> , funds are inadequate and seldom released in time and not utilized.	Poor		1. Progress Report/ March Financial Closing report (Form 7B)	1. STATE BUDGET In FY14-15, received Rs.12,752.33 lakh, amount spent was Rs.10,051.35 lakh; In FY15-16, received Rs.11,058.47 lakh, amount spent was Rs.13,178.82 lakh; In FY 16-17, received Rs.1,706.45 lakh and amount spent was 1,739.73 lakh. 2. PARK DEVELOPMENT FUND In FY14-15, received Rs.385.7 lakh and amount spent was Rs.355.4 lakh; in FY15-16, amount received was Rs.559.4 lakh, and amount spent was Rs.452.04 lakh; in FY16-17, amount received was Rs.523.7 lakh and amount spent was Rs.273.4 lakh. 3. Funds received from MP Ecotourism Board FY 14-15 received Rs.54 lakh, spent Rs.27.5 lakh FY 15-16 received Rs.7.75 lakh, and spent Rs.7.75 lakh FY 16-17 received Rs.245.25 lakh and spent Rs.122.29 lakh 4. CAMPA FY17-18 sanctioned Rs.134.81 crore and amount spent was Rs.50.79 crore, for village relocation and habitat development.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair		2. Discussion with FD & JD.	
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

*Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		1. Discussion with FD & JD.	1. NGOs - WWF India & WCT have been supportive. During 2014-2017, WCT provided 104 mosquito netss, 29 First Aid box, 30 solar torches, 32 GPS units, 120 plastic chairs, 30 plastic tables, 120 metal cots, 30 solar panels, 30 portable lights, 120 hunter shoes, 120 bags, 120 jerry
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the	Good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

management of some TR level activities.				cans, 120 rain coats, 104 water bottles, 104 caps, 104 fleece gloves, 104 winter socks, 29 binoculars, 1 searchlight, 4 waist pouch, 2 car searchlights, 2 Bolero vehicles, 1 Bolero camper vehicle. 2. During 2014-2017, WWF India provided eight vehicles; two Mahindra Thar, five camper vehicles and one Bolero.
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good		✓	

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		1. Discussion with FD & JD.	1. The JD & Veterinary Doctor are Wildlife Diploma trained from the Wildlife Institute of India; the FD completed one month in-service training in WII. 2. Two frontline staff have been trained in handling sniffer dogs for reducing wildlife crime.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

***Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc . The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		1. Discussion with FD & JD and field visit by MEE team.	1. Frontline staff are trained in village relocation; habitat management of relocated sites; management of barasingha & chital recovery in the Park; and protection and patrolling. 2. UNDP India Biodiversity Award 2014, TOFT Best Tourism Destination Award in 2014 and NTCA Award for excellence in Village Relocation in 2016. Numerous other awards from the state government.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		1. Discussion with FD & JD and 2. Progress report of Anubhuti camp.	1. The park conducted 11 camps under Anubhuti programme for approximately 1705 students from MP Govt. schools and they were given exposure on wildlife conservation. 2. Wildlife Week is celebrated with EDC members. 3. An Innovative Scheme - 25% contribution from the Park Development Funds are spent for Jan Bhagidari scheme in the villages through the EDC; 75% funds come from the District Collector's office. In FY17-18, Rs.45 lakh was contributed by the Park and total amount of the Jan Bhagidari scheme was Rs.182 lakh.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good	✓		

**The involvement of NGOs/ NGIs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		1. Office register 2. Discussion with FD & JD.	1. 12 complaints were received in 2015 and 10 were resolved. 10 complaints were received in 2016 and 5 were resolved. 28 complaints were received in 2017 and 8 were resolved. <i>Complaints were received through the Forest Dept. (PCCF).</i> 2. Through the CM's helpline, in FY15-18, 82 complaints were received, and all were resolved.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		1. Discussion with the FD & JD.	1. Since 2014, on an average, 1,500 laborers per year have been involved in forestry development work. Out of the above, almost 40% are women. 2. In addition to the above 350 daily wagers, 170 nature guides, and 300 vehicle owners-cum-drivers have been employed with the park.
Few livelihood issues are addressed by TR management.	Fair		2. Progress report.	
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good	✓		

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		1. Progress report on village relocation. 2. Discussion with FD & JD.	1. A total of 42 villages have been relocated from STR till date, out of which, 37 villages have been relocated from the Core. Current plan is to relocate the remaining six villages in due course of time.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		1. Website 2. Pamphlets 3. Coffee table book	1. website satpuratigerreserve.mp.gov.in has relevant information on park management. 2. Local media covers Satpura TR related issues regularly. 3. Pamphlets are available in all MP Tourism hotels. 4. Coffee table book on Satpura TR has been provided at all MP Tourism hotels and resorts in adjacent areas.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		1. 1. TCP Chapters 9.8.2, 9.8.3, 9.8.4, 9.8.5 & Annexure 104, 106	1. Interpretation Centre at Bison Lodge, Pachmadhi, at Dhoopgarh and tourism facilities are at Madhai, Churna and Pachmadhi. Buffer tourism facilities are at Parsapani and Jamanidev. 2. Tourist facilities include trekking, boating, canoeing, cycling. 3. Daily film shows at Bison Lodge, Pachmadhi.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		1. Carnivore & ungulate monitoring report by SFRI.	1. Information on research activities in the TR have been regularly monitored by the FD, and outcomes of Phase IV monitoring are regularly checked and used for monitoring missing tigers or strengthening protection whenever required. 2. Formats for In-house monitoring through specially designed patrolling camp registers using M-STRIPES & NTCA protocol. 3. Format for special monitoring of the hard ground barasingha enclosure 4. Results of the 2014-15 to 2016-17 Phase IV monitoring of tigers, co-predators and ungulates by WCT and SFRI 5. Information on publication of research papers/ technical articles on Satpura 6. Information on forest and wildlife offences in the TR 7. Livestock immunization Wildlife health monitoring as per guidelines contained in the Tiger Conservation Plan 8. Continuous monitoring of grasslands by SFRI is going on. 9. 17 research papers have been published by Prof. Ravi Upadhyay, from Science College, Piparia.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair		2. 16 research projects of different universities & institutions have been approved through CWLW's letters. List attached.	
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good		3. Discussion with the FD, JD and team.	

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		1. Budget progress report.	1. Funds have been received for maintenance of building, roads, vehicles and other assets from NTCA, State Fund under different schemes and Park Development Funds.
Inventory maintenance is <i>ad-hoc</i> and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		1. SFRI report on ungulates and carnivores.	1. Barasingha population increased from 33 to 63 in 2017. 2. Population trend (number per 1sq.km) of other ungulates are as follows from 2016 to 2017 - spotted deer 8.5 to 8.4 sambhar 7.5 to 10.1 wild pig 16.6 to 24.3 langur 55.4 to 61.8 gaur 7.5 to 8.6 and barking deer 2.6 to 4.6
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good	✓		

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		1. WCT Phase IV monitoring data.	1. Number of unique individuals – 20 adults in 2015-16 and 29 adults in 2016-17
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good	✓		

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		1. Relocation progress report. 2. Offence records. 3. Beat inspection reports.	1. Village relocation is a continuous process, and so far 42 villages have been relocated from within the Park. 2. Patrolling is strengthened on regular basis, number of patrolling camps increased from 162 to 180 in last three years. All these helped in reducing offences. 3. Beat inspection is carried out rigorously and any gap is addressed.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely ad-hoc.	Poor		1. Visit to the field. 2. Discussion with the FD & JD.	1. Visitor management has been found to be appropriate. 2. Tourist numbers are increasing. 3. Tourism is carried out in 7% of the core area. 4. No private vehicles are allowed within the park, it is only EDC owned vehicles which are used for tourism in the park.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good			
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good	✓		

+Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		1. Discussion with FD & JD.	1. Local communities have been reported to be generally supportive. 2. Local people have been reported to have no visible grievance against the TR management, and no bodily harm has been caused to the TR staff in the recent past.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good	✓		

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	47.5	290 and 91%
2.	Planning	07	10	70	62.5	
3.	Inputs	05	10	50	47.5	
4.	Process	06	10	60	52.5	
5.	Outputs	04	10	40	32.5	
6.	Outcomes	05	10	50	47.5	
Total		32		320	290	

*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

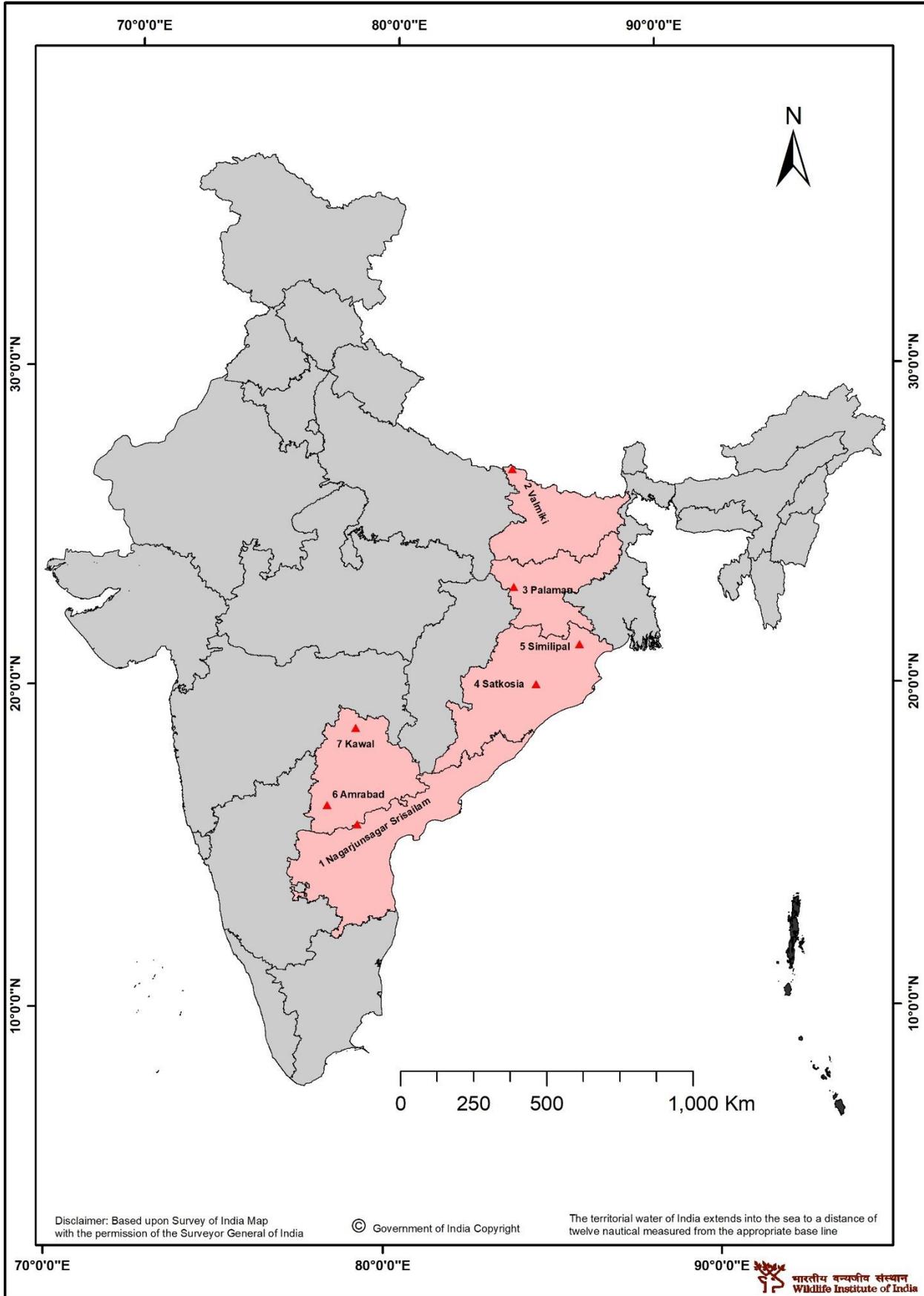
CLUSTER THREE

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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List of Tiger Reserves included in Cluster Three

1. Nagarjunsagar Srisaïlam (NSTR) Tiger Reserve, Andhra Pradesh	387
2. Valmiki Tiger Reserve, Bihar	407
3. Palamau Tiger Reserve, Jharkhand	422
4. Satkosia Tiger Reserve, Odisha	437
5. Similipal Tiger Reserve, Odisha	458
6. Amrabad Tiger Reserve, Telangana	480
7. Kawal Tiger Reserve, Telangana	502



* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1. Nagarjunsagar Srisailam Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1. Brief write-up and visit on Biodiversity Research Centre and Ecological Knowledge Park 2. List of 16 Research Papers from NSTR and adjoining areas from 2006 to 2016 3. Website http://www.nstr.in/index.php?page=home mentioning history, morphology, flora, fauna, management etc. 3. TCP	NSTR have excellent habitat endowed with wide variety of flora and fauna, around 1521 species of Angiosperm including 29 species of grasses and 353 species of medicinal plants and faunal diversity includes Mammals-50 species, Birds-200 sp., Reptiles-54 sp., Amphibians-18 sp., Fishes-55 sp., Butterflies-89 sp., Moths-57 sp., Coleopteran beetles-45 sp., Dragonflies and Damselflies -30 sp. The vast collection of museum specimens ranging from Planktons, invertebrates to mammals in Srisailam Research Lab is a commendable work by the NSTR team. The entire biodiversity of NSTR has been documented and preserved in this lab, is an excellent research work of the NSTR team and is visited by students of all across the India. NSTR also have the Catchment value from River Krishna and two multipurpose dams at Srisailam and Nagarjunsagar built on this river for irrigation, drinking water and power generation purpose. NSTR have the excellent cultural value in terms of famous jyotirling of Lord Mallikarjuna and his consort Goddess Bhramaramba, a shakti peeth, on the Srisailam plateau, are being worshipped from time immemorial. There are ancient relics of Buddhist monuments at Anupu and Nagarjunakonda within the Tiger Reserve limits. The undulating landscape of Nallamalais provides aesthetic and recreational value to the NSTR. All values of NSTR systematically identified, assessed and monitored in TCP, Lab and field.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria ⁺				
Condition	Category [*]	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1. List of villages & no. of households and cattle population in core of NSTR 2. Map showing fire risk zonation in Buffer and Core of NSTR 3. TCP	NSTR is facing several issues and challenges. The list of major issues and threats are: 1. Jurisdiction issue 2. A Railway track is passing adjacent to the GBM sanctuary, which enables timber mafia for illegal wood collection. 3. There are 15 villages inside the core area of NSTR with a population of 5650 households, having 2977 cattle population. Whereas 69 villages in buffer with 1,26,000 cattle population. 4. Fishing activity is a major concern in the back waters of the multipurpose dams which are constructed across the River Krishna at Srisailam and Nagarjunasagar forming large reservoirs within the boundaries of the Tiger Reserve. 5. There is shortage of frontline staff about 32% 6. Dornala-Srisailam highway is passing in the core of NSTR posing threat for wildlife and habitat management. Road kill is a problem due the highway. 7. Accidental fire in summer due to trespasser in highway
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	√		
All threats systematically identified and assessed.	Very good			

⁺This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria ⁺				
Condition	Category [*]	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		1. List of villages & no. of households and cattle population in core of NSTR 2. Details of NTFP extracted from NSTR over the last 4 years upto 2017 3. TCP	There are 15 villages inside the core area of NSTR with a population of 5650 households, having 2977 cattle population. Whereas 69 villages in buffer with 1,26,000 cattle population.
The 'Core Area' has some human and biotic interference.	Fair	√		
The 'Core Area' has little human and biotic interference.	Good			The high human dependency on NSTR for fodder, fuel wood, NTFP and Bamboo collection in NSTR. However many of the villages are small 'Chenchu' hamlets called 'gudems', due to which the problem is not acute in the core. A value of 80 lakh in 2015-16 and 57 lakh in 2016-17 NTFP have been collected by the local communities from the TR.
The 'Core Area' has no human and biotic interference.	Very good			

⁺This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		1. Gazette notification of Core and Buffer 2. Notification of TCF 3. Approval of TCP 4. Constitution of State-level steering committee 5. SOP- ii on Tiger Mortality 6. SOP-iii on Disposal of Carcass 7. SOP-iv on Dealing with orphaned cubs	NSTR has notified core and buffer with Vide G.O.M.S. No. 148, EFS&T Dept, Dt. 20-12-2007. GBM wildlife sanctuary has been notified as extended core to NSTR vide G.O.M.S. No. 50, EFS&T Dept, Dt: 18-03-2010.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair	✓		TCF established with vide G.O.M.S. No.143 EFS&T dept, Dt.15.12.2007.
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied	Good			The TCP of NSTR was approved by NTCA vide GoI, F.No. 1-19/2009-NTCA, Dt: 13 October, 2014 under section (3) of Section 38 v of wildlife (Protection) Act.
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			A proposal for constitution of state level steering committee under the chairmanship of Hon'ble Chief Minister is under progress. Out of 7 SOPs, 4 are complied in NSTR

*Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor	✓	1. Minutes of the meeting held on 17.01.17 at NSTR on Proposed re-organised to bring under the unified control of Project Tiger Circle Srisailam 2. Gazette notification of extended core of NSTR	NSTR is facing severe problem of jurisdiction issues, because the entire Tiger Reserve area is not under unified control of Field Director NSTR. The core and buffer of Rajiv Gandhi Wildlife Sanctuary is under the unified control of Field Director, NSTR. GBM sanctuary (an extended core) is managed by four division namely Atmakur, Nandyal, Giddalur and
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good			Markapur, out of which, Nandyal and Giddalur Division are not under the control of Field Director NSTR.
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2. Planning

2.1 Status of Tiger Conservation Plan (TCP)+?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		1. Letter of Approved TCP 2013-14 to 2022-23 2. Copy of TCP 2013-14 to 2022-23	NSTR has approved TCP with vide F.No:1-19/2009-NTCA, GOI, MOEF & CC, NTCA, Dt.13.10.2014. Although TCP contains good scientific content, lacks proper participatory process.
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		1. Month-wise report on Mstripes patrolling in section 2.5 2. Map showing base camps in NSTR in section 2.5 3. TCP	The Tiger Reserve safeguards a large number of threatened Biodiversity in the Nallamalai landscape of Eastern Ghats. Tiger is the top most predator, co-predators like Leopard, wild dog, Sloth bear, Ratel and herbivores like Spotted deer, Sambar, Nilgai, Four horned antelope, Mouse deer, Giant squirrel are some of the endangered animals that are conserved in the Tiger Reserve. NSTR is the largest TR in the country for safeguarding biodiversity with an area of 3727.82km ² including core and buffer, manned with 180 Staffs. The vegetation in the TR includes high value Bambusa and a variety of medicinal plants. There is lack of focus in arresting the deterioration of Bambusa arundacea clumps and other plants. The grasslands also need protection against invasives. To safeguarding the biodiversity, NSTR have a security plan, there are around 63 base camps in the Tiger Reserve (Atmakur-23, Markapur-24, Nandyal-9, Giddalur-7) manned by protection
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>watchers from local tribal groups particularly Chenchus. The staff and protection watchers patrol the areas of the Tiger Reserve and collect the direct and indirect evidences of wildlife using GPS. Well connected wireless network has been established among the base camps. River patrolling is done along river Krishna. Rescue van with tranquilizing equipment is stationed at Dornal, Atmakur and Giddalur. The base camps have been strengthened by providing various amenities like solar lights, GPS equipments, semi permanent shelter, water, torch lights, first aid kit, wireless system, field kits apart from shoes and uniforms to the protection watchers.</p>
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***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		1. Abstract showing list of Primary and Secondary Stakeholders in NSTR 2. Minutes of the meeting with NSTR and Tribal (ITDA) at Srisilam on 2.7.15 3. Letter from NSTR to Police for prevention and controlling smuggling activities, making wildlife offence case for action 4. Letter from NSTR to Police for opening rowdy sheet against wildlife offence case 5. Letter from NSTR to Electricity Department for illegal erection of Electric Transformer	There is no systematic regular stakeholder consultation in place; however opportunistic communications happened for management and protection activities. The stakeholders participate in the planning process to some extent. Eco Development Committees have been established involving local tribal groups. They also involve in wildlife protection as protection watchers in base camps, strike force and assist in wildlife monitoring. The EDCs also take up fire lines, view lines, weed removal and Soil Moisture Conservation works (SMC) and in other alternate livelihood programmes.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		1. Detailed write-up on water management and fire management 2. Maps on month-wise mapping of fire zones in core and buffer and map showing waterholes in NSTR 3. TCP	NSTR has the systematic habitat management strategy in terms of water management and fire management. However, intensive management of grasslands, bamboo clumps etc. is not being done. There are around 337 saucer pits, which meets the requirement of water during pinch period. There are 16 solar pumps for providing water in the interior areas of the Tiger Reserve. Fire lines and view lines are maintained regularly every year to prevent the spread of fire. Fire watch towers have been constructed for early deduction of fire. Fire watchers are engaged for 5 months during the fire season. Wireless net works have been improved for better communication. Other limited management strategies include Grassland maintenance, weed removal and Soil Moisture works are attempted here and there.
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

**This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.*

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		1. Month-wise report on Mstripes patrolling 2. List and Map showing base camps in NSTR 3. Abstract showing no. of wildlife offence court cases in NSTR 4. Interaction with Dog Squad Team 5. TCP	The protection strategy of NSTR is very effective by incorporating M-STriPES for patrolling and also a security plan in place. There are 63 base camps in the Tiger Reserve (Atmakur-23, Markapur-24, Nandyal-9, Giddalur-7) manned by protection watchers from local tribal groups particularly Chenchus, is very good example of involvement of local communities in protection. Two Dog-Squads team, 2 Strike Forces team, 2 River Patrolling parties are playing key role in effective protection and prevention of illegal hunting/poaching of wild animals in NSTR. There are 180 Staffs placed for effective protection of NSTR.
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good	✓		

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		1. Statement showing man-animal conflict and details of compensation paid in last 4 years	Crop damage by wild animals and cattle lifting by predators are the main reason of conflict between the reserve and the people. Though compensation is paid to villagers, still there are chances of retaliatory actions. There is a delay in payment of compensation money also felt. An amount of Rs. 35.94 lakh paid in 2014-15, 31.59 lakh in 2015-16, 40.68 lakh in 2016-17 and upto Dec 2018 15.40 lakh paid in 2017-18 as compensation to local communities mostly for crop damage. Death and injuries to human beings is not common. Attacks on human by wild animals are mostly, not intentional, though accident happens and sometime people get injured by sloth bears and leopards. Inadequate rescue and conflict mitigation capability: Presently the TR has one mobile animal rescue vehicle, but no regular veterinary staff of the forest department is available to man the rescue vehicle.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		1. WII map showing list of PAs in Andhra Pradesh 2. WII Corridor Report showing linkage with Sri Lankamalleswara WLS, Sri Penusila Narasimha WLS, Sri Venkatesvara NP 3. Corridor Area Plan of TCP	The NSTR has a functional corridor, as it is contiguous with Amrabad Tiger Reserve (Telangana) in the North (Nallamalla Forest), Lankamaleswara Sanctuary and Sri Venkateswara towards south upto Tirupati (Seshachalam hills), Although these corridors mentioned in the TCP, need implementation and backing in financial term. These corridors are vulnerable against hunting and poaching and other anthropogenic pressures.
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

*Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

3. Inputs

3.1 **Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?**

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		1. Statement showing staff position in NSTR 2. Details of qualification and age of staff working	Out of the total 251 sanctioned strength 80 posts are vacant. There is shortage of staff of around 32%. Details enclosed. The average age of FRO is 48, Forester is 47 and Forest Guard is 45 and Forest Watcher is 44.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

**This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)*

3.2 **Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?**

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		1. Statement showing list of vehicles in NSTR 2. Statement showing list of Department buildings in division, range, section and beat-wise in NSTR, construction of new buildings and old/new existing buildings	The resources both immovable (buildings), movable (vehicles) are available to certain extent. Office buildings and staff quarter are being improved. New quarters for the front line staff are being constructed in a phased manner. NSTR have 2 Dog-Squads team, 2 Strike Forces team, 2 River Patrolling, 337 saucer pits and 63 base camps. The lack of adequate infrastructure like vehicles and buildings is hampering some of the activities. For patrolling through M-STriPES, android mobiles are required with laden new software.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*																											
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																							
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		1. Statement showing budget sanctioned, released and expended under NTCA PT Scheme from 2015-16 to 2017-18 along with sanction letter of NTCA of 3 years	The Centrally Sponsored Project Tiger Scheme is released to the Tiger Reserve with delay due to the LOC/PAO system. However, the released funds are utilized to the maximum extent.																							
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair				The year wise budget allotment, released and expenditure under CSS Project Tiger Scheme in the last three years is furnished below:																						
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		<table border="1"> <thead> <tr> <th>Years</th> <th>Approved APO</th> <th>Budget released</th> <th>Expenditure</th> </tr> </thead> <tbody> <tr> <td rowspan="2">2015-16</td> <td>134.72 (Revalidation)</td> <td>134.72</td> <td>131.84</td> </tr> <tr> <td>236.55 Regular</td> <td>48.83</td> <td>48.52</td> </tr> <tr> <td>Total</td> <td>371.21</td> <td>183.55</td> <td>180.36</td> </tr> <tr> <td>2016-17</td> <td>393.45</td> <td>393.45</td> <td>344.31</td> </tr> <tr> <td>2017-18 (upto 12/07)</td> <td>370.64</td> <td>370.64</td> <td>117.31</td> </tr> </tbody> </table>		Years	Approved APO	Budget released	Expenditure	2015-16	134.72 (Revalidation)	134.72	131.84	236.55 Regular	48.83	48.52	Total	371.21	183.55	180.36	2016-17	393.45	393.45	344.31	2017-18 (upto 12/07)	370.64	370.64
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Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good																										

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks												
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		1. Details of funds sanctioned, released and expended under various State schemes from 2014-15 to 2017-18	Funds under CAMPA and Bio-SAP schemes are released timely and utilized. The details of allotment, release and utilization in the last three years are furnished below:												
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair				CAMPA <table border="1"> <thead> <tr> <th>Years</th> <th>Approved APO</th> <th>Budget released</th> <th>Expenditure</th> </tr> </thead> <tbody> <tr> <td>2014-15</td> <td>515.6</td> <td>422.43</td> <td>410.43</td> </tr> <tr> <td>2015-</td> <td>511.20</td> <td>350.74</td> <td>349.08</td> </tr> </tbody> </table>	Years	Approved APO	Budget released	Expenditure	2014-15	515.6	422.43	410.43	2015-	511.20	350.74
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2014-15	515.6	422.43	410.43													
2015-	511.20	350.74	349.08													
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓														

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			16			
				2016-17	405.25	308.85	300.73
				2017-18	460.06	222.79	197.31
				Bio-SAP			
				Years	Approved APO	Budget released	Expenditure
				2014-15	474.05	399.00	399.55
				2015-16	649.74	618.38	593.60
				2016-17	698.68	626.15	608.67
				2017-18	468.56	237.30	236.29

*Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		1. Letter and report of WWF for organization of 'Eklavya Archery Championship' at NSTR in 2015 2. Letter of PCCF Andhra Pradesh for the nomination of Mr. Imran from HyTiCoS for Phase-IV monitoring of Tiger in NSTR in 2016 3. HyTiCoS Brochure showing activities in NSTR	NGO contribution to NSTR in some extent.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			Like WWF is contributing 50% of cost of installation of Solar pumps.
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			WWF is conducting Archery competition for the tribal protection watchers in coordination with Forest Department.
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good	✓		HyTiCoS is assisting in Phase IV monitoring of Tigers. HyTiCoS also helped the management in relocation of villages. The 2 villages have taken exposure visit to Tadoba for understanding relocation process.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		1. Proceedings, letters showing list of Officers nominated for various training programmes of NSTR	CCF & FD, Project Tiger, Srisailem trained in Wildlife Management. Few FROs, Section Officer and grass root level staff have attended short term wildlife management course and attended training programmes on wildlife monitoring, wildlife estimation and tranquilization of wild animals. Though higher Officers have some training in wildlife management, there is no systematic regular training programme for frontline staff in wildlife management.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc . The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Discussions with TR management	Although the promotion linked to the performance of Staff in fulfilling the objectives of the TR, there is no award, reward programme by the State of TR Management.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		1. Letter of PCCF Andhra Pradesh for the nomination of Mr. Imran from HyTiCOS for Phase-IV monitoring of Tiger in NSTR in 2016 in section 3.5 2. List of 40 EDCs in NSTR 3. Details of ROFR claims in number and extent at 4 levels, FRA Committee, Gram Sabha, Sub-division level, district level.	In some aspects of the management, NSTR involved CSOs for participation like HyTiCOS involved in Phase IV monitoring of Tiger, WWF for other activities. The local communities & Tribals dwelling in and around the Tiger Reserve are involved in wildlife protection, eco-development and community based eco tourism programmes. Engagement of primitive tribal group Chenchus as protection watchers in the base camps has improved the overall forest and wildlife protection. Involvement of EDCs are significant in the conservation education programmes like Vanam-Manam, wildlife week celebrations, International Tiger Day and other community based tourism.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGLs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		1. Copy of Visitor register	Although visitor registers are placed at Ecotourism sites for feedback, there is no systematic complaint handling process.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	✓		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria														
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks										
No livelihood issues are addressed by TR management.	Poor		1. Statement showing mandays generated under BIO-SAP, CAMPA and PT schemes from 2014-15 to 2017-18 in NSTR	<p>The livelihood issues of resource dependent communities are being addressed. Various alternate livelihood programmes like vermi composting and tailoring have been taken up in NSTR. Vermi compost unit has been established at Bairyuty <i>Chenchu</i> gudem and around 52 sewing machines have been distributed to the tribal women after imparting training.</p> <p>The local communities are involved in habitat management works like maintenance of fire lines, view lines, desilting of percolation tanks and other SMC works. PTG Chenchus collect various NTFP products like gum, honey, soap nuts in the Tiger Reserve and market them through GCC. The quantity of NTFP collected and its value in the last three years are enclosed.</p> <p>Abstract mandays created in the last three years are as follows:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>No. of Mandays</th> </tr> </thead> <tbody> <tr> <td>2014-15</td> <td>116639</td> </tr> <tr> <td>2015-16</td> <td>131737</td> </tr> <tr> <td>206-17</td> <td>113322</td> </tr> <tr> <td>2017-18 (upto Dec,17)</td> <td>70017</td> </tr> </tbody> </table>	Year	No. of Mandays	2014-15	116639	2015-16	131737	206-17	113322	2017-18 (upto Dec,17)	70017
Year	No. of Mandays													
2014-15	116639													
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2017-18 (upto Dec,17)	70017													
Few livelihood issues are addressed by TR management.	Fair													
Substantial livelihood issues are addressed by TR management.	Good	✓												
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good													

*The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.6 **Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?**

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		1. Meeting with Kudichentalabailu village going to be relocated soon	There are 15 villages inside the core area of NSTR with a population of 5650 households, 69 villages in buffer.
Plans have been made but no implementation	Fair			Out of 15 villages, 2 villages have been selected in the first attempt to relocate. Exposure visit has also been made to villagers to Tadoba.
Plans have been made and some implementation is in progress	Good	✓		The villages inside the core are being motivated for voluntary village relocation, however the response is poor.
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			Since the NSTR has the heavy forest dependent communities in the core and buffer; there is a need to study the willingness for relocation of the villages. After the study, the relocation process needs to be taken on priority basis to make the core inviolate from human pressure.

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 **Is adequate information on TR management publicly available?**

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		1. Copies of media reports in various newspapers 2. Brochures on Ecological research and monitoring lab, medicinal plants of NSTR, Chenchus-the saviors of NSTR, Ecotourism in Nallamalais, NSTR, Ecotourism in Nallamalais 3. Website http://www.nstr.in/index.php?page=home	Biological diversity preserved and displayed in the Bio Lab at Srisailam for public access.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			General Information on tiger reserve is available in website www.nstr.in , eco-tourism website www.nallamalaijunglecamp.com and EEC, Srisailam. Several Brochures, Pamphlets, and signages also provide information on the tiger reserve.
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			However the detailed information on management aspects, research reports, public assets are not available publicly.
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category *	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		1. Details of facilities provided to the visitors 2. Copy of visitor register in placed in Eco-huts	Visitor services and facilities are well established at EEC Srisailam & Smruthi Vanm, Community based Ecotourism at Bairuly, Thummalabilu, Pacherla, Biodiversity research Center and Ecological Knowledge Park, Dr. YSR Smruthi Vanam Park at Velgode exhibiting local flora. Interpretation centre, Nature Shops, Video Films, Brochures, Posters, Ecohuts, nature trails, Safari Vehicles etc. are facilities for tourist.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good	✓		

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category *	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		1. Copy of letter of NCBS for setting up of long term monitoring plots for measuring forest dynamics in NSTR including the research activities between 2011-2016 2. Copy of ATREE report on tracking migrant harriers across space and time in Rollapadu Bustard Sanctuary 3. Copy of Tiger Report of WII on NSTR showing camera trap locations, transects, encounter rate of Chital, Sambar and Chwosingha	Most of the research monitoring related trends have been systematically made and used to improve management. Such as NCBS helped in setting of long term vegetation monitoring plots. Estimation of encounter rate of Tigers, co-predators and prey has been done every six months in the last two years. WII report includes the camera trap locations, transects, encounter rate of Chital, Sambar and Chwosingha and population estimation results of prey and predator in 2014-15. A well defined monitoring mechanism for all the threatened species are not in place, however, the photo captures of many of the endangered species have been
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>maintained.</p> <p>Using M-Stripes software, patrolling effort is assessed and distribution pattern of Carnivores and Herbivores is generated. Monthly feedback on the patrolling effort is given to the DFOs for further review and improvement.</p> <p>Although efforts have been made for assessment of research monitoring trend, but there is no assessment of threats in number, nature and extent across the different years.</p>
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**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Details of funds under Central and State Schemes	Although there is a regular funding for infrastructure development and other habitat management activities under CSS-PT, BIOSAP and CAMPA schemes, there are no specific funds for maintenance of infrastructure and also there is no schedule or maintenance.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		1. Copy of letter of NCBS for setting up of long term monitoring plots for measuring forest dynamics in NSTR including the research activities between 2011-2016 in section 5.3 2. Copy of ATREE report on tracking migrant harriers across space and time in Rollapadu Bustard Sanctuary in section 5.3 3. Copy of Tiger Report of WII on NSTR showing camera trap locations, transects, encounter rate of Chital, Sambar and Chwosingha in section 5.3	All the research monitoring studies mentioned in section 5.3 helped in maintaining the viable population of threatened species. However, a well defined monitoring mechanism for all the threatened species is not in place, but photographic records have been maintained which suggests that most of the populations are stable and increasing.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

*This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		1. Block-wise summary on Phase-IV intensive monitoring of Tigers from 2015 to 2017	Block-wise intensive monitoring of Tigers based on Phase –IV monitoring protocol has been taken up every year. Based on this, the numbers of Tigers are increasing and recorded 37 in 2015, 40 in 2016 and 43 in 2017. The results of phase –IV monitoring and the photo captures of Tigers with cubs in the last couple of years indicates that the population of Tigers are showing an increasing trend.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good	✓		
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

*This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.3 **Have the threats* to the TR being reduced/ minimized? Or is there an increase?**

Assessment criteria				
Condition	Category^{y*}	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		1. List of villages & no. of households and cattle population in core of NSTR in section 1.2 2. Map showing fire risk zonation in Buffer and Core of NSTR in section 1.2	NSTR prone with variety of threats like fishing, hunting, poaching, road killing, fire, cattle grazing etc. To tackle the numerous threats, the security Plan of NSTR is in place and being reviewed periodically. The plan also includes the disaster management preparedness. However by the Involvement of local tribal communities in wildlife protection, some of the threats have been reduced / minimized.
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

*Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?

6.4 **Is visitor management* appropriate?**

Assessment criteria				
Condition	Category[*]	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		1. Copies of media reports in various newspapers in section 5.1 2. Brochures on Ecological research and monitoring lab, medicinal plants of NSTR, Chenchus-the saviors of NSTR, Ecotourism in Nallamalais, NSTR, Ecotourism in Nallamalais in section 5.1 3. Details of facilities provided to the visitors in section 5.2 4. Copy of visitor register in placed in Eco-huts in section 5.2 5. Copy of Visitor register in section 4.4 6. Website http://www.nstr.in/index.php?page=home	Tourism management and monitoring programme are well taken by the TR. Most of the expectations of the visitors are met particularly in Eco-tourism centers Bairluty, Thummalabailu and EEC center and Bio-Park, Srisailam.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good	✓		
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

+ Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.5 **Are local communities supportive of TR management?**

Assessment criteria*				
Condition	Category *	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		1. Meeting with Kudichentalab ailu village going to be relocated soon	The local communities are supportive to the tiger reserve. The protection of the tiger reserve has been strengthened by engaging local tribal communities as protection watchers in base camps and strike forces. They are also involved in fire protection (fire watchers) and in plastic removal (Swachh sevaks). The local communities are also involved in Eco-tourism activities at Bairluty and Thummalabailu. livelihood improvement programmes are being taken up in few of the fringe villages. Medical camps and cattle immunization are also being conducted in the interior villages.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	30	68.75
2.	Planning	07	10	70	47.5	
3.	Inputs	05	10	50	37.5	
4.	Process	06	10	60	35	
5.	Outputs	04	10	40	35	
6.	Outcomes	05	10	50	35	
Total		32		320	220	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		NCBS has laid out plots to monitor the changes taking place in the vegetation against time lapse. However, results have to be applied appropriately in drawing management strategy.	Significant and systematic scaling down of anthropogenic pressure on the Terrestrial as well as Riverian areas is required.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		No conscious attempt in field has been initiated.	Crowding in bamboo clumps is leading to slow death and retarded growth. Working them is necessary. Removal of Phoenix is required in grasslands.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2. Valmiki Tiger Reserve, Bihar

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		TCP (1.1)	Values and Threats to the TR have been well documented and assessed and mentioned in the Tiger Conservation Plan (TCP), which has been duly approved by NTCA. Regular follow up on protection and management of the values have resulted in significant improvement including tiger recovery. Systematic monitoring programme is in place. Focused actions have contributed towards improving the status of the Tiger and other wildlife.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Security Plan of TCP as well as threat maps (1.2 a-c)	Threats have been documented and assessed and appropriate remedial actions have been taken by VTR authorities. The TR has been proactive in taking active conservation Measures for critical threats. For instance, VTR has successfully managed to divert the alignment of the existing NH28 road cutting across the TR to the boundary outside TR, in Bikhna Tori (Eastern side of TR) a 6 KM railway track passing through the TR has been limited to outside the TR area, preparations have been done to rescue the animals swept in the Gandak river flood waters, etc.
Threats generally identified but not systematically assessed.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.3 Is the 'Core Area' of TR free from human and biotic interference*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor			There is no human habitation inside the core area of the VTR. However about 26 Revenue Villages are surrounded by the core area of VTR. The TR is actively working with these communities with support of NGOs for strengthening local institutions, alternate livelihoods, and alternate energy to minimize the biotic impact and also promote participatory approach for biodiversity conservation.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good	✓		

**This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.*

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor			VTR has complied with all the four statutory requirements along with Tripartite MoU and all seven SoPs.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tripartite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

**Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.*

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.5 **Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?**

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor			The Core and Buffer of the VTR is under the unified management of the Field Director.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

2. Planning

2.1 **Status of Tiger Conservation Plan (TCP)*?**

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor			VTR has a comprehensive and relevant TCP, duly approved by the NTCA. TCP clearly outlines prescriptions for effective wildlife management focusing on the Tiger.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

2.2 **Does the TR safeguards the threatened biodiversity values*?**

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor			More than 40 anti-poaching camps have been constructed at strategic locations for effective patrolling and protection regime. A good GPS based patrolling system is also in place for almost real-time monitoring and monthly reports are analyzed, generated and used for better management. Gharials were supplemented in the Gandak river in VTR and population of Gharials are recovering. A proposal to re-introduce Greater One-Horned Rhinoceros in the Madanpur Range is in progress.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor			Eco Development Committees have been formed and a regular engagement with them is in place. The participation of the people in buffer area management too has been enhanced. Most stakeholders including the the non-regular staff, other frontline staff and EDC members were consulted while drawing up protection and management strategies.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor			A detailed landuse landcover map of VTR has been prepared with the help of NGOs and intervention area for special and unique habitats including waterholes have been identified and documented. A number of waterholes in strategic patches have been constructed to prevent straying of wild animals such as Wild Boar and Chital into the adjoining agricultural fields. The prey-predator dynamics is being monitored with the field level data collected by the wildlife trackers.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

*This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as *Lantana sp.*, *Mikania sp.* etc. would be examined.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.5 Does the TR has an effective Protection Strategy (PS)⁺ and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Referenc e documen t(s)	Remarks
TR has little or no PS and SA.	Poor			The TCP includes a well-thought out security plan. In spite of having only less than 10 % of permanent staff in place, VTR is being managed effectively by active involvement of local community in protection and patrolling. The TR has been proactive in taking active conservation measures for most important species. There are adequate number of patrolling Camps with all basic equipment. There are watch towers at strategic locations. 5 staffs are stationed at each APC for 24x7 hrs to keep a vigil on poachers, smugglers and other biotic pressure elements. Security audit is also being lanned. Regular coordination with the transboundary PAs in Nepal and Uttar Pradesh has also paid rich dividends. Joint Patrolling with SSB (paramilitary force) is an add-on to the already strict security regime. Tiger Reserve has a well organised intelligence and protection network, and there is good coordination between the district administration, police and VTR management.
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

⁺This assessment takes *inter-alia* into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.6 **Has the TR been effective in the mitigation of human-wildlife conflicts?**

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor			The Tiger reserve has established rescue team and well equipped with all necessary resources. Cases of compensation for injury and death of cattle and human beings are being promptly addressed by the management of the Tiger reserve. Good information network in Valmiki-Parsa NP (Nepal) corridor is in place to receive information about movement of elephants is working well.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 **Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?**

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor			VTR is generally quite well integrated into a network/ landscape. The management was able to convince appropriate authorities to realign the Highway NH28B and also to deploy appropriate mitigation measures on railway line passing through critical tiger habitat. The railway line has also been limited to the boundary of TR in the Eastern sector. The Border Road proposed along the Indo-Nepal border has also been successfully aligned with the boundary of the TR. The proposal for notification of Eco-Sensitive Zone has been submitted and final notification is awaited.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

*Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor			Though VTR is being managed effectively by the existing staff, over 90% of the park staffs are casual non-permanent staff. These are engaged from the local community residing on the fringe of VTR. The services of Home Guards and ex-servicemen are used to supplement the huge vacancy in the regular staff.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

*This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor			VTR is bestowed with good number of quality vehicles, equipments and buildings. The NGOs are also supporting with the additional resources. Wireless network connectivity in VTR is quite effective. An exclusive Rescue Van is also deployed for timely response for man-animal conflict situations.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

*These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor			Matching grant from the state government to the NTCA (CSS) fund is regular and timely. Funds are properly utilized. The funding required for priority actions to be increased in tune with the actual requirement. However, the contribution of Tiger Conservation Foundation is meager.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor			Funding support from the state government under various heads is regularly received. Apart from regular funding the district administration also supports creation of some assets, especially in Ecotourism sector. The funds are properly utilized. However, there is scope to increase the state funding.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor			WWF India and WTI are actively supporting the management of VTR in implementing the GPS based patrolling system, supplying essential kits to the frontline staffs, organizing the local communities to participate in different activities of TR management, training the local youths in different trades, supporting the TR management in conduction the camera-trap exercise, coordinating with the adjoining PAs in Nepal and Uttar Pradesh, etc.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor			Most existing frontline staffs were trained by NGOs, WII, WCCB, other government institutes, etc., on Law Enforcement Management, use of equipments, wildlife tracking and trailing, Intelligence networking and GPS aided patrols handling camera traps, etc.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor			The TR staff management performance is linked to the achievements of management objective. Despite huge vacancy of regular staffs local youths, Home Guards and ex-servicemen are deployed to man different positions for effective protection and performance. The officers are very vital in managing the TR to achieve the management objectives.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor			Confidence building measures such as the revival and creation of EDCs and entry point activities in some villages have been successfully implemented. All the contractual staffs are from local community. Thus their participation is significant in tiger reserve management and protection. WWF & WTI are assisting VTR in species monitoring and recovery.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGLs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor			Regular meeting with local community leaders/people. Complaint/suggestion boxes installed in some villages to redress the grievances and to receive suggestions in the TR management.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor			The local communities include a significant population of Tharu tribes along the periphery of the VTR. VTR and NGOS (WWF India and WTI) are working together for improving the livelihood opportunities, creating alternate livehood opportunities and alternate energy of the Tharu communities.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

*The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.6 **Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?**

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor			No case of voluntary village relocation in VTR noticed because there is no village inside the core area of VTR.
Plans have been made but no implementation	Fair	✓		
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

**Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.*

5. Output

5.1 **Is adequate information on TR management publicly available?**

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor			Most of the information/reports are available in the forest department, district administration, and tiger reserve websites. Posters and signages are deployed at TR and in different locations in the district. The VTR management activities are widely covered by the mass media regularly.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Referen ce docume nt(s)	Remarks
Visitor services and facilities do not exist.	Poor			The state has a strong eco-tourism programme, and the reserve is one of the important eco-tourism destination in the State. Infrastructural facilities in the reserve are significant and better than most reserves particularly for ecotourism.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor			TR has brought about significant improvements in monitoring of Tigers and other species. Annual Database of species is maintained. Monthly GPS based monitoring Report is compiled and utilized for decision making.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor			VTR is having a good number of infrastructures and assets like buildings, wireless network, vehicles, equipment, etc.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor			There is good recovery of threatened species in VTR due to effective management interventions.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor			Recovery of tigers and other species is well documented and monitoring data shows increasing trend of tigers in VTR.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good	✓		
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.3 Have the threats* to the TR being reduced / minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor			TR has managed to diverted and control some major threats into tiger habitat like diversion of NH28B, deployment of mitigation measures on railway line in Madanpur Range, stopping the train service passing through the tiger habitat in Manguraha Range, large scale implementation of Soil and Moisture controlling measures (stream erosion control), Elephant watch tower constructed along the Elephant movement route between VTR and Parsa NP (Nepal), etc.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor			Tourism management plan is good and well monitored. Jungle Camp is well developed for ec-tourism facilities in Valmikinagar.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good	✓		
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

***Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			About 500 local forest fringe villagers are regularly involved and about 1000 fringe villagers seasonally involved in different protection and management of TR. Local people are supportive of the TR management.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	42.5	75.78%
2.	Planning	07	10	70	55	
3.	Inputs	05	10	50	40	
4.	Process	06	10	60	37.5	
5.	Outputs	04	10	40	30	
6.	Outcomes	05	10	50	37.5	
Total		32		320	242.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

3. Palamau Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Core, buffer and corridor – TCP approved by NTCA 2013-14 to 22-23. pp-01, pp-26, Annexure- III & IV	The values identified (As per the approved TCP) are as under:- 1. The Palamau TR constitutes a part of Central Indian Landscape. 2. It forms forest and landscape connectivity with Chhattisgarh, MP in the west, Odisha and Singhbhum forest in the south and GBWLS, HWLS, KWLS, LWLS in the east. 3. It has diverse forest composition, mostly dry deciduous in nature. 4. 3 major rivers and about 40 major hill streams. 5. The Palamau TR is home to around 308 species of plants which are mixture of endemic northeast and <i>tarai</i> .
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Approved Tiger Conservation Plan 2013-14 to 22-23. pp 141-150	The threats are identified and assessed viz. Man- Animal conflict, prey-base deficiency, Wildlife diseases, railway line and heavy transport, rural electrification, illegal hunting/ poaching, NTFP collection, grazing, fire, water scarcity, nearly 200 villages, poor staff strength, multi- purpose Mandal Dam (long pending), poor law and order, Naxal activities and lack of research documentation etc. have been documented. However, certain threats are beyond the capacity of management to be handled, such as naxal activities that leaves them to keep away a some part of TR outside management purview.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		1 Approved TCP 2013-14 to 22-23. pp-60- 69	There are 8 forest villages in the core / CTH having population approx. 5,000 with the total area of 619.84 ha. These villages are depended upon the forest for livelihood sustenance, grazing of nearly 3,000 cattle, MFP collection and agriculture. The interference due to the presence of tribal villages, identified in the last MEE, continues at present also. Little has been done to control biotic pressure of cattle, which continues un-abated. The left wing extremists have been confined to a lesser area as compared to the earlier times, thus making available almost entire core area for better protection and habitat restoration.
The 'Core Area' has some human and biotic interference.	Fair	✓	2 Draft Relocation Plan	
The 'Core Area' has little human and biotic interference.	Good		3 Notification of state & District Monitoring Committee for relocation of villages in CTH	
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones by under the Field Director would also be taken into account.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		1. Approved Tiger Conservation Plan 2013-14 to 22-23. Annexure- I, XIV, XVI,	Legal delineation and notification of core and buffer Establishment of Tiger conservation foundation (TCF). Development of TCP- approval by NTCA- File No.- 1-3/213-NTCA, dated 02-11-2015 State level steering committee constituted- Letter No.- WL-01/2008-09-4475, dated- 26-9-2016 (pp-111 of TCP) However no meetings of the above mentioned committee have been conducted as yet. The documents related to compliance of SoPs in the field could not be produced at the time of MEE assessment.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair		2.letter No.- WL23/07, dated 31-12-207 (Annexure- I of TCP)	
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓	3. Letter No. - WL- 1 of 2008- 09- 275 dated 20-01-2014. (Annexure-XIV of TCP)	
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor			
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) +?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Copy of the approved Tiger Conservation Plan 2013-14 to 22-23	The Tiger Conservation Plan 2013-14 to 22-23 has been approved by NTCA.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

**The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.*

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Approved TCP 2013-14 to 22-23.	TR safeguards few threatened biodiversity values Anti- poaching patrolling is ad-hoc at present, including infrastructure which needs a relook. Invasive species management is not being done. Grazing pressures seen however some efforts have been made for seeking support from the villagers which are not adequate.
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good		Field observations	
TR safeguards all threatened biodiversity values.	Very good		Registers/ records of Palamau TR	

**Remarks need to elaborate on the kind of safeguards and how they work or are intended to work*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor	✓	Field Observations	Met one EDC chairman, Shri. Ajay Uraun, and interacted, he however was not fully familiar with the possible benefits that could be harvested. More interactions with EDC members by the staff can only improve the situation. Awareness about the benefits that can flow to the Stake holders needs sustained efforts, by holding meetings and engaging more stakeholders in management planning.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

**The result of participation must show in the field and not merely reported as a routine exercise.*

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Observations made during the field visits	Habitat management programmes are planned and being monitored at present. Garu dohar Grassland work was found to be exceptionally good. Water harvesting works in Betla range are well planned and water harvested is being used by wild elephants and other animals. In Betla range, the observed indirect signs and direct sightings of mammals substantiates, that the habitat management works are yielding good results
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

**This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

2.5 Does the TR has an effective Protection Strategy (PS)+ and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Field visits	Security plan in place as mentioned in the TCP
TR has an adhoc PS and SA.	Fair	✓	Approved TCP 2013-14 to 22-23. pp- 182-192	The newly recruited staff had been recruited three months ago.
TR has a generally relevant PS and SA but is not very effective.	Good			The provisions of TCP are being contradicted by constructing watch towers/ camps, encroaching the areas in CTH
TR has a comprehensive and very effective PS and SA.	Very good			Patrolling teams and staff are observed to be highly demotivated, most staff lack promotional motivation, which adversely impact protection strategy
				The Palamau TR needs a high motivational force. Trackers (daily wagers) have been deployed to cover for the guards vacancies. To improve the efficiency, the Forest guards including the Field trackers (deployed on daily wages) needs to be supported with adequate welfare activities and facilities for their camping in the patrolling camps .provided with, rations, project allowances

+This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Approved Tiger Conservation Plan 2013-14 to 22-23. pp- 182-192 Office records related to human wildlife conflict. Register of Preliminary Offence Report (POR). Notification of revised ex-gratia rates	At present, the sanction for the payment of ex-gratia in case of crop damage of farmers by wildlife is carried out after the verification done by the concerned Circle officer. This needs to be delegated to facilitate the payment of ex-gratia.
TR has been able to mitigate few human-wildlife conflicts.	Fair	✓		The ex-gratia rates are revised from 2.5 to 4 lakhs.
TR has been able to mitigate many human-wildlife conflicts.	Good			There is an urgent need for deployment of rapid response team (RRT) including Veterinary doctor for dealing with cases of Man wildlife conflict expertise to be deployed.
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		TCP	The Mahuadanr wolf sanctuary is yet to be integrated as buffer to the TR Corridors have been identified, but no concrete action has been taken towards its securement
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize land use around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		TCP Office Documents related to officials/Staff sanctioned/ working strength.	76 % staff vacancy filled (Sanctioned posts 288, filled posts 221). No specific wildlife training / orientation have been provided to the field formations (Field Staff). There is an urgent need for capacity building / training regarding various aspects of wildlife management for the field officials/staff. The tiger reserve management should ensure this on priority basis. Only the Deputy Directors trained in wildlife management from WII, Dehradun.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		TCP	Motorbikes - 32 4 - wheelers – 17
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair	✓	Discussions with field officials / staff	Very few patrolling camps, chowkies seen in the TR, thereby restricting patrolling efficiency Other equipment's viz. Wireless sets, GPS, Compass etc. were not found available in the field or offices of Tiger Reserve management. Maintenance registers are not updated. Due to left wing extremists, few of the TR buildings have been occupied by the CRPF. The CRPF officials also need to be mobilized for tiger protection by PTR management.
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

+ These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		TCP	Funds sufficient, but released untimely
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓	Annual report of PTR	
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.*

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.4 Are financial resources from the State linked to priority actions and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		TCP	Funds sufficient, but released untimely
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓	Records related to APOs of different Financial years	Drastic change, reduction in the budgetary allocation for carrying out the Silviculture operations prescribed in the TCP
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good		Annual Report of Palamau TR.	
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.*

3.5 What level of resources is provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Reports related to participation of NGOs in the Tiger Reserve management	1. Nature Conservation Society provides supports in research, documentation, livelihood training, Eco-development planning and other management requirements. 2. Wildlife Conservation Trust, Mumbai provided 20 two wheeler and 2 four wheeler patrolling vehicles. 3. WTI had provided training and field gear to daily wagers. 4. More collaboration opportunities in the tiger monitoring and facilitation for assessment needs to be explored
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		TCP	The two DFOs posted in Palamau TR have been trained in Wildlife management There are only very few trained frontline staff
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Discussion with the Field Officials/ staff.	Project allowance not provided to ones engaged in tracking of wild animals/. Efforts should be made to extends the provisions of project allowance to work charge employees as well During discussions, it was informed by Palamau management that officials / staff showing extraordinary zeal in management and protection of wildlife are being awarded, however no such document was produced during assessment.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Discussions with field officials / staff.	During the discussions, it was informed that, NGOs, have been involved in the preparation of the TCP and in the planning of water conservation/ harvesting works. Also, the EDC members are involved in the forest fire management. No such meeting was conducted during the field visit. There is a need for institutionalizing the regular interaction with the PRIs representatives/ EDC members by the TR management.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGIs in population estimation may be taken into account*

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor	✓		During the assessment, it was informed that there are Complaints / suggestion boxes, available in Garu East and West ranges. However no such box / system were seen during the field visit.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

***Does the TR maintain 'Suggestions Register'? What actions are taken to deal with suggestions?**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Visited the cooperative unit for honey extraction / processing during the assessment	A cooperative for honey collection and oil extraction processing and sale unit has been started at Maromar involving Maromar, Henar, Surkumi villages
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Reports / records related to village relocation plan for the Palma TR.	The efforts are being made to relocate Kujrum forest village at present.
Plans have been made but no implementation	Fair	✓		The land for rehabilitation of this village has been identified in Polpol PF. However, limited efforts have been put for carrying out actual village relocation in any of the six villages present in the core area/CTH. This should be taken on a priority basis.
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5. Output

5.1 *Is adequate information on TR management publicly available?*

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Website	The public information is available through TR website- www.palamautigerreserve.in The signages, booklets, brochures are available and seen during the assessment. However, the information dissemination mechanism for seeking their support/ mobilizing them for wildlife protection / management needs to be institutionalized. To improve transparency for the executed works by TR management.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓	Booklets / Information Brochures/ Pamphlets etc.	
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 *Are visitor services and facilities appropriate and adequate?*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Field Visit during the assessment	Basic tourist facilities are available at Betla (14 rooms, dormitory with 15 beds, 2 conference hall, canteen) Control on polythene to be regulated. Visitor facilities with regards to lighting to be converted to depressed lightings, colors to be used as soft as possible and camouflaging with the environment (khakhi and green)
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feedback on the quality of wilderness experience.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.3 Are research / monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Copies of the reports related to research / monitoring carried out are submitted	Some efforts are visible but not evaluated systematically. NGOs working in Central Indian landscape viz. WCT/WWF needs to be partnered for monitoring assessment and for facilitation of wildlife protection.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Copies of the registers made available during the assessment	Inventory maintenance is adhoc and so is the maintenance schedule Inadequate funds
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Field visit during the assessment	At present, the ungulate population is depressed and needs immediate attention, can be supplemented by reintroduction program making soft releases. The Palamau TR needs to
Some threatened/ endangered species populations declining, some are increasing, and most others are stable.	Fair	✓	Supporting report copies made available	
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				coordinate with Pench TR , Kanha TR, MP for recovery / augmentation of the prey animals and WII for tigers, co-predators, prey animals, habitat monitoring. The TR has already engaged WII, Dehradun for tiger status, population estimation and prey animals density estimation.
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**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor	✓	AITE, Tiger Assessment Reports	WII report 7 tigers (5 male- 2 female) in 2010; 5 tigers (2 male- 3 female) in 2011; 4 tigers in 2015
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good			

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

**Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Discussions with the Field Officials/ staff TCP (PP 47 & 48)	The threats on WL movement and protection have increased due to presence of naxals and CRPF. The CRPF camps are being stationed at Betla, Kerh, Chhipadohar, Labhar, Garu, Maromar, Baresanr, Mandal and Barwadih which are in the core and buffer area of PTR. Around 14 % areas still accessible due to naxal issue. The TR does not have a Disaster Risk Management Plan in place.
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR have a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

6.4 Are the expectations of visitors+ generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		Field visit and discussions with the visitors	54 Sq. Kms of the PTR area is open for tourism. The visitors have been increasing since 2014; However, there is no system in place to measure the expectations of the visitors. It was discussed with few visitors, tourists, and guides. It was informed that the expectations were not met by many. The compliance status on NTCA normative tourism guidelines is not adequate.
Expectations of many visitors are met.	Fair	✓		
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good			

**What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?*

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Discussions in the field with Field Officials/Staff	Some are supportive, but largely villagers are either indulged in illegal activities or not participating in the management planning/implementation practices at present.
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	37.5	53.91 %
2.	Planning	07	10	70	40	
3.	Inputs	05	10	50	25	
4.	Process	06	10	60	27.5	
5.	Outputs	04	10	40	20	
6.	Outcomes	05	10	50	22.5	
Total		31		310	172.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 31 Assessment Criteria including 'normalization'.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		Discussions in the field with Field Officials/Staff	Adaptation plan formulating management actions for climate change needs to be prepared by the TR management
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		Discussions in the field with Field Officials/Staff	At present, efforts have been started to increase the area under grassland, ANR activities to encourage carbon capture. Lately, the grassland and water harvesting programs taken up in small areas near Garudohar, Bhaisadohar etc., under the expert advice of Dr Muratkar from Maharashtra have shown promising results.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4. Satkosia Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1. TCP 2013-14 to 2022-23 Page No. 9 of Core and Page No. 12 of Buffer	Satkosia TR is one of the best tiger habitat in the country supporting good prey base. The name Satkosia, means Sat Kos (22km) long Gorge in Mahanadi River in Odisha. Dr. H R Bustard in 1975 identified the Satkosia Gorge in Mahanadi River as the best Gharial Habitat in the country. The immense values of SKTR are, the gorge is the deepest in Asia, Southern most limit for Ghariyal; Part of Mahanadi Elephant Reserve; Meeting point of 2 Biogeographic zones Deccan Plateau and Eastern Ghats; Important fauna Flying Squirrel, Chowsingha, Malabar pied Hornbill, 4 sp. of Turtle- Chitra, Lyssemis, Kachuga, Tryonis, Gymnosperm Cycas nayagrensis and Flora Teak, Sal, Dalbrgia latifolia, Terminalia alata, Adina Cordifolia, Mitragyna parviflora, Sterculia urens, Triwia nudiflora, Bambusa arundinasia, Dendrocalamus strictus etc. Satkosia Tiger reserve has a tremendous genetic and ecological importance as it is the wet portion of Deccan Zone. It has a significant elephant population in deciduous forests. Cultural value includes Temple of Goddess Binikei, and Kankei, Panthei, Baigani Parbata, Bhimdhara waterfall and Crocodile Rescue & Rehabilitation Centre at Tikarpada with the magnificent view of the gorge attract tourists in to the tiger reserve throughout the year. Satkosia is famous for its unique gorge and riverine ecosystem and it serves also as a major watershed for the entire region. The magnificent Hinjala, Dhauranja, Kochila, Arjuna and Phasi forests on the banks of river Mahanadi are typical elements of riverine forests. Two species of bamboo, namely Bambusa arundinaceae and Dendrocalamus strictus are common to this Tiger reserve. Geologically, the Eastern Ghats form the land
Values generally identified but not systematically assessed and monitored.	Fair		2. Website www.satkosia.org ; www.ecotourodisha.com ; www.wildlife.odisha.gov.in , Nayagarh District Website and Boudh District	
Most values systematically identified, assessed and monitored.	Good		Website, Angul District Website	
All values systematically identified, assessed and monitored.	Very good	✓	3. Book on Birds of Satkosia Landscape; 4. Book on Satkosia Seen and Unseen 5. List of 14 research projects 6. Brochure on Satkosia TR in 8 types 7. PowerPoint Presentation by DD SKTR	

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>bridge for faunal migration between Holarctic, Indo-Chinese and Indo Malayan regions on one hand and the Western Ghats on the other.</p> <p>It forms an important catchment of lower Mahanadi basin. The positive role these catchment forests play in prevention of siltation and maintenance of a specific desirable depth of water that can hardly be over emphasized, particularly for the endangered Gharial, for breeding of amphibians and for spawning sites of commercially important carps and prawns.</p>
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**The value would include biological, physiological, ecological, historic-cultural etc.*

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1. TCP para 3.5 in p-54 of Core and para 2.3 in p-26 of Buffer	<p>The Satkosia TR is facing immense pressure from large number of human settlements. There are 4 villages in 416 ha area with 99 households and 427 population, 250 is the livestock population in core. In addition to this 136 villages are in buffer and around 400 villages in outer conflict zone. These villages pose threat in terms of Hunting, Poaching, Loss of Habitat, Tree felling, Grazing, Fire, fishing, proximity to Industrial Town Angul, Inhospitable terrain, climate and endemic malaria-proneness, Invasive species ; Eupatorium in 5% area.</p> <p>Since the road passing through the core has been closed in the core and has been diverted through buffer zone. NH57 passes thru Buffer (Baisipalli WLS) by 2km, SH23 passing thru Buffer by 30km in Satkosia Gorge WLS are a serious concern for habitat fragmentation.</p> <p>There is no disease outbreak in last 4 years except some malarial attacks to the staff.</p> <p>There are 23 cases in 2014-15, 38 cases in 2015-16, 23 cases in 2016-17, 24 cases in 2017-18 that have been booked under wildlife offences and 5-10 offence cases per year of timber smuggling have been booked by the TR management.</p>
Threats generally identified but not systematically assessed.	Fair		2. Action Plan for Forest Fire in 2018	
Most threats systematically identified and assessed.	Good	✓	3. Copy of vehicle movement register	
All threats systematically identified and assessed.	Very good		4. Details of human settlements 5. Details of Wildlife Cases booked, offence made, timber smuggling and other cases	

**This assessment should be based on number, nature and extent of threats*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Details of villages in core and buffer	There are 4 villages in 416 ha area with 99 households and 427 population, 250 livestock population in the core. In addition to this 136 villages are in buffer and around 400 villages in outer conflict zone.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		1. Core notification 2. Buffer notification 3. Foundation notification in TCP p-280, Appendix 43 4. TCP Approval Letter 5. State level Steering committee notification 6. SOP in Oriya on Straying of Tiger 7. SOP in Oriya on Tiger Mortality 8. SOP in Oriya on Disposal of carcass 9. SOP in Oriya on dealing with Orphan Cubs 10. SOP in Oriya on Tigers from Source areas 11. SOP in oriya on depredation on livestock 12. SOP on Interstate Coordination	The TR has complied with all statutory requirements.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	✓		

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		1. TCP p-291, Appendix 48 letter to show all areas under FD 2. Details of all divisions, ranges under FD Satkosia TR	The entire ranges of Satkosia TR along with other periphery forest ranges are under unified control of Field Director, Satkosia TR.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) +?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Annexure 2.1 1. TCP Approval Letter 2. Letter of participation while TCP preparation	The Satkosia TR has a comprehensive Tiger Conservation Plan for the 10 years TCP 2013-14 to 2022-23
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

+The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		1. TCP 2. Fire Plan 3. Security Plan	<ul style="list-style-type: none"> Total no. flora 400 and fauna 584 are overall safeguarded Concept of core within core for safeguarding in Zone Plans After declaration of the TR in Dec 2007, the forest protection and safeguards to the biodiversity have been strengthened. Around 86 Anti Poaching camps have been constituted and around 450 daily wage personnel through Service Provider have been engaged to assist the TR staff in forest protection and wildlife management. Deployment of squad and dedicated vehicle round the clock is almost assured Well established VHF network for communication and
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				monitoring <ul style="list-style-type: none"> • Provision of temporary water points/waterholes during summer months and maintenance of the salt licks. • Deployment of only one sniffer dog has been made • Implementation of Soil & Moisture Conservation (S.M.C.) works to ensure water security in the forest area. • Three dedicated river squad have been deployed in the Gorge for protection and management of aquatic fauna. • Modern fire fighting method have been adopted to prevent and control forest fire. Round the clock monitoring is being done by the control room.
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***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Annexure 2.3 for following documents 1. List of stakeholders 3. Minutes of the meeting with stakeholders	Meeting for Tiger Conservation Foundation,
Stakeholders participate in some planning.	Fair			Meeting for Village relocation,
Stakeholders participate in most planning processes.	Good	✓		Meeting for Reintroduction of Gharial
Stakeholders routinely and systematically participate in all planning processes.	Very good			Meeting for EDC activities

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		1. TCP 2. PPT 3. Habitat management related mapping on fire, water, weeds, habitat (Annexure 2.4)	Water bodies creation, SMC measures, Meadows and Grassland, Salt Lick, Water Harvesting Structures, Eradication of Invasive Species Eupatorium, Control of Forest Fire, Anti Poaching Camps, deployment of local tribal for habitat management are undertaken.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Annexure 2.5 with all documents	The Satkosia TR has a very effective protection strategy.
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good		1. TCP 2. PPT 3. Protection Plan 4. Security Plan and Audit Report 5. Patrolling Registers 6. Meeting with patrolling staff and observing protection strategies 7. Annual Forest Patrol Report 8. GPSPDA Report 9. Details of Antipoaching camps, foot patrolling, manson patroling report 10 List of 30 Registers 11. Report on Intelligence Network system	Around 86 Anti Poaching camps have been constituted and around 592 (FR-8,Dy.Ranger-2,Forester-28,F.G-72,Temporary staff-482) Staffs are personnel through Service Provider have been engaged to assist in forest protection and wildlife management. Deployment of squad and dedicated vehicle round the clock. Well established VHF network for communication and monitoring Provision of temporary water points/waterholes during summer months and maintenance of the salt licks. Deployment of sniffer dogs. Implementation of Soil & Moisture Conservation (S.M.C.) works to ensure water security in the forest area. Thee dedicated river squad has been deployed in the Gorge for protection and management of aquatic fauna. Modern fire fighting method have been adopted to prevent and control forest fire. Round the clock monitoring is being done by the control rooms. The protection measures includes 9 Ranges, 86 permanent patrolling camps, 21 temporary patrolling camps, 1 sniffer dog, 24000 kmts per year foot patrolling through new MSTRIPs app called GPSPDA, 592 staffs, vehicular patrolling, wireless communication through 58 VHF base stations, 14 vehicle mounted base sets, 138 Walkie-talkies, 95 mobile cell phones, River squad, intelligence informers etc. Efficient patrolling through new mobile app and GPSPDA with regular senior level inspection List of 30 Registers placed for various management and protection purposes Ample informers and intelligence inputs are sourced regarding the movement of timber smugglers and

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				poachers which operate in the area. This has helped to get timely information regarding attempts by poachers and to intercept them
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Annexure 2.6 attached, includes the details of compensation paid from 2013-14 to 2017-18.	The human wildlife conflicts are fairly not much and the compensation have been paid timely.
TR has been able to mitigate few human-wildlife conflicts.	Fair			There are 5 cases of human death, 3 cases of cattle kill, and more rampant crop damage due to wild boar have been recorded.
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		An amount of Rs. 4.5 lakh in 2014-15, Rs. 24.40 lakh in 2015-16, Rs. 26.54 lakh in 2016-17, 24.39 lakh in 2017-18 has been paid compensation for human death, injury, crop damage, cattle lifting.
TR has been effective in mitigating all human-wildlife conflicts.	Very good			<p>There are 116 villages located within the Tiger reserve. Instance of human wildlife conflicts do occur, but are being managed. Crop raid are common in the villages. The human kills and house damages that used to occur frequently in the past have been drastically reduced due to erection of solar powered electric fences and elephant proof trenches in the village periphery. Apart from these anti-depredation squads are deployed to track the movement of elephants and fore warn the villages.</p> <p>a. Anti-depredation squads are deployed in many villages prone to wild animal attacks. These squads are provided under the funds received from State CAMPA and Project Tiger. These squads forewarn the villages on the movement of elephants and also maintain the solar power fences erected in their villages.</p> <p>b. Solar power fencing: Solar power fencing is provided to many villages that are highly prone to wild animal attacks. These have been installed through the Eco-development Committees (EDCs) in these villages. The EDCs take responsibility of managing the Solar power fences. The list of villages where solar power fences are provided or are under progress is shown in Annexure-III</p> <p>c. Compassionate grants All the crop depredation cases has been enquired and addressed timely. The compensation has been paid to the victims accordingly within 30 to 90 days and this activity has been included in Odisha Right to Public Services Act,2012 by the State Govt.</p>

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Annexure 2.7 (1 to 4)	The TR is well integrated with neighboring forest division for identification and management of corridor.
Some limited attempts to integrate the TR into a network/ landscape.	Fair		1. Coordination meeting with neighboring forest division for linkage of corridor 2. Corridor identification and management authority meeting 3. Smart Green Infrastructure in nearby villages	There is Corridor Management Authority, who identified the corridor and made a corridor management plan for management of the corridor.
TR is generally quite well integrated into a network/ landscape.	Good	✓		Report on Smart Green Infrastructure made in nearby villages and urban area
TR is fully integrated into a wider network/ landscape.	Very good			The forest areas surrounding the buffer areas which are critical corridors to wildlife are identified as the 'Adjoining areas' for the TR. These include 2 forest blocks of Athagarh and Athamallik division, 9 forest blocks of Angul division, 5 forest blocks of Nayagarh forest division and 1 forest block of Dhenkanal and Boudh divisions. Various habitat management and protection activities are carried out under various State and Centrally sponsored programmes in these areas. The details are also given in the TCP- 'Adjoining Area Plan' Landscape level meetings have been organized with the staff of adjoining Forest Divisions for better coordination and management of Tiger Reserve.
				The forest blocks have been kept in the protection working circle and no timber coupe working is being permitted which has been incorporated in the Working Plans of adjoining Forest Division.
				Smart green infrastructure has been established in Chhotkei Nature Camp and Chhotkei village, where the power supply of the village has been done through installation of Solar Power Plant.

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Annexure 3.1 1. List of Staff Position, Sanctioned, Present, Vacant 2. Qualification and Age of Staff	Satkosia Wildlife Division of SKTR has a sanctioned post of 138 Staff, against which 97 are working and 41 posts are vacant (around 30%). In Mahanadi Division, against sanctioned post 102, 56 are working and 46 are vacant (about 45%). Available Manpower Around 592 (8 No. of Forest Rangers, 2 Dy. Ranger, 28 Foresters, 72 No. of Forest Guards have been deployed in addition to 482 Nos. of temporary staff) for protection and management of the TR. Staff age is ranging from 25 to 55 and mostly above 40.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

*This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Annexure 3.2 1. List of Vehicles and buildings and their deployment 2. List of Equipments and their deployment 3. Weblinks where details of public assets available	Satkosia TR has a adequate resource base for management and protection. <ul style="list-style-type: none"> • Vehicles: A total of 15 light vehicles, 39 motor cycles, 10 motor boats, all forest watchers have cycle • Weapons: A total of 12-Bore Gun-19, 32"Revolver-07, 315-Rifle-19, Pistol-01. • VHF: A total of 66 Base sets, 138 Hand Sets, 95 Mobile Sets • Camera Trap: 216 (118 in Satkosia Division and 98 in Mahanadi Division) • GPS: 120 (60 in each division) • Tranquillizer: 04 Tranquilization Gun and 01 Dan Inject. • One Sniffer Dog Buildings: i. Office buildings- 11 Nos. (Field Director, Dy. Director & Range Officers)
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				ii. Residential quarters- 71 Nos. (Field Director, Dy. Director & Range Officers, Forester & F.G.) iii. Protection Barracks- 07 Nos. iv. Protection Camps- 86 Nos. Permanent camp and 21 Nos. of temporary camps v. Rest houses- 07 Nos. FRH vi. Ecotourism destinations:- 07 Nos.(Tikarpada ,Purunakote, Chhotkei, Tarava, Baghmunda, Baliput & Badmul)
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*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*																													
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																									
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Annexure 3.3 1. Details of funds released by NTCA and utilization certificate from 2014-15 to 2017-18 2. Details of funds in Tiger Conservation Foundation from 2011-12 to 2016-17	Details of funds received and utilized at from NTCA with Central and State Share are as given below: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Year (in lakhs)</th> <th>APO Submitted</th> <th>Sanctioned by NTCA</th> <th>Released</th> <th>Utilized</th> </tr> </thead> <tbody> <tr> <td>2014-15</td> <td>3802.04</td> <td>397.581</td> <td>315.278</td> <td>315.278</td> </tr> <tr> <td>2015-16</td> <td>3835.98</td> <td>334.567</td> <td>318.930</td> <td>318.930</td> </tr> <tr> <td>2016-17</td> <td>930.32</td> <td>705.694</td> <td>714.690</td> <td>666.164</td> </tr> <tr> <td>2017-18</td> <td>2552.77</td> <td>1841.47</td> <td>1841.470</td> <td>1700.027</td> </tr> </tbody> </table>	Year (in lakhs)	APO Submitted	Sanctioned by NTCA	Released	Utilized	2014-15	3802.04	397.581	315.278	315.278	2015-16	3835.98	334.567	318.930	318.930	2016-17	930.32	705.694	714.690	666.164	2017-18	2552.77	1841.47	1841.470	1700.027
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Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓																											
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good																												
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good																												
				The Tiger Conservation Foundation has Rs. 49,54,981 in the balance account as on 31 March 2017																									

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Annexure 3.4 1. Details of funds released under various State Govt. Schemes and utilized of last 4 years from 2014-15 to 2017-18 2. Details of revenue received from tourism, deposited in foundation	The TR has a very fairly good amount of funds received from various State Govt. sources like Plan, Non-Plan, CAMPA, PCCF etc. are given below: 2014-15: 3.61 Crore; 2015-16: 4.09 Crore; 2016-17: 8.89 Crore The TR earned good revenue from last 4 years, the details are given below: 2013-14: 10,00 Lakh 2014-15: 13.33 Lakh 2015-16: 12.33 Lakh 2016-17: 15.59 Lakh
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.*

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Annexure 3.5 1. List of NGOs working in Satkosia TR 2. List of donations made by NGOs	There are six NGOs working in the Satkosia TR are: 1. Foundation for Ecological Security, 2. Nature, Environment and Wildlife Society, 3. Wildlife Conservation Trust, 4. WCCP Jabalpur, 5. WWF-India, 6. SRADHA-NTPC Kaniha These NGOs helped in Satkosia in terms of awareness programmes and distribution of solar systems, torch, coats, shoes, mosquito nets and health camps etc.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Annexure 4.1	The TR has trained Officer upto Range Officers and Foresters but the lower staffs are not trained in wildlife management. Internal training programmes were conducted on Wildlife Management at Tikarpada; Tranquilisation training to one Forester and Forest Guard; Annual training on Census/ Estimation of Tiger, Crocodiles, Elephants and water fowls are being conducted every year.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓	1. List of training made for higher staff	
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc . The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor	✓	Annexure 4.2	There is no regular award reward program. The promotion linked on the performance as per State plan. However there are 4 Staff awarded in following categories: 1. One ACF awarded by GTF for best range officer for protection and wildlife management 2. Three Foresters awarded for best Forest Guard for protection and wildlife management 3. A lot can be achieved in terms of output by outlining motivational reward system program
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair		1. Details of Staff working their promotion date	
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good		2. List of Awards	
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Annexure 4.3	The TR has a systematic public participation in most aspects of the TR management.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair		1. List of Stakeholders and activities	Local communities have been engaged in management and protection related activities, local communities.
Systematic public participation in most of the relevant aspects of TR management.	Good	✓	2. List of EDCs and their activities	There is active involvement of public participation in the management of the TR in following aspects: i. Awareness Programme: Awareness programmes are being conducted to aware local communities and EDC members on conservation of nature & wildlife, protection of forest and fire protection etc.
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good		3. Minutes of meeting with Stakeholders 4. List of NGOs and their way of participation	ii. Ecotourism Groups: iii. Nature Camps for students and line Department officers. iv. Involvement of NGOs in population estimation. v. Celebration of Important Days: World Environment Day, International Tiger Day, World Forestry Day, Wildlife Week, Vanmahotsva etc. are celebrated in Range and Division level. vi. Village Level 72 EDCs and 31 VSS are implementing eco-development activities, Income generation activities, Anti-depredation activities. vii. District level and State level coordination committees for various aspects of management of the TR

**The involvement of NGOs/ NGIs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor	✓	Annexure 4.4	Complaint Box and suggestion Register have been placed recently. Website for Satkosia Tiger Reserve: www.satkoskosia.org ; Ecotourism Website : www.ecotourodisha.com are also used for feedback and suggestions.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair		1. Copy of Complaint box recently placed	Workability of ensuring a feedback loop is yet to happen as a system driven action.
Coordinated system logs and responds effectively to most complaints.	Good		2. Cover page of complaint register	
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good		3. Website for complaints and feedback	

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				Remarks																																					
Condition	Category*	(Tick ✓)	Reference document(s)																																						
No livelihood issues are addressed by TR management.	Poor		Annexure 4.5 1. List of 18 EDCs involved under JBIC Project 2. year-wise funds released from 2013-14 to 2015-16 under OFSD project 3. Details of mandays generated 4. Details of funds received from district agencies 5. Status of FDA implementation, FRC, SDLC, Receipt and disposal of claims	Under livelihood programme, Rs. 34.75 Lakh has been released to 18 EDCs and 86 SHGs for doing agroforestry practice. The following mandays have been generated in execution of protection, Development works and Ecotourism development and management.																																					
Few livelihood issues are addressed by TR management.	Fair			A. Protection and Development works.																																					
Substantial livelihood issues are addressed by TR management.	Good			<table border="1"> <thead> <tr> <th rowspan="2">Year</th> <th colspan="3">Satkosia</th> <th colspan="3">Mahanadi</th> </tr> <tr> <th>Total No. of mandays</th> <th>Women</th> <th>Men</th> <th>Total mandays</th> <th>Women</th> <th>Men</th> </tr> </thead> <tbody> <tr> <td>2015-16</td> <td>68882</td> <td>17220</td> <td>51662</td> <td>27553</td> <td>6888</td> <td>20665</td> </tr> <tr> <td>2016-17</td> <td>113009</td> <td>28252</td> <td>84757</td> <td>45204</td> <td>18082</td> <td>27122</td> </tr> <tr> <td>2017-18</td> <td>86998</td> <td>21749</td> <td>65249</td> <td>34799</td> <td>8699</td> <td>26100</td> </tr> </tbody> </table>				Year	Satkosia			Mahanadi			Total No. of mandays	Women	Men	Total mandays	Women	Men	2015-16	68882	17220	51662	27553	6888	20665	2016-17	113009	28252	84757	45204	18082	27122	2017-18	86998	21749	65249	34799	8699	26100
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				Other livelihood options include, Power tillers- 05, Sewing Machines-46 have been distributed to SHGs, LPG connection- 278 have been provided in and around Tiger Reserve, Fuel efficient chullahs – 2250 have been distributed to the beneficiaries inside the villagers of TR, Banaraj Chicks – 1300 have been distributed to the traditional fishermen of Tikarpada as an alternative source of income and to reduce the pressure on the Gorge.																																					

*The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		1. Details of human settlements in the core 2. Village Relocation Plan for 2 villages, Raigoda and Marada	There are 4 villages in 416 ha area with 99 households and 427 populations, 250 livestock populations in core. In addition to this 136 villages are in buffer and around 400 villages in outer conflict zone. The relocation of Raigoda village made recently with all facilities. The resources have been mobilized from all Govt. sources for provision of facilities to relocated village in New Raigoda. The another tribal village Marada is not willing to go out, but efforts are on to relocate at the earliest. The facilities provided to new Raigoda relocated village includes creation of approach road, allotment of lands, provision of temporary tribal huts immediate and construction of Puccas houses under Indira Awas Yojna, installation of solar lights immediately and long permanent facilitation of electric connections, water facility tanks, boar and pipes, exgratia payment in bank account with 5 year FD, sanitation un SBM, banking facility, medical facility, Anganwadis as community centre, veterinary facility, cattle sheds, education facility, vocational trainings, Food rations, Seatout tree, sewing machines, gas and smokeless chulhas, common kitchen etc. Due to the provision of these faculties, the nearby Sarauli village becomes hostile and demanding these faculties for them also instead of living outside the TR.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		1. TCP 2013-14 to 2022-23 Page No. 9 of Core and Page No. 12 of Buffer 2. Website www.satkosia.org ; www.ecotourodisha.com ; www.wildlife.odisha.gov.in , Nayagarh District Website and Boudh District Website, Angul District	The entire information on Satkosia Tiger Reserve is available on the official website www.satkosia.org and Ecotourism website www.ecotourismodisha.com . The information on this public domain is comprehensive and provides ample details to tourists, wildlife enthusiasts, PA managers and general public. Apart from this there is a Reception centre
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good		Website 3. Book on Birds of Satkosia Landscape; 4. Book on Satkosia Seen and Unseen 5. List of 17 research projects 6. Brochure on Satkosia TR in 8 types 7. PowerPoint Presentation by DD SKTR 9. Media Reports	at Pampasar, the entry gate for the TR, which provides details of the park interpretation to the visitors. There are eight types of brochures which readily available for visitors.
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5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*																	
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks													
Visitor services and facilities do not exist.	Poor		Annexure 5.2 1. Details of facilities provided to visitors 2. Details on community based tourism	The TR management is doing commendable work of involving local communities in ecotourism complexes in 3 sites of Satkosia TR. Due to the large number of human settlements in buffer, there is a great opportunity for Eco-development activities in the buffer zone. Various EDC programmes is being undertaken in the periphery of the TR for greater stake of local communities in conservation and management of TR. Currently ecotourism is being carried out with the involvement of local tribes in core zone. An overview of visitor facilities provided are: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Type of Ecotourism facility</th> <th>Mode of operation</th> <th>Services provided</th> </tr> </thead> <tbody> <tr> <td>1. Nature Camp, Tikarpada</td> <td rowspan="7">Community run</td> <td rowspan="3">Provides accommodation & refreshment, catering, boating, nature trekking, Drinking water facility, Lavatories</td> </tr> <tr> <td>2. Nature Camp, Purunakote</td> </tr> <tr> <td>3. Nature Camp, Chhot kei</td> </tr> <tr> <td>4. Nature Camp, Tarava</td> <td rowspan="4">Camping, Birding, Boating, Cultural programme</td> </tr> <tr> <td>5. Nature Camp, Baghamunda</td> </tr> <tr> <td>6. Nature Camp, Baliput</td> </tr> <tr> <td>7. Satkosia Sand Resort & Nature</td> </tr> </tbody> </table>	Type of Ecotourism facility	Mode of operation	Services provided	1. Nature Camp, Tikarpada	Community run	Provides accommodation & refreshment, catering, boating, nature trekking, Drinking water facility, Lavatories	2. Nature Camp, Purunakote	3. Nature Camp, Chhot kei	4. Nature Camp, Tarava	Camping, Birding, Boating, Cultural programme	5. Nature Camp, Baghamunda	6. Nature Camp, Baliput	7. Satkosia Sand Resort & Nature
Type of Ecotourism facility	Mode of operation	Services provided															
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4. Nature Camp, Tarava		Camping, Birding, Boating, Cultural programme															
5. Nature Camp, Baghamunda																	
6. Nature Camp, Baliput																	
7. Satkosia Sand Resort & Nature																	
Visitor services and facilities are very basic.	Fair																
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓															
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good																

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				Camp, Badmul		
				Forest Guest House, Tikarpada (6 rooms), Purnakote (2 rooms), Labangi (2 rooms)	Run by Tiger reserve	Provides accommodation
				Boating facilities, Tikarpada	Run by Tiger reserve	
				Interpretation Centre, Tikarpada	Run by Tiger reserve	Films on Satkosia Tiger Reserve Ecotourism Centre on Refreshment and accommodation.

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*					
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks	
Little or no systematic evaluation or routine reporting of trends.	Poor		Annexure 5.3 1. Research reports also available at satkosia website 2. List of 17 Research & monitoring work in TR done by various research scholars 3. Estimation of imp. Wildlife population in trend and time series basis 4. Report on Phase IV monitoring 5. Implementation MSTRIPES through GPSPDA 6. Year-wise report on population estimation of prey base.	The TR is systematically monitoring its prey and predator data base on annual basis. The Elephant census data is maintained from 1979 to 2017. There are 17 various types of studies conducted by govt. and non govt. organizations. Floristic study also made by BSI in 2011. Epidemics:- No reports of epidemic in last three years. Immunization:- The cattle population have been vaccinated in all the villages inside the sanctuary area 2 important books published on Satkosia are Book on Birds of Satkosia Landscape and Book on Satkosia Seen and Unseen.	
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓			
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good				
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good				

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Annexure 5.4 1. copy of maintenance register for infrastructure, buildings, vehicles, assets	There is no regular schedule of repair but the need based maintenance has been done. The TR has some funds for maintenance of assets and infrastructure
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Annexure 6.1 1. Wildlife Census Odisha 2017	Wildlife Department of Odisha is conducting census of all wildlife on annual basis. Based on the assessment, the trend of Tiger, Leopard, Mugger is stable, Gharial, Elephant and prey population is increasing. No innovative effort to carry out census with neutral umpires is visible.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Observation of enclosures made for resource population of tiger	The tiger population as per the last estimation was two and at present the population is stable. For augmentation/recovery of tiger population in the TR steps has been initiated to translocate three pairs of tiger from Madhya Pradesh.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good	✓	Phase IV Report	
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Field visit and discussions with TR management	Based on the discussions with TR Management and strict protection measures, the threats to the TR are minimized to certain extent. All the threats are being taken care of for abatement, but due to large number human settlements in the periphery, the conservation is a challenging task. The forest protection is given utmost priority in the TR and the incidences of illicit felling of timber and poaching have been almost stopped.
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		1. TCP 2. Visitation data on last five years 3. Details of revenue received from tourism 4. List of all ecotourism facilities provided	Visitor management has been done as per NTCA guidelines and ecotourism done as per TCP.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			The expectations of the visitors are met. The TR is a major tourist attraction of the State. Around 30,000 visitors come to Satkosia each year. Presently the tourists are able to book the accommodation facilities through the website www.ecotouridisha.com and www.satkosia.org . The feedbacks received from the tourists are extremely positive.
Tourism management plan is good and well monitored.	Good	✓		No. of tourists visited: 30,000 Nos.
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			Visitors are not permitted for movement in the core area.

+ Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			Following are the specific measures taken by the Management: <ul style="list-style-type: none"> The NGOs have been engaged for effective conflict management between the local people. Entry point activities are being carried out in villages under convergence through various programmes of line Department. Solar lights have been provided to Chhotkei, Tarava, Tulka, Katrang, Asanbahal, Bhurkundi & Raigoda villages. Approach roads to the villages have been repaired to improve the communication network.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>The involvement of 18 EDCs and 86 SHGs in TR management spreads a positive message for conservation in the local communities. Also the excellent ecotourism run with the involvement of local communities, excellent facilities provided to relocated village New Raigoda enables local communities very much supportive.</p> <p>However, due to closing of road in core area, due to provision of excellent facilities to New Raigoda Village, hostility remains in few villages like Sarauli.</p>
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**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card⁺

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	42.5	67.19 say 68%
2.	Planning	07	10	70	55	
3.	Inputs	05	10	50	30	
4.	Process	06	10	60	35	
5.	Outputs	04	10	40	22.5	
6.	Outcomes	05	10	50	32.5	
Total		32		320	217.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		a. SMC work has been undertaken to retain soil and improve the moisture regime.	Besides planting more trees for raising carbon sequestration, what is required is to keep the forest crop disease free, young and healthy. Planting of location specific 5 to 10 feet tall trees may be planned to fill the gaps and replace old, diseased, dying and dead trees.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair		b. Fire management plan has been formulated to prevent and control forest fire so that the soil carbon is retained. c. Emphasis has been given to improve dependency on solar power to reduce carbon foot print.	
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good	✓	d. Supply of 1000 Nos. of fuel efficient chullas to the villagers to reduce use of fuel wood and carbon foot print. e. 1410 hectares of area have been regenerated and improved through ANR works with financial assistance under State funded Ama Jangala Yojana and O.F.S.D.P.	
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good		f. 1,00,000 Nos. of seedlings have been distributed to the local villages for plantation outside the forest areas and 3000 Nos. of seedlings have been planted under avenue plantation programme which will increase carbon capture.	

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		(a) The Tiger Reserve Management has been aware of addressing issues relating to climate change.	The active management of forests be initiated to replace the old management of watching and protecting the forests.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓	(b) In addition to the above point mentioned in point No. 1 specific plantations programme under Green Mahanadi Mission has been initiated by the Government and 14,000 Nos. of plants will be planted within one kilometre of the river bank during 2018-19.	
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5. SIMILIPAL TIGER RESERVE

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1. TCP Cha-1, pp 5-10	<p>Status: Similipal Tiger Reserve is the unique TR in the country declared in the first list of TRs in India in 1973, 4th largest TR in India (2750 km² with a core of 1195 km²), largest TR in Odisha, part of Elephant Reserve and Biosphere Reserve Network and is only home to unique melanistic tigers in the world, home to 75% tiger and 25% elephants of Odisha.</p> <p>Geological value: The area lies in Deccan Peninsular bio-geographic zone and harbours a unique blend of Western Ghats, Eastern Ghats and Eastern Himalayan biodiversity. Similipal Tiger Reserve is the part of larger Central Indian landscape Complex and specifically it is part of the Similipal – Hadagarh – Satkosia landscape unit.</p> <p>Ecological value: The floristic composition indicates a connecting link between South Indian and North Eastern Sub-Himalayan Species with the large Sal forest. The landscape encompasses 7% plants (1352 species), 8% orchids (94 species), 7% reptiles (62 species), 20% birds (361 species) and 11% mammals (55 species) of India. There are many species of rare and threatened faunal biodiversity like Tiger, Elephant, Mahaseer, Hornbill, Chowsingha, Mouse Deer, Giant Squirrel, Flying Squirrel, Stiped necked Mongoose, Mugger Crocodile and Rufus Tailed Hare, Civet etc.</p> <p>Catchments value: Richest watershed in the state giving rise to many perennial rivers like Budhabalanga, Khadkei, Khairi, Bhandan, West Deo, Sanjo and Palpala.</p> <p>Historico-cultural value: It was once the</p>
Values generally identified but not systematically assessed and monitored.	Fair		2. Comprehensive Management Action Plan of SMTR BR 2017-18 to 2021-22	
Most values systematically identified, assessed and monitored.	Good		3. List of 167 Research Papers published on SMTR	
All values systematically identified, assessed and monitored.	Very good	✓	4. List of 26 Research Projects funded by SMTR 5. List of ongoing 6 Research Projects 6. Brochure on SMTR in 8 pages 7. PowerPoint Presentation on SMTR 8. Website www.similipal.org ; www.ecotourodisha.com ; www.wildlife.odisha.gov.in 9. Book on Birds, Trees and Grasses of Similipal TR	

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>hunting ground of the Maharajas of Mayurbhanj. Similipal is linked with the religion and culture of the people of Mayurbhanj. Apart from its biodiversity, the region around Similipal forests is home to a variety of tribes. Prominent among these are Kolha, Santhala, Bhumija, Bhatudi, Gondas, Khadia, Mankadia and Sahara.</p> <p>The TCP mentioned all the important value to the TR, but there is no detailed information on historical value of the area.</p>
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**The value would include biological, physiological, ecological, historic-cultural etc.*

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1. TCP Ch 3, section 3.4, P-32-33 2. Para 7.2.5.2 Page 101-109 on fire 3. Year-wise threat assessment report 4. Threat abatement strategy	Threats identified and documented in the TCP. Threat abatement strategies for major threats in place. Akhand Shikar, Left Wing Extremism and Intrusion of Tribal from Jharkhand have been totally stopped. Threat Assessment Report indicates relocation of 35 families from Jamunagarh village in 2015 and now only 3 families of Jamunagarh Village and Bakua-Nawana South are still putting pressure on core in 2017. No Akhand Shikar from 2015 onwards. Some cases of illicit felling and poaching. There is no case of Naxalite and other forms of extremism from 2010 onwards. No intrusion reported from Jharkhand side from 2014 onwards. Fire incidences recorded 15 cases in 2014, 21 cases in 2015, 78 cases in 2016 and 22 cases in 2017. Threats from invasives and the varying flora at some places need to be assessed in details and periodically monitored and separately recorded in TSP.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

**This assessment should be based on number, nature and extent of threats*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		1. Present status of relocation of village from core of SMTR 2. TCP on Buffer villages 3. Statement of impact from villages in core 4. Different committee formed for relocations and communication thereof.	Currently Core has 2 villages, Bakua village have 61 families and Jamunagarh have 3 families. Other 2 villages and 2 hamlets have been relocated from Core. 1 village from Buffer area also got relocated as per state Govt. policy. There are 63 villages in buffer zone of the TR. The tribal communities rearing Goat for meat, they don't rear cow or buffalo therefore not much pressure on grazing. One village Khejuri in buffer is on the way putting pressure on the forest. It is strongly recommended to relocate this village on priority basis to create large inviolate area.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		1. Notification of Core & Buffer in TCP on P-472-483 2. Notification and bylaws of Foundation in TCP P-683 3. Approval letter from NTCA on TCP 2013-14 to 2022-23 in TCP 4. State level Steering committee in TCP p-680 5. Only SOP No. 7 is not applicable due to Interstate	The Similipal TR is complied with all the statutory requirements and SOPs except interstate SOP, which is not applicable. The SOPs are also translated in vernacular languages.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	✓		

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		1. TCP Organogram P-47 showing all administrative structure of SMTR under FD	No issue of Unified Control. Even the divisions of Corridor Kuldiha WLS, Hadgarh WLS are now under the control of FD cum Regional CCF, Baripada.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		1. Approval letter from NTCA on TCP 2013-14 to 2022-23 in TCP 2. Copy of TCP (Hard & Soft) 3. Executive Summary of TCP explaining the process of participation while preparation	TCP of SMTR approved.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			Additionally, a Comprehensive Management Action Plan of Similipal Biosphere Reserve 2017-18 to 2021-22 has been approved as per the UNESCO guidelines. The Chapters from existing situation of Core, Buffer and Corridor are based on scientific study, critical analysis of past management and based on that proposed management chapters of Core Buffer and Corridors have been prescribed.
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		1. Ch 7 on Management strategies of TCP on Core and Buffer	The TR safeguards all threatened biodiversity values mentioned in section 1.1 as per TCP.
TR safeguards a few threatened biodiversity values.	Fair		2. Action Plan for prevention of Poaching and Illicit felling in Monsoon	Security Audit has been done in March 2018. Akhand Shikar has been totally stopped for last 4 years. No. of Anti Poaching camps and TMCs have been significantly increased in buffer area.
TR safeguards a large number of threatened biodiversity values.	Good	✓	3. Guidelines to prevent Akhand Shikar	
TR safeguards all threatened biodiversity values.	Very good		4. Number of Antipoaching Camps in Core and Buffer 5. List of Antipoaching Camps in Core with names 6. Letter from NTCA regarding Security Audit 7. List of Equipments Division-wise and Vehicle 8. Statement showing strength of Staff Sanctioned, Working and Vacant	Protection measures include 194 anti-poaching camps (APC-167) and temporary matchan camps (TMC-27), 85 APC+18 TMC= 103 in Core and 82 APC+09 TMC=91 in Buffer. Total staff 840, 1 dog squad, 63 STPF adding value on protection and safeguarding.

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		1. Minutes of the 2 nd meeting of TC Foundation at State level on 6.6.17	While preparation of Comprehensive Management Action Plan of SMBR, consultation with various Stakeholders made.
Stakeholders participate in some planning.	Fair		2. Minutes of Foundation with Local Committee, 2017	Eco-development, Ecotourism, CAMP APO, Research activities are now going on involving reputed organizations, individuals and NGOs with the involvement of various stakeholders.
Stakeholders participate in most planning processes.	Good	✓	3. Minutes of the meeting of Simlipal BR Management Council June 2017	Most of the stakeholders have been consulted for village relocation.
Stakeholders routinely and systematically participate in all planning processes.	Very good		4. Minutes of Research Advisory Council .under the Chairmanship of PCCF WL	Opportunistic public participation is in place.

*The result of participation must show in the field and not merely reported as a routine exercise.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		1. Ch 7 on Management strategies of TCP on Core and Buffer	1. Creation of inviolate zone by relocation
Limited planning and monitoring programmes are in place for habitat management.	Fair		2. Scheme of Meadow development in SMTR	2. Meadow development
Habitat management programmes are generally planned and monitored.	Good	✓	3. Comprehensive Management Action Plan of SMTR BR 2017-18 to 2021-22 (mentioned in 1.1)	3. Soil Moisture Conservation strategy and Interventions
Habitat management programmes are thoroughly planned and monitored.	Very good		4. All maps on management strategies in PPT and TCP	4. Forest Fire Management
				5. Weed Management of Invasive species Lantana, Cromolena, Colibrochea done, but threat from Phoenix in Grasslands not quantified and addressed
				6. Arrest of Sal regeneration in meadow
				7. Annual maintenance of Pathway and bush cutting
				8. Creation of Seed Plots for meadows
				9. Reintroduction of Orchids
				10. Tissue Culture

**This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.*

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		1. Ch 7 on Management and Protection strategies of TCP on Core and Buffer	Security Audit has been done in March 2018. STPF is operational.
TR has an adhoc PS and SA.	Fair		2. Action Plan for prevention of Poaching and Illicit felling in Monsoon	There are 840 regular staff is working in the SmTR. In addition to this, there are 112 posts under STPF (1ACF+3RO+81FG+27FW), out of which 63 STPF is working (1ACF+3RO+59FG) and 22 are FG post
TR has a generally relevant PS and SA but is not very effective.	Good		3. Guidelines to prevent Akhand Shikar	
TR has a comprehensive	Very good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

<p>and very effective PS and SA.</p>			<p>4. Number of Antipoaching Camps in Core and Buffer 5. List of Antipoaching Camps in Core with names 6. Letter from NTCA regarding Security Audit 7. List of Equipments, Vehicle and Buildings Division-wise 8. Statement showing strength of Staff Sanctioned, Working and Vacant 9. Notes on STPF for SMTR 10. Foot Patrolling through Forestry App (GPS PDA) Orissa Govt. and hejje. 11. Number of Offence reported, arrested, prosecution and conviction achieved in last 4 years in SMTR 12. All maps on patrolling, management strategies in PPT and TCP 13. Details of Intelligence network 14. Dog Squad Report</p>	<p>are vacant and there is no notification for recruitment of 27 FW. Foot Patrolling through Forestry App (GPS PDA) Orissa Govt. Dog squad is in place. Intelligence network is active. Akhand Shikar has been totally stopped for last 4 years. No. of Anti Poaching camps and TMCs have been significantly increased in buffer area. Protection measures include 194 anti-poaching camps (APC-167) and temporary matchan camps (TMC-27), 85 APC+18 TMC= 103 in Core and 82 APC+09 TMC=91 in Buffer. Each APC serves dual purpose as base camp and as APC. Each APC has an average beat size of 15-20 km² for protection with 1 Forest Guard (FG) and 5 Protection Assistants (PAs). VHF Network, GPSPD patrolling, Elephant patrolling, foot patrolling, dog squad, fire alert, are other good protection measures. Although a good network of APC, most of the Antipoaching camps cum base camps are under construction with CAMPA funds. Due to no smokeless chulhas, the APCs are full of smoke; walls of APCs are black due to continuous smoke which may cause hazards to protection watchers living in APCs.</p>
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****This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.***

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*																																																											
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																																							
Human-wildlife conflicts are significant but poorly addressed.	Poor		1. Govt. notification on payment of compensation on conflict 2. Details of conflict cases in core and buffer and payment made	SOP to deal with emergency related to HWI approved by Govt. of Odisha is in place. Compassionate payment is part of Odisha Right to Public Service Act, 2012. Timely payment done. WTI has provided necessary veterinary service for immunization, rescue/ rehabilitation, and training for rescue operation.																																																							
TR has been able to mitigate few human-wildlife conflicts.	Fair		3. MoU b/w WTI and SMTR for rescue and rehabilitation in conflict cases	The human wildlife conflict is rampant due to Elephants and Wild Boar population with large number of human settlements in the buffer. The compensation amount has been paid to all affected peoples. The details of conflict and amount paid from 2014-15 to 2017-18 are given in the table below:																																																							
TR has been able to mitigate many human-wildlife conflicts.	Good	✓	4. Notification of Public service ACT for timeliness payment of compensation	<table border="1"> <thead> <tr> <th></th> <th>Human death</th> <th>Amount (lakh)</th> <th>Human injury</th> <th>Amount (lakh)</th> <th>Cattle kill</th> <th>Amount (000')</th> <th>House damage</th> <th>Amount (lakh)</th> <th>Crop damage (Acres)</th> <th>Amount (lakh)</th> </tr> </thead> <tbody> <tr> <td>2014-15</td> <td>7</td> <td>16</td> <td>8</td> <td>2.50</td> <td>-</td> <td>-</td> <td>60</td> <td>2.88</td> <td>435.271</td> <td>43.65</td> </tr> <tr> <td>2015-16</td> <td>7</td> <td>19</td> <td>22</td> <td>6.80</td> <td>14</td> <td>70</td> <td>70</td> <td>1.72</td> <td>372.7653</td> <td>38.35</td> </tr> <tr> <td>2016-17</td> <td>2</td> <td>6</td> <td>25</td> <td>7.90</td> <td>11</td> <td>55</td> <td>49</td> <td>1.38</td> <td>462.832</td> <td>46.96</td> </tr> <tr> <td>2017-18</td> <td>6</td> <td>18</td> <td>15</td> <td>6.45</td> <td>12</td> <td>57</td> <td>42</td> <td>1.16</td> <td>346.15</td> <td>34.75</td> </tr> </tbody> </table>		Human death	Amount (lakh)	Human injury	Amount (lakh)	Cattle kill	Amount (000')	House damage	Amount (lakh)	Crop damage (Acres)	Amount (lakh)	2014-15	7	16	8	2.50	-	-	60	2.88	435.271	43.65	2015-16	7	19	22	6.80	14	70	70	1.72	372.7653	38.35	2016-17	2	6	25	7.90	11	55	49	1.38	462.832	46.96	2017-18	6	18	15	6.45	12	57	42	1.16	346.15	34.75
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TR has been effective in mitigating all human-wildlife conflicts.	Very good																																																										

*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		1. WII Report on Corridors	SmTR has a good network of contiguous forest in 3 corners of the TR as: North= Similipal-Badampahar RF Corridor Southeast= Similipal-Hathgarh-Kuldiha WLS Corridor Southwest= Similipal-Santospur RF adjacent to Satkosia Corridor
Some limited attempts to integrate the TR into a network/ landscape.	Fair		2. Corridor Plan from page no. 395-462 of TCP	
TR is generally quite well integrated into a	Good	✓	3. Stage-1 clearance of NH-6 project passing through	

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

network/ landscape.			Similipal buffer	
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there any effort to rationalize land use around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

*

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Statement showing strength of Staff Sanctioned, Working and Vacant	27 Forest Watchers of STPF still not recruited and 28% vacancy in regular staff of the TR. The total sanctioned post is 1173, working is 840 and vacant is 333 (28%). Wildlife trained staff needs to be posted
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		List of Equipments, Vehicle and Buildings Division-wise	The TR have adequate resources for protection measures such as: 45 Vehicles including 2 wheelers and 4 wheelers, Torch lights- 680, First Aid Kit- 155, Lathi- 1085, Shoes-712,
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*																			
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks															
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Statement of funds released and utilized in last 4 years under State Plan Schemes, CAMPA etc.	CSS-PT, CSS-SBR & CAMPA funds being used for habitat improvement, protection, road repair, training, exposure visit. The allocation and expenditure under CAMPA fund given in the table below:															
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair																		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓																	
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good																		
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*Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Details of contribution given by IGS/WTI/ other NGOs for SMTR	Hand holding exercise by IGS and rescue, immunization activities by WTI has immensely benefitted. Veterinary services hired from WTI. FAO India is implementing a Green Agriculture project. Transforming Indian agriculture for global environmental benefits and the conservation of critical biodiversity and forest landscapes.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

sought and negotiated for the management of many TR level activities.				A small NGO Indian Grameen Services (IGS) has been hired for provision of relocation facility.
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4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Statement showing list of trainings by Staff taken in last 4 years in SMTR	Higher Officials trained in Wildlife Management from WII and other Institutes. The lower staff, Forest Guards and Foresters got exposure visits to other TRs of the country on regular basis. More training on field botany and animal life cycles needs to be provided to selected staff in each range.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc . The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		1. Details of State level forestry award 2. List of Award/rewards received by the Staff in last 4 years in SMTR 3. Health insurance for all the staff working inside Similipal Tiger Reserve.	FG/Forester/Range officers have been awarded in different state level awards. Health insurance for staff working inside Similipal to get free health care facilities. Every year one of the Forest Staff awarded by State on the occasion of World Forestry Day. Scope and variety of awards need to be raised for fulfilment of higher order needs of staff.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria																						
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																		
Little or no public participation in TR management.	Poor			The TR is celebrating important environmental days.																		
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		There are 66 EDCs in the TR area. Among which 5 EDCs are involved in Ecotourism and Eco-development at 6 destinations in the TR.																		
Systematic public participation in most of the relevant aspects of TR management.	Good			The State Govt. made a norm to distribute the revenue received from ecotourism in following manner:																		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			Govt. revenue- 10% EDC/VSS - 10 % Corpus fund at State wildlife tourism cell- 10% Payment of wages to engaged in ecotourism- 30% Recurring maintenance – 10% Infrastructure development- 20%																		
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**The involvement of NGOs/ NGLs in population estimation may be taken into account)*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		1. Screen shot of all ways for lodging complaints 2. Status of all mechanisms pending list of complaints 3. Copy all visitor registers for recent months	<ul style="list-style-type: none"> E-abhijog web portal of Govt. of Odisha for lodging complaints Feedback system in Ecotourodisha.com website Petition and Grievances received at FD SMTR/ENTRY GATES/Eco tour destinations. Dedicated official twitter handles of SMTR, SMBR Women Internal Complaints Committee as per Vishakha Guidelines Informations also sought thru RTI Visitor Register maintained at FRH, Ecotourism Complexes and Range Offices All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

***Does the TR maintains ‘Suggestions Register’? What actions are taken to deal with suggestions?**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		1. Mandays generated for locals in all activities under NSTR Management 2. Benefit share mechanism from Ecotourism 3. SBR related C-MAP activities generated livelihood for locals 4. Recognition of FRA in SMTR 5. List of NTFP collected 6. List of EDCs involved in Ecotourism and	The State Govt. made a norm to distribute the revenue received from ecotourism in following manner: Govt. revenue- 10% EDC/VSS - 10 % Corpus fund at State wildlife tourism cell- 10% Payment of wages to engaged in ecotourism- 30% Recurring maintenance – 10% Infrastructure development- 20%
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

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*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

			Eco-development	The TR has generated lot of employment to local communities. A total of 98680 mandays generated in 2014-15, 109644 in 2015-16, 120608 in 2016-17 and 129051 in 2017-18
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***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		1. Present status of relocation of village from core of SMTR (section 1.3) 2. Guidelines for relocation of villagers from the SMTR includes relocation plan 3. District Level Meeting, Minutes and Communications. 4. state level committee details (Refer 1.2 and 1.3)	Currently Core has 2 villages, Bakua village have 61 families and Jamunagarh have 3 families. Voluntary relocation process is going on for both the villages relocation District level and state level coordination committee is doing efforts for relocation.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		1. Brochure on SMTR in 8 pages on complete information and 1 for tourist 2. Website	All research related data available on wildlife.odisha.gov.in website. All tourism related information are available in
Publicly available information is general and has limited relevance to management accountability and	Fair	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

the condition of public assets.			www.similipal.org ;	www.similipal.org ;
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good		www.ecotourodisha.com ;	www.ecotourodisha.com ;
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good		www.wildlife.odisha.gov.in www.odishaforest.in 3. YouTube movie on SMTR for 17 minutes, Odisha Wildlife (10-12 min) 4. SMBR movie on alternate livelihood activities.	www.wildlife.odisha.gov.in Major books on flora, flowers, birds, odonates, Orchids, medicinal plants etc. are available in public domain The documentary on Similipal is very good for information dissemination and is available in public domain.

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		1. List of all sites and facilities provided to visitors 2. Brochure on Ecotourism	All the details available www.ecotourodisha.com The SMTR has done good work in development of tourism spots in 3 places on SMTR. There are 3 visitor entry gates. 1 Nature Interpretation centre. Crocodile breeding Centre at Ramtirath. Orchidarium also serving as an attraction for nature tourism. Local communities are involved in nature tourism.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		1. All census reports 2. All management related reports 3. MSTRIPES 4. Human Wildlife Conflict	No permanent vegetation plots Systematic Phase IV Monitoring of Tiger, Copredator and its prey, Muger Census, Bird census, Elephant Census done on annual basis. Fire, health report, mortality report for
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation	Good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

following phase IV guidelines and routine reporting of trends undertaken.			5. Visitor status and revenue generated	Elephant, disease outbreak, monitoring of elephant through Wildlife Odisha App, Modified MSTRIPES called GPS PDA used for patrolling and reports generated as per requirement Human wildlife conflict monitoring through budgetary allocation Immunisation in buffer zone in WTI report Visitors and their activities and revenue generated
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		1. Maintenance Schedule as per TCP para mentioned in CSS PT APO 2. No. of maintenance work as per CSS SBR work 3. Maintenance schedule under CAMPA APO (Refer 3.3 and 3.4) & Comprehensive MAP of SMBR.	Dedicated fund is allocated in APOs for infra/road/equipment/solar/VHF/meadow/ecotourism/saltlick maintenance as per the TCP/CMAP prescription. The funds have been fully utilized in maintenance/ up-gradation of facilities/ infra/ equipments/ meadow/ salt licks. The State Govt. made a norm to distribute the revenue received from ecotourism in following manner: Govt. revenue- 10% EDC/VSS - 10 % Corpus fund at State wildlife tourism cell- 10% Payment of wages to engaged in ecotourism- 30%
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				Recurring maintenance – 10% Infrastructure development- 20% <table border="1"> <thead> <tr> <th>Year</th> <th>Tourists</th> <th>Revenue (Cr)</th> </tr> </thead> <tbody> <tr> <td>2014-15</td> <td>25459</td> <td>3.72</td> </tr> <tr> <td>2015-16</td> <td>30431</td> <td>3.84</td> </tr> <tr> <td>2016-17</td> <td>29130</td> <td>6.83</td> </tr> <tr> <td>2017-18</td> <td>31740</td> <td>11.33</td> </tr> </tbody> </table>	Year	Tourists	Revenue (Cr)	2014-15	25459	3.72	2015-16	30431	3.84	2016-17	29130	6.83	2017-18	31740	11.33
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6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		1. All census reports on last 4 years	Systematic Phase IV Monitoring of Tiger, Co-predator and its prey, Mugger Census, Bird census, Elephant Census done on annual basis. Most of the wildlife populations are on increase like Mugger and Elephant.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		1. Census reports on Tiger for last 4 years	AITE-2014 has only 5 individuals captured, During pre-monsoon Phase-4 exercise a total of 20 unique Tigers including 7 cubs were photo captured from which 1 cub got killed because of mugger attack. In AITE-2018, during 1 st block of Phase-3 Camera Trapping 9 unique tiger captured. Subsequent blocks of camera trapping are still going on.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good	✓		
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

***This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		1. Year-wise threat assessment report 2. Disaster Risk Management Plan. Govt. of Odisha	All the threats identified and threat abatement strategies are in place. Disaster Risk Management Plan prepared by Govt. of Odisha is in place. District Level disaster mitigation meetings are held in every 6 months.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		1. Annual report on Ecotourism revenue 2. Carrying capacity assessment in TCP Ch. 7 on Zone Plan for Ecotourism 3. Ecotourism Guidelines, benefits and mechanism, Govt. of Odisha	Around 0.152 sq km of core area is used for eco-tourism which is around 0.1% of the total notified core area. TCP also have the details of tourism management as per TCP. The State Govt. made a norm to distribute the revenue received from ecotourism in following manner: Govt. revenue- 10% EDC/VSS - 10 % Corpus fund at State wildlife tourism cell- 10% Payment of wages to engaged in ecotourism- 30% Recurring maintenance – 10% Infrastructure development- 20%
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair	✓		
Tourism management plan is good and well monitored.	Good			
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

Year	Tourists	Revenue (Cr)
2014-15	25459	3.72
2015-16	30431	3.84
2016-17	29130	6.83
2017-18	31740	11.33

+ Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		1. Details of FAO Project 2. Details of IGS (Refer 3.5)	1. List of villages covered under Akhand Shikar Prevention and Awareness drive given in Comprehensive Management Action Plan of SMTR BR 2017-18 to 2021-22 2. List of important days celebration 3. List of EDCs involved in Ecotourism and Eco-development 4. List of trainings provided by NGOs/Other Institutes FAO project for Green Agriculture IGS (Indian Grameen Service) project on village relocation The belongingness of the forests and animals among the people can only be reached by visible steps and efforts in transparency. It can be started from involvement of locals in protection, scientific surveys, ecotourism, animal tracking, nature guiding etc. Starting of eco system schools for tribal children can be conceptualized on the lines of water schools.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card⁺

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	45	72.65%
2.	Planning	07	10	70	57.5	
3.	Inputs	05	10	50	32.5	
4.	Process	06	10	60	35	
5.	Outputs	04	10	40	27.5	
6.	Outcomes	05	10	50	35	
Total		32		320	232.5	

⁺*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.*

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	✓	Though no documents were submitted in order to establish the efforts made by the sfd. However, the adaptation to climate change are expected to run havoc to this pristine and unique biodiversity. It is of paramount importance to under take landscape level research and monitoring project for the TR on priority.	
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		Though Information regarding the plantation program in the buffer and corridor areas is not available. The routine drive of plantation during monsoons is the only conscious effort towards sequestration of carbon. It would be essential to identify areas and develop a comprehensive plan of action.	
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6. Amrabad Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1. TCP 2. PowerPoint Presentation by FD 3. Field visit and discussions 4. Research paper by Srinivasulu and Nagulu on Mammalian and Avian Diversity of the Nallamalla Hills in 2002:17(1)	Amrabad Tiger Reserve (ATR) is one of the largest tiger reserve in India covering 2611 km ² area of Nallamalla Forest having finest bamboo forest in parts of Eastern Ghats in Deccan Peninsula, declared as 45 th Tiger Reserve of the country.
Values generally identified but not systematically assessed and monitored.	Fair		5. Research Report by NCBS on long term monitoring of tree communities, biomass and dynamics in 2015-16. 6. Newspaper article in Indian Express 7. A book on Project Tiger including a chapter on Amrabad Tiger Reserve	ATR is rich in its biodiversity, endowed with 353 species of flora (88 families), and faunal diversity includes 80 species of mammals, 303 species of birds, 54 species of reptiles, 20 species of amphibians, 55 species of fishes, 101 species of butterflies, 57 species of moths, 45 species of coleopteran, 30 species of odonata and numerous other forms of insects.
Most values systematically identified, assessed and monitored.	Good		8. State Forest Department website with a page on Amrabad TR http://forests.telangana.gov.in/WildLife/Amrabad.htm	The ATR is running a commendable Ex-situ Conservation Programme of Mouse Deer Reintroduction in collaboration with LACONES, where 8 individuals are kept in enclosure from Sep 2017 and continuous monitoring of the ecology and breeding to release back in the wild.
All values systematically identified, assessed and monitored.	Very good	✓		The landscape supports tropical mixed dry deciduous and moist deciduous forests with dense growth of Bamboo and Grasses, unique of having 4 species of Antelopes - Chinkara, Nilgai, Blackbuck and Four Horned Antelope, unique of having Wolf and Wild dog Association rare in the country, presence of Nilgai in high forest as against the nature of Nilgai which lives in fringe in the country. ATR has catchment value with River Krishna, covering over a distance of 175kms through deep and narrow gorges.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>ATR has rich cultural and heritage value with presence of Saileshwaram, UmaMaheshwaram, Maddimadugu, Akkamahadevi caves Kadilivanam, Mallela theertham.</p> <p>ATR have traditional and cultural value due to presence of large number of tribal communities of Chenchu and Lambadas.</p>
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1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1. TCP 2. PowerPoint presentation by FD 3. Statement showing number of light and heavy vehicle entered in the highway passing ATR 4. Statement showing details of MFP collected from ATR 5. Number of villages/ human settlements and households in core zone of TR	<p>ATR is facing severe anthropogenic pressure due to large number of human settlements inside the core (around 70 villages having population of 63000). These villages pose enormous biotic pressure in the core of ATR, having 90,000 grazing cattle, attempts of poaching & smuggling are also reported. Thousands of migratory cattles also exposed to ATR for grazing during pinch period.</p> <p>Threats, such as invasive species- Lantana, Phoenix passage of National Highway (59km in core and 13km in buffer), Hydroelectric power project, erection of high voltage power lines, heavy pilgrimage tourism etc. The free movement on the National Highway inside ATR lacks proper management measures to reduce the disturbance. The State Government is further planning widening of road which shall become a greater challenge in near future for ATR management.</p> <p>Uncontrolled and illegal fishing activity is a major concern in the back waters of the multipurpose dams which are constructed across the River Krishna at Srisailam and Nagarjunasagar forming large reservoirs within the boundaries of the Tiger Reserve. This is an excellent aquatic habitat for aquatic wildlife, which is highly threatened due to large number of semi permanent fishermen settlements illegally settled and doing fishing inside the core of the</p>
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>tiger reserve. They are also introducing fingerlings of exotic carps etc. thus threatening the population dynamics of indigenous fishes of river Krishna.</p> <p>The value of 75,91,000 NTFP have been collected during 2014-15</p> <p>Although detailed information on threats have been provided, there is no year wise assessment carried out on nature, number and extent of threat.</p>
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***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		1. TCP 2. Number of villages/ human settlements and households in core zone of TR 3. Statement showing details of MFP collected from ATR	ATR is facing severe anthropogenic pressure due to large number of human settlements inside the core (around 70 villages having population of 63000). These villages pose enormous biotic pressure in the core of ATR, having 90,000 grazing cattle, encroachments; attempts of poaching & smuggling are also reported. Large number of NTFP Collection from the ATR. An amount of Rs. 75,91,000 value of the NTFP collected during 2014-15.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		1. Notification of Core and Buffer 2. Notification of TC Foundation 3. Hard copy of TCP 4. Notification of Tripartite MoU 5. Discussions with Field Director	Amrabad have all 4 Statutory requirements except the State level Steering Committee, which is underway. Since no incident of poaching/Tiger Mortality cases, required, SOPS will be followed wherever required.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	✓		

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		1. TCP 2. Meeting with TR Management	The entire ATR i.e., Core and Buffer area is under the unified control of Field Director. The Amrabad Tiger Reserve was recently carved out from NSTR and there is a proposal for coordination meeting in the month of April-2018 with other territorial forest divisions.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)+?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		1. Hard copy of TCP and approved letter from NTCA	TCP has been prepared for 10 years from 2014-15 to 2023-24 and duly approved by NTCA vide F.No. 1-9/2014-NTCA dated 23/2/2015. The plan was prepared before bifurcation of the state. The consultation may happened at NSTR level before bifurcation
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		1. TCP Chap. 7 Para 7.5, 7.6, 7.7 & 7.8 2. PowerPoint presentation by FD 3. List of Manpower working in ATR 4. List of resources	ATR safeguards all threatened rich biodiversity value in Nallamalla Forest. There are set management strategies for protection and preservation of threatened biodiversity in core, buffer and tourism zone. The various measures for safeguarding the
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

			<p>for protection and management of ATR</p> <p>5. Copy of Vehicle Movement Register</p> <p>6. Field visit and interaction with all levels of Staff involved in safeguarding ATR</p>	<p>threatened biodiversity value are:</p> <p>a. Allow natural succession in the habitats</p> <p>b. Maintain wilderness zone to preserve the gene pool</p> <p>c. Protection from fire</p> <p>d. Controlled Grazing</p> <p>e. Grassland Management</p> <p>f. Remove of invasive obnoxious weeds</p> <p>g. Soil and water management activities like Check Dam, percolation tanks, water holes, saucer wells, solar pumps</p> <p>h. Limited experimental research</p> <p>i. improvement of wireless communication facility</p> <p>j. Protection strategies like base camp, strike force, antipoaching squads, intelligence network, restriction on hunting and poaching, River patrolling through river parties.</p> <p>k. Restriction of movement of vehicles from 9pm to 6am and ban on heavy vehicle in day time also.</p> <p>To perform all above activities, a list of approx 100 Staffs working in the ATR and safeguarding natural habitat</p>
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**Remarks need to elaborate on the kind of safeguards and how they work or are intended to work*

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		1. Minutes of the Meeting with District Collector for Planning and Management of ATR 2. Constitution of District level Protection Committee by Principal Secretary	Meetings are conducted with line Departments for planning in some aspects of the ATR
Stakeholders participate in some planning.	Fair			Meeting was conducted with District Collector to review the management and protection planning of ATR
Stakeholders participate in most planning processes.	Good	✓		Meeting was conducted with Principal Secretary and District level protection committee was setup for protection and management planning
Stakeholders routinely and systematically participate in all planning processes.	Very good			The PRA exercise was conducted in the villages living in and around the ATR to involve in planning process Local tribal communities are involves in the protection planning of the ATR

**The result of participation must show in the field and not merely reported as a routine exercise.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		1. TCP- Chapter 7 in Core and Buffer 2. Details of habitat improvement works done under State and CSS funds 3. Map on Water management and Fire management	ATR has pristine natural habitat supporting large number of threatened biodiversity. The TR management is doing various habitat improvement works like maintaining wilderness zone to preserve the gene pool, fire management, control o grazing, fodder plot and grassland management to increase prey base, removal of invasive obnoxious weeds, soil and water management activities like construction of Check Dam, percolation tanks, water holes, saucer wells through installation of solar pumps, provision of natural salt licks etc.
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		1. TCP 2. A detailed writeup on Protection Plan 3. List of and Statement showing location of Base Camps, Strike Force, Checkposts 4. Copies of patrolling Register 5. List of GPS and Torch Lights 6. Statement showing receipts and disposal of Offence cases, Vehicle cases, poaching cases, encroachment cases, 7. Brief writeup on Intelligence Network 8. List of Buildings, vehicles and Equipments 9. List of Staff working 10. Maps on protection strategies, base camps	Considering the extent of threats, the protection strategy is not very effective. The M-STRiPES patrolling not updated with current methodology. The ATR lacks field gears and patrolling equipments, which hampers adequate protection. Considering the vastness of area and types of threats, a total of 23 base camps, 4 strike forces, 254 beats & 3 check posts employed total 141 protection watchers is meager for effective protection of the ATR. The Beat size is 8.52km ² is almost equal to accepted norm 7.5km ² . There is an acute shortage of frontline staff. Out of 367 sanctioned strengths of Range Officer, Section Officer and Beat Officer, only 96 are working and 271 posts are vacant (about 74%). The lack of adequate infrastructure like vehicles and buildings hampering protection activities. There are no
TR has an adhoc PS and SA.	Fair	✓		
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

			<p>etc. 11. Field visit and interaction with protection watchers</p>	<p>Android Phones and no updated GPS for patrolling through M-STripes Application.</p> <p>The rescue and rehabilitation facility, conflict mitigation strategy and veterinary services are lacking and inadequate.</p> <p>There is a Security Plan of ATR but no Security Audit in done.</p> <p>Although 2 river boat with 5 protection watchers working in protection, due to large number of fishermen in the Srisailem reservoir and along the river Krishna, it is vulnerable to the ATR.</p> <p>Restriction of movement of vehicles from 9pm to 6am and ban on heavy vehicle in day time also.</p> <p>Currently, no STPF for protection, but proposal has been given in TCP.</p> <p>There is a Toll Free Number from Control Room round the clock for monitoring illegal timber trade and poaching</p>
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		1. PowerPoint presentation by FD 2. Statement showing human wildlife conflict cases an 3. TCP Core section 5.3	Human Wildlife conflict mostly from crop damage by wild animals. About 70-75% damage caused by Wild Boar. A total of 111 cases of crop damage from 2014-15 to 2017-18 and an amount of Rs. 32.81 lakh have been paid as compensation. Also 4 cases of human death in 2016-17 and 2 cases of human injury in 2016-17 and in 2017-18 have been compensated. An amount of Rs. 2.50 lakh has been paid for each human death.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Field visit and discussions	Amrabad is a erstwhile NSTR, due to which the southern portions contiguous with NSTR, There is no probability in north and east side for corridor, whereas in the western side, Achampet Forest Division is contiguous with Amrabad which can be taken as extended Amrabad. There is no other possibility of corridor connectivity.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		1. Statement of Staff Sanctioned, working and vacant 2. PowePoint Presentation including the deployment of Staff 3. TCP 14.4 para in Core and 16.3 para in Buffer	Amrabad has a total of 526 sanctioned strengths, out of which 172 is working, and 354 are vacant including Administrate Office and field staff. Whereas the Field Staff level includes FRO, DFRO, FSO, FBO have 367 sanctioned strengths, 96 working and 271 vacant. The above Staff deployed for protection in 23 base camps, 4 strike forces, 3 checkpost which includes total 141 protection watchers.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*																																								
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																				
Few, if any, resources explicitly allocated for TR management.	Poor		1. List of Buildings 2. List of Vehicles 3. List of equipments 4. List of items asked under APO 5. TCP	Amrabad has meager resources for protection. ATR has following list of vehicles: Vehicles are under use for the TR by the FROs and DFOs- 14 vehicles Anti-Poaching Squad- 1 Vehicle. Two- wheelers to all the field level staff- 86 River patrolling boats -2 small & 2 bigger A total of 68 buildings as per details given below: <table border="1" data-bbox="1029 621 1318 1129"> <thead> <tr> <th>Structure</th> <th>Core</th> <th>Buffer</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Office</td> <td>11</td> <td>1</td> <td>12</td> </tr> <tr> <td>Residential</td> <td>13</td> <td>1</td> <td>14</td> </tr> <tr> <td>Guest houses</td> <td>5</td> <td>1</td> <td>6</td> </tr> <tr> <td>CBET buildings</td> <td>12</td> <td>-</td> <td>12</td> </tr> <tr> <td>Watch Towers</td> <td>7</td> <td>-</td> <td>7</td> </tr> <tr> <td>Base camps</td> <td>15</td> <td>1</td> <td>16</td> </tr> <tr> <td>EEC building</td> <td>1</td> <td>-</td> <td>1</td> </tr> <tr> <td>Total</td> <td>64</td> <td>4</td> <td>68</td> </tr> </tbody> </table> Other field gears and equipments include: Torch Lights- 21; Mosquito Net, Solar Lights 15, Compass 213, Fire Blowers 2, Boats 4, wireless sets 7, Walkie-talkie 25, Repeater Station 4, Binocular 10, Camera Trap 40 Considering the vastness of area, the resources are minimal in ATR.	Structure	Core	Buffer	Total	Office	11	1	12	Residential	13	1	14	Guest houses	5	1	6	CBET buildings	12	-	12	Watch Towers	7	-	7	Base camps	15	1	16	EEC building	1	-	1	Total	64	4	68
Structure	Core	Buffer			Total																																			
Office	11	1			12																																			
Residential	13	1			14																																			
Guest houses	5	1	6																																					
CBET buildings	12	-	12																																					
Watch Towers	7	-	7																																					
Base camps	15	1	16																																					
EEC building	1	-	1																																					
Total	64	4	68																																					
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair	✓																																						
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good																																							
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good																																							

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		1. Copy of APO 2. Sanction letter of NTCA 3. Utilisation Certificate 4. Audit Report 5. Statement showing yearwise revenue and expenditure of Tiger Conservation Foundation 6. Statement showing the revenue collected in 2016-17 and 2017-18 from community based ecotourism	The Central funds under CSS released by NTCA to ATR according to APR submitted.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		An amount of Rs. 127.54 lakh released and 123.43 lakh utilized in 2016-17 and Rs. 144.40 lakh released in 2017-18 upto December 2017.
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			An amount of Rs. 37.50 lakh is remaining earned from revenue in Tiger Conservation Foundation from last 3 years
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			An amount of Rs. 50.81 lakh revenue earned from Community based ecotourism from April 2016 to March 2017.

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*																																																													
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																																									
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		1. PPT by FD	Amrabad received funds under State Plan and Non Plan Schemes. The details of funds released and expenditure made in 2016-17 and 2017-18 furnished in the table below.																																																									
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓																																																											
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4	IFM	-	-	4.00	-	4.00	-																																																						

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

time and are fully utilized.									Total of Plan:	1,531.43	1,462.01	1,179.02	600.26	2,710.45	2,062.26	
	NON-PLAN SCHEMES															
	1	03-Dist. Officers	4.00	3.60	1.32	1.32	5.32	5.81								
	2	DET	6.00	5.89	-	-	6.00	5.89								
	3	Beedi leaf	4.09	4.09	15.99	11.12	20.08	15.21								
	4	44-Buildings	0.23	-	-	-	0.23	-								
	5	Normal State Plan	7.50	5.84	-	-	7.50	5.84								
	6	04 Sanctuaries	2.13	1.93	-	-	2.13	1.93								
	7	06- Sanctuaries	12.50	12.50	-	-	12.50	12.50								
	Total of Non-Plan		36.45	33.85	17.31	12.44	53.76	47.18								
	Total of Plan & Non-Plan:		1,567.88	1,495.85	1,196.33	612.70	2,764.21	2,109.45								
There is a delay in release of funds by the State from 3 to 5 months.																

+Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		1. PPT by FD 2. Interaction with NGO HyTiCOS	Amrabad received some support from few NGOs, like HyTiCoS is closely associated with the Amrabad Tiger Reserve, helping in baseline prey densities estimation, Phase IV monitoring in the Tiger Reserve, Participation in Wildlife Census, Training to the staff in installation & operation of camera traps. They also extend their services in capacity building of the staff & communities and also in Resettlement Plan. The NGOs like Birdwatchers society of Andhra Pradesh, HyTiCoS, Friends of Snakes visited several times that contributed for compilation of checklist. The WWF India has also assisted in installation of Solar Operated Water Resources, training of the nature guides, archery competition, awareness programmes for Swatch Bharat and wildlife census. NCBS is helping in establishing permanent vegetation plots.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		1. Details of trainings conducted 2. PPT showing abstract of trainings	Staffs getting trainings at Telangana Forest Training Academy. A total of 9 trainings conducted in 2016-17 and 9 trainings in 2017-18. Field Director and Deputy Director trained at Wildlife Institute of India in Advance Diploma Programme. Staff gone some trainings on forest aspects but there is no training programme on wildlife management Staff also lacks basic motivation and field skills like MSTRIPES patrolling.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc . The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		1. List of Awards received at State & District 2. Discussions with TR Management	There is no such regular award reward programme, however some awards given at State and District level. There is a lack of trained and motivated frontline staff, as there is no regular capacity building programme in wildlife management in the State. The awards received are given in the table below:
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

Year	Emp.	Des	Award
2017-18	Mr. Joji	DFO	District level award
2016-17	Mr. Devraj	DRO	State level Haritha Mitra Award
2017-18	Mr. Kasna	FSO	District level award
2017-18	Mr. Swapna	FBO	District level award
2017-18	Mr. Wasavi	FBO	District level award

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		1. List of Stakeholders involved in TR management 2. List of EDCs	The list of contributions given by NGOs mentioned in the above section 3.5
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			Local communities are engaged in protection watchers and ecodevelopment activities. A total of 44 EDCs involved in various activities.
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		Meetings are conducted with line Departments for planning in some aspects of the ATR
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			Meeting was conducted with District Collector to review the management and protection planning of ATR
				Meeting was conducted with Principal Secretary and District level protection committee was setup for protection and management planning
				The PRA exercise was conducted in the villages living in and around the ATR to involve in planning process

**The involvement of NGOs/ NGIs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria					
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks	
Ad-hoc approach to handling complaints.	Poor		1. Copy of visitor register	Two control rooms at Achmpet and Nagarjunsagar Division with toll free no. 7337552030 is effective for handling complaints if any.	
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair				
Coordinated system logs and responds effectively to most complaints.	Good	✓			Visitor registers are also placed at EEC Mannanur.
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good				Although visitor registers are placed at Ecotourism sites for feedback, there is no systematic complaint handling process.

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria																																																							
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																																			
No livelihood issues are addressed by TR management.	Poor		1. Details of NTFP collected 2. PPT by FD includes details of ROFR claimed 3. Details of Title deeds issued under ROFR 4. Report on WWF for Securing livelihood for forest dependent communities 5. Number of mandays generated in last 4 years 6. Details of NTFP collected 7. Details of Haritha Haram Programme	There are 945 Title Deeds issued under RoFR Act 2006 to the beneficiaries in 5 phases.																																																			
Few livelihood issues are addressed by TR management.	Fair			Preferential employment to locals in buffer area of Amrabad Tiger Reserve as Protection watchers, Animal / Tiger trackers, Anti-poaching watchers and fire patrol watchers.																																																			
Substantial livelihood issues are addressed by TR management.	Good	✓		Engaging the local tribals in the habitat management works such as uprootal of obnoxious weeds, formation of view lines, formation of fire lines, nature guides etc.,																																																			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			The value of 75,91,000 NTFP have been collected during 2014-15 Providing assured employment under NREGA. A total of (173) local people are engaged as Protection watchers, Drivers, Nature guides etc., The activities of nursery, soil and water conservation are taken-up under NREGA and also other schemes in TR. The total number of mandays generated in the past three years is (314488) mandays, given below:																																																			
<p>Q. 4.5 (2+3)</p> <p>4.5 (2) Number of mandays generated in the last 4 years by the TR management</p> <table border="1"> <thead> <tr> <th rowspan="2">Sl.No</th> <th rowspan="2">Mandal</th> <th colspan="3">No of Mandays</th> <th rowspan="2">Total</th> </tr> <tr> <th>2014-15</th> <th>2015-16</th> <th>2016-17</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Achampet</td> <td>8368</td> <td>21085</td> <td>12908</td> <td>41742</td> </tr> <tr> <td>2</td> <td>Balmoor</td> <td>10894</td> <td>32182</td> <td>30153</td> <td>73230</td> </tr> <tr> <td>3</td> <td>Kodair</td> <td>10287</td> <td>21831</td> <td>15308</td> <td>47426</td> </tr> <tr> <td>4</td> <td>Kollapur</td> <td>27877</td> <td>9241</td> <td>7121</td> <td>44239</td> </tr> <tr> <td>5</td> <td>Lingal</td> <td>8509</td> <td>29426</td> <td>22927</td> <td>60862</td> </tr> <tr> <td>6</td> <td>Uppunthala</td> <td>11619</td> <td>22167</td> <td>13205</td> <td>46990</td> </tr> <tr> <td colspan="2">Total :</td> <td>77554</td> <td>135931</td> <td>101622</td> <td>314488</td> </tr> </tbody> </table> <p style="text-align: right;">District Forest Officer, Nagarkurnool.</p>					Sl.No	Mandal	No of Mandays			Total	2014-15	2015-16	2016-17	1	Achampet	8368	21085	12908	41742	2	Balmoor	10894	32182	30153	73230	3	Kodair	10287	21831	15308	47426	4	Kollapur	27877	9241	7121	44239	5	Lingal	8509	29426	22927	60862	6	Uppunthala	11619	22167	13205	46990	Total :		77554	135931	101622	314488
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The Govt. of Telangana is running a big massive afforestation programme called Haritha Haram, where local communities are being involved for plantation activities.																																																							

*The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*																																									
Condition	Category *	(Tick ✓)	Reference document(s)	Remarks																																					
No planning and no implementation	Poor		1. TCP 2. Number of villages/ human settlements and households in core zone of TR 3. Meeting with a village 4. Constitution of District level Implementation Committee and State level monitoring committee 5. Brief note on status of relocation of villages in Amrabad TR	ATR is facing severe anthropogenic pressure due to large number of human settlements inside the core (around 70 villages having population of 63000).																																					
Plans have been made but no implementation	Fair	✓		The 10 villages are proposed to relocate in first phase. State level Monitoring Committee and District level Implementation Committee is in place facilitation of relocation process of the villages.																																					
Plans have been made and some implementation is in progress	Good			Since the ATR has the heavy forest dependent communities in the core and buffer; there is a need to study the willingness for relocation of the villages. After the study, the relocation process needs to be taken on priority basis to make the core inviolate from human pressure.																																					
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			Currently two villages 'Kudichentalabailu' and 'Saralapali' are ready to move and exposure visit has also been made by HyTiCOS (an NGO) to Tadoba TR. If these villages are relocated, the big inviolate area will be available for free tiger movement.																																					
				Therefore, it is recommended that these two villages should be relocated at the earliest for creating at least some area as inviolate for tigers and other animals. The abstract of these 2 villages are given in table below:																																					
<table border="1"> <thead> <tr> <th rowspan="2">Sl.No</th> <th rowspan="2">Name of the village</th> <th rowspan="2">Total No of Family members</th> <th rowspan="2">Above 18 years</th> <th rowspan="2">Total</th> <th colspan="2">Will to go by</th> <th rowspan="2">Amount Required (as per NTCA Rs 10.00 Lakhs / person) (Rs in Crore)</th> </tr> <tr> <th>Taking cash</th> <th>Land / proper settlement</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Sarlapally</td> <td>102</td> <td>19</td> <td>121</td> <td>10</td> <td>111</td> <td>12.10</td> </tr> <tr> <td>2</td> <td>Kudichintalabailu</td> <td>92</td> <td>33</td> <td>125</td> <td>10</td> <td>115</td> <td>12.50</td> </tr> <tr> <td colspan="2">Total :</td> <td>194</td> <td>52</td> <td>246</td> <td>20</td> <td>226</td> <td>24.60</td> </tr> </tbody> </table>								Sl.No	Name of the village	Total No of Family members	Above 18 years	Total	Will to go by		Amount Required (as per NTCA Rs 10.00 Lakhs / person) (Rs in Crore)	Taking cash	Land / proper settlement	1	Sarlapally	102	19	121	10	111	12.10	2	Kudichintalabailu	92	33	125	10	115	12.50	Total :		194	52	246	20	226	24.60
Sl.No	Name of the village	Total No of Family members	Above 18 years	Total	Will to go by		Amount Required (as per NTCA Rs 10.00 Lakhs / person) (Rs in Crore)																																		
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*Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		1. TCP 2. PowerPoint Presentation by FD 3. Field visit and discussions 4. Research paper by Srinivasulu and Nagulu on Mammalian and Avian Diversity of the Nallamalla Hills in 2002:17(1) 5. Research Report by NCBS on long term monitoring of tree communities, biomass and dynamics in 2015-16. 6. Various media reports 7. A book on Project Tiger including a chapter on Amrabad Tiger Reserve 8. State Forest Department website with a page on Amrabad TR http://forests.telangana.gov.in/WildLife/Amrabad.htm 9. State Govt. management Information website www.tgfmis.com	General Information on tiger reserve is available in website http://forests.telangana.gov.in/WildLife/Amrabad.htm , and EEC Mannanur. Several Brochures, Pamphlets, and signages also provide information on the tiger reserve. Management related information is available in public domain through State Govt. management Information website www.tgfmis.com
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		Detailed assessment reports are available with TR management but not in public domain.
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		1. TCP 2. PPT by FD 3. List of Facilities for Visitors 4. Awareness programme for School children's. 5. Field visits to visitor facilities	Following facilities are available for visitors to ATR: a. Hoardings at Important locations showing the importance of Wildlife conservation. b. EEC at Mannanur. c. Camping facilities at Mannanur & Domalapenta. d. Assistance of nature guides to the visitors. e. Awareness programs for children of Govt. schools "TIGER CALLING". The transport and food facilities are arranged to the children by the Department – Facilitated by CONARE NGO f. Documentaries, Trekking Routes, view points, Tiger Safaries are available for visitors Although the facilities are provided for visitors but not sufficient and mostly under developing stage.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

*Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*																																		
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																														
Little or no systematic evaluation or routine reporting of trends.	Poor		1. Details on estimation of important wildlife population conducted by ATR	Research monitoring trends are available upto 2013 before bifurcation with NSTR.																														
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair		2. Report on planning and management of Phase –IV estimation	As per previous records , the total herbivore population in ATR are as: Chital- 7473, Sambar-3888, Chinkara-635, Chousingha- 908, Nilgai-2807, Wild Boar-9462 and Blackbuck 3000.																														
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good	✓	3. TCP	All India Tiger Monitoring on Annual Basis is done regularly as per following standard protocols: a. Sampling for Tiger, leopard and other carnivore sign survey and Encounter Rate estimation b. Direct and Indirect Sampling for Ungulate Encounter Rate c. Sampling for Vegetation, Human Disturbance & Ungulate Pellets																														
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good		4. PowerPoint Presentation by FD 5. Research paper by Srinivasulu and Nagulu on Mammalian and Avian Diversity of the Nallamalla Hills in 2002:17(1) 6. Research Report by NCBS on long term monitoring of tree communities, biomass and dynamics in 2015-16. 7. Various media reports 8. A book on Project Tiger including a chapter on Amrabad Tiger Reserve	The current data is available on prey, predator during this years phase IV monitoring only . The wildlife census figures for some prey population in Phase IV are: Sambar 92, Chital 69, Chousingha 25, Nilgai 19, Wild Pig17, Sloth Bear 8, Chinkara 7, Langur 83 and Rhesus Macaque 9. The research related trend on carrying capacity of tiger includes: Preferred prey biomass= 556.2(+_192.6) Kg/sqkm; Predicted Tiger Density= 6.42+ _1.005/100sqkm (5-7); Current tiger density= 1.50 +_0.27/100sqkm The numbers of tiger in previous years are: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Year</th> <th>Tiger</th> </tr> </thead> <tbody> <tr><td>1999</td><td>51</td></tr> <tr><td>2001</td><td>58</td></tr> <tr><td>2002</td><td>59</td></tr> <tr><td>2003</td><td>64</td></tr> <tr><td>2004</td><td>70</td></tr> <tr><td>2005</td><td>70</td></tr> <tr><td>2006</td><td>107</td></tr> <tr><td>2007</td><td>65</td></tr> <tr><td>2008</td><td>76</td></tr> <tr><td>2009</td><td>85</td></tr> <tr><td>2010</td><td>60</td></tr> <tr><td>2011</td><td>85</td></tr> <tr><td>2012</td><td>72</td></tr> <tr><td>2013</td><td>65</td></tr> </tbody> </table> The ATR is running a commendable Ex-situ Conservation Programme of Mouse Deer Reintroduction in collaboration with LACONES, where 8 individuals are kept in enclosure from Sep 2017 and continuous monitoring of the ecology and breeding to release back in the wild.	Year	Tiger	1999	51	2001	58	2002	59	2003	64	2004	70	2005	70	2006	107	2007	65	2008	76	2009	85	2010	60	2011	85	2012	72	2013	65
Year	Tiger																																	
1999	51																																	
2001	58																																	
2002	59																																	
2003	64																																	
2004	70																																	
2005	70																																	
2006	107																																	
2007	65																																	
2008	76																																	
2009	85																																	
2010	60																																	
2011	85																																	
2012	72																																	
2013	65																																	

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		1. List of vehicles and their maintenance required	There is no specific schedule for maintenance, however occasional repairing of items made. Also there is no specific budget schedule for maintenance.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		1. Research reports given in Section 5.3 2. Discussions with TR Management 3. PPT by FD	As per the records available, the population of Chinkara is increasing. There are 98 pugmarks recorded for leopard in 254 beats of ATR during All India Tiger Monitoring 2018. There is a census data available on most of the threatened species population as per previous assessments. Since, there is no such study made in recent years, the trend is not available. The prey densities of some animals are: Ungulates- 5.46/km ² , Cervids-4.78/km ² , Chital-1.84/km ² , Sambar 3.34/km ² The ATR is running a commendable Ex-situ Conservation Programme of Mouse Deer Reintroduction in collaboration with LACONES, where 8 individuals are kept in enclosure from Sep 2017 and continuous monitoring of the ecology and breeding to release back in the wild.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good	✓		

*This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		1. Research reports given in Section 5.3 2. Discussions with TR Management 3. PPT by FD	For Tigers also, there is no trend is available from recent years. Only yearwise trend available along with NSTR upto 2013, when 65 tigers was recorded. During All India Tiger Monitoring 2018, 17 Tiger Pugmarks are recorded in 254 beats of ATR. As per the last census the Tiger population in the Amrabad Tiger Reserve is 15 numbers found mostly in Farhabad plateau of Achampet division. The research related trend on carrying capacity of tiger includes: Preferred prey biomass= 556.2(+_192.6) Kg/sqkm; Predicted Tiger Density= 6.42+_1.005/100sqkm (5-7); Current tiger density= 1.50 +_0.27/100sqkm
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good	✓		
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		1. PPT by FD	Overall due to various management strategies, the threats are by and large reduced to certain extent. Some management interventions are: <ul style="list-style-type: none"> • Improvement in Forest Protection – Reduction in destruction of forests for timber & Encroachments. • Improvement in fodder availability. • Improvement in providing adequate water resources. • Increase in Prey base. • Improvement in communication facilities – Wireless network etc. • Decline in threats in the Tiger Reserve mainly encroachments, water scarcity, fire & road kills. • Awareness among the local people and participation in the management of Amrabad Tiger Reserve. • Increase in awareness of the nature eco system
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>due to eco-friendly & eco-tourism activities.</p> <ul style="list-style-type: none"> • Decrease in poaching activity. • Regulation of traffic from 9.00 P.M to 6.00 A.M at the entry points of roads • passing through Amrabad Tiger Reserve by establishing & strengthening of check posts • Man-Animal Conflict reduced with prompt payment of compensation. • Capacity building of the staff & communities in Wildlife Conservation & Management of TR <p>ATR being a centre for resource for various stakeholder departments, especially hydroelectric and Integrated Tribal Development Agency (ITDA), migrated fishing community, and other excessive resource users, there is every possibility for conflicts between the conservation interests, individual interests/the non-compatible developments.</p>
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***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		1. Copy of Tourism Plan 2. Copy of Posters, Brochures, Booklets 3. TCP	The ATR has a tourism plan as per NTCA guidelines to control and manage the tourists. The report includes the evaluation of carrying capacity of tourism. Out of 2166.37km ² area, only 93.90km ² is open for tourist which constitutes only 4.30% of the total area However due to bifurcation of this TR from NSTR, the tourism management is in nascent stage. New Tourist sites are being developed.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good			
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good	✓		

+Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Meeting with local communities	The local communities of the ATR include Tribal communities from Chenchu and Lambadas and other non-tribal communities. The tribal communities are getting all benefits from Forest Department as per the ROFR and also support from Tribal Board ITDA hence supportive to the management.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				The other communities which are non tribal are not very supportive but also not hostile. Some villages have also shown their interest in voluntary relocation.
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**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card⁺

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	40	72
2.	Planning	07	10	70	47.5	
3.	Inputs	05	10	50	27.5	
4.	Process	06	10	60	40	
5.	Outputs	04	10	40	27.5	
6.	Outcomes	05	10	50	45	
Total		32		320	227.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		Indirect efforts such as routine withdrawal of invasive species is helping to mitigate degradation. No visible planning is in place to consciously take steps towards adaptive management of habitat.	Some serious planning needs to be done to control the invasive alien species like Phoenix as under growth. The aquatic habitat of Krishna river is to be made inviolate for protection of indigenous fish and turtles.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		Sporadic attempts of habitat improvement in some places can be construed as directed towards carbon sequestration.	
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good	✓		
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

7. Kawal Tiger Reserve, Telangana

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1. TCP 2013-14 to 2022-23 2. PPT 3. M.Sc. Dissertation by Imran on assessment of prey, 2010 4. Maps on water bodies, connectivity maps, movement of tiger 5. Research paper by Murthy et. al. 2010 on Plants used by Gond Tribes 6. Reports on population estimation of prey base year-wise 7. Ph.D. on Floral diversity estimation of Adilabad Dist. Including Kawal TR, 2010-11 by A.N. Murthy 8. Research Paper by Murthy 2012 on Ethno medicinal Plants used by Gond Tribes	The KTR notified in 2012 is a very important TR in Deccan Peninsula supporting rich and threatened floral and faunal diversity. Although KTR has no resident Tiger population, it has very strong potential in sustaining tiger population if reintroduced. The geomorphological diversity enumerated well in TCP through two big Rivers Godavari and Paranhita. The cultural diversity also very well documented in TCP by Gond and Nayakpod Tribes. However, the documentation of flora and fauna has not been updated since 2012 after the notification of KTR
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

*Values would also include the agro-morphological, historic-cultural, floral and faunal species.

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1. TCP 2013-14 to 2022-23 2. Map of weed removal 2017-18 3. Field Visit 4. Patrolling Registers 5. TGFMS website 6. Year-wise threat assessment report	The KTR has recorded all major threats in TCP such as Traditional hunter societies, Timber Smuggling, Invasion of habitat by weeds due to 37 villages inside the core heavy pressure of cattle grazing; only Myssempet Village alone has 600 cattle. Large population of human being and cattle in the buffer zone, Electrification of villages and passage of power lines, Local and temporary migration of wild animals from the water scarcity area, The state Highway passing through PA, Poaching by local people for meat, Forest encroachment of the habitat, Annual Fire, Heavy Dependency on forest resource, mining activity and industries, Impacts of Climate Change.
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>KTR and its buffer are likely to be fragmented as there is high pressure due to infrastructure development especially after the separation of the Telangana State. 40km State highway is in the core of TR & other roads in the buffer with planning for further widening of these roads.</p> <p>There is a railway track between Kaghaznagar and Chandrapur passing through Vempally, Sirpur, Makidi, Cheelapally beats of corridor area where 3 to 4 Tiger were killed in the past.</p> <p>Another important threat will likely occur in future due to expansion of drinking water pipeline under Mission 'Bhaghiratha' in all along the TR and adjoining areas.</p>
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**This assessment should be based on number, nature and extent of threats*

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		1. TCP 2013-14 to 2022-23 2. Village Relocation Plan for 2 Villages in Nirmal District	The KTR is not free from human and biotic pressure due to 37 villages located inside the Core. Only 2 villages Rampur, Myssempet are ready to move within 3 months, other villages Malyal, Gangapalli and Alinagar will be also shifted within six months. 40km State highway and railway track through the core also cause lot of disturbance to the animals.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

**This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		1. Gazette Notification of Core and Buffer Areas 2012 2. Notification of Tiger Conservation Foundation in 2015 3. TCP 2013-14 to 2022-23 4. G.O. of State-level Steering Committee under the Chairmanship of the Chief Minister in 2015. 5. Discussed SOPs	The KTR is complied with all four Statutory Requirements. The gazette notifications of Core and Buffer is available and notification of Tiger Foundation also in place, however only meager funds in Foundation. State level Steering Committee constituted but no meeting held so far. With reference to 7 SOPs, 6 are applicable and implemented in the field (except SOP V).
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair	✓		
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

*Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		1. Letter from PCCF 2. Meeting with Territorial Division 3. Discussions with FD	Although Core is under unified control of Field Director of KTR, but after the reorganization of the districts two buffer divisions of KTR i.e. Asifabad and Utnoor are not under the unified control of the FD KTR since October 2017. Also the Field Director has extra charge of the Corridor area of Kagaznagar division of Mancherial District.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair	✓		
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)+?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		1. TCP 2013-14 to 2022-23 2. Gram Sabha Resolution as NOC by local communities for TCP preparation	The KTR has a scientifically approved TCP for the duration 2013-14 to 2022-23 from 2014 Although NOC has been signed with Gram Sabha for the preparation of TCP by involving local communities however the consultation for management aspects have not been done with local Communities.
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

**The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.*

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		1. TCP 2013-14 to 2022-23 2. Statement showing installation of wireless networks at 14 checkposts 3. Statement showing existing base camps and strike forces 4. Heavy Vehicle movement Register 6. Patrolling Data 7. Statement showing the Staff Position	All threatened biodiversity values have been safeguarded by protection measures. In the total area of KTR of 2015.44 km ² , there are 39 base camps (each base camp covering 52 km ²), 14 wireless networks at check posts, 10 Strike Forces, 14 Check posts, 30 Check gates / Barriers, 4 Anti-poaching Squads, 17 Watch Towers, 1 Anti-poaching Division headed by ACF Nirmal. A total of 373 Staffs working for safeguarding.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

**Remarks need to elaborate on the kind of safeguards and how they work or are intended to work*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor	✓	1. Minutes of the Stakeholders meeting conducted at district level including the list of Stakeholders	The KTR management conducted several meetings with all relevant stakeholders for village relocation; however, there is no systematic involvement of stakeholders in KTR Management. Recently in Nov 2017, stakeholder meeting was conducted in all 4 districts for planning processes.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		1. TCP 2013-14 to 2022-23 2. Maps of Habitat management like weed management 3. Online documentation of water holes in TGFMS website 4. Field visit to Corridor	KTR management has made efforts in Habitat management programmes for Gaur, Sambar, Chowsingha, Chinkara, Blackbuck species. The Grassland management made for fodder plot development for herbivores, where grass species have been planted like <i>Hemata sp.</i> , <i>Cenchrus ciliaris</i> , <i>Pennisetum pedicellatum</i> , <i>Cynodon dactylon</i> . Successful weed management has been done for <i>Casia tora</i> , <i>Hyptis suaveolensis</i> , <i>Parthenium</i> , <i>Eupatorium</i> . The KTR management is doing good efforts in watershed management and water holes creation as per water augmentation module in Telangana Forest Management Information System (TGFMS). Additionally habitats in corridor are also being managed by State Funds in Kagaznagar and Chimur Territorial Division.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

*This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as *Lantana sp.*, *Mikania sp.* etc. would be examined.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		1. TCP 2013-14 to 2022-23 2. Dist. Specific strategic protection plan 3. Statement showing installation of wireless networks at 14 checkpoints 4. Statement showing existing base camps and strike forces 5. Vehicle movement Register 6. Patrolling Data 7. Statement showing the Staff Position 8. Online database of all offenses and protection in www.tgfmis.com	KTR has effective protection strategy in 2015.44 km ² area as KTR Circle in 4 districts, 4 divisions in core and 5 divisions in buffer, 9 Ranges in core, 8 ranges in buffer, 46 sections in core, 36 sections in buffer, 160 beats in core and 119 beats in buffer. For protection of total area, 373 staffs are working in 39 base camps (each base camp covering 52 km ²) with 14 wireless networks at checkpoints, 10 Strike Forces, 14 Checkposts, 30 Checkgates/Barriers, 4 Anti-poaching Squads, 2 Watch Towers, 1 Antipoaching Division headed by ACF Nirmal. STPF has also been constituted and approved by NTCA and is pending with State Govt. There are 31 cases of offenses reported during past 3 years. Protection systems in place, however, protection strategies need to be developed further with guidance and support from senior cadres of the State. It is oriented more towards controlling illicit felling and smuggling of timber, however there is a need to focus towards curbing of illegal wildlife crime.
TR has an adhoc PS and SA.	Fair	✓		
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		1. State showing Wildlife compensation made	There are 49 cases of cattle kill, 159 cases of crop damage, 11 cases of human injury and 6 cases of human death and all have been compensated during last 4 years. On an average compensation made within one month of the conflict. Conflict prone areas have been identified and measures have been attempted to minimize it. No veterinary Officer is in place however District Veterinary officer is supporting veterinary cases.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		1. TCP 2013-14 to 2022-23 2. Corridor Report of WII 2015 3. Meeting and field visit with Territorial Staff working in Corridors	TR integrated into wider ecological network and is a part of Deccan Peninsula. The Corridor connecting Tipeswar WLS, Tadoba-Andhari TR and Chaprala WLS (Maharashtra) in the north and Indravati TR (Chhattisgarh) in the East. However no efforts have been made for smart green infrastructure due to lack of mainstreaming and crisis of funds.
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		1. Statement showing list of staff position i.e. sanctioned, working and vacant	The KTR has the total Sanctioned Posts is 857, out of which 373 is working posts and 484 is vacant. The major vacant posts are of Forest Beat Officer (FBO) i.e. 429 which is going to fill quickly because the recruitment process will be completed very soon. These vacancies have been arisen due to reorganization of Forest Department in the State from October 2016 and the Beat Officer jurisdiction also revised.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		1. List of Vehicles, equipments and buildings 2. List and place of Watch Towers 3. List of wireless sets 4. TCP 2013-14 to 2022-23 5. TGFMS website	The KTR management has available resources in some aspects but more resources are required in terms of GPS, Fire Blowers, Patrolling Gears, Arms etc. Wireless sets are being installed for those base camps which do not have communication network and 17 Watch Towers have been constructed in strategic locations to combat illicit felling, controlling the forest fires etc. 250 Camera Traps have been installed and more camera traps are being planned to be installed. Equipments like, Torch lights, mosquito nets, solar charged lights seen during the field visit.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

+ These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*																																	
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																													
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		1. Statement of expenditure, sanctioned and released by NTCA for the last 3 years 2. Discussion with KTR Management	The KTR management receives adequate funds by Union Government with a delay of 6 to 8 months. This delay is mainly due to the State Government passing them down to the field. Hence no booking is reflected, though expenditure is made.																													
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓																															
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good																																
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good																																
				<table border="1"> <thead> <tr> <th colspan="2">2015-16</th> <th colspan="2">2016-17</th> <th colspan="2">2017-18 (Upto Nov, 2017)</th> <th colspan="2">Total (in Lakhs)</th> </tr> <tr> <th>Releases</th> <th>Exp</th> <th>Releases</th> <th>Exp</th> <th>Releases</th> <th>Exp</th> <th>Releases</th> <th>Exp</th> </tr> </thead> <tbody> <tr> <td>149.11</td> <td>121.542</td> <td>187.33</td> <td>187.33</td> <td>303.10</td> <td>0</td> <td>639.55</td> <td>308.872</td> </tr> </tbody> </table>						2015-16		2016-17		2017-18 (Upto Nov, 2017)		Total (in Lakhs)		Releases	Exp	Releases	Exp	Releases	Exp	Releases	Exp	149.11	121.542	187.33	187.33	303.10	0	639.55	308.872
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*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		1. Statement of funds sanctioned and utilized by State Government for 3 years	The KTR Management is receiving adequate funds from State Government under CAMPA scheme every year. Year wise releases
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.*

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		1. Discussion with KTR Management 2. Discussion with HyTiCOS Staff 3. NGO Contribution reports, documents provided by HyTiCOS	There are not many NGOs supporting to KTR, however the supports provided by NGO HyTiCOS (in collaboration with WCS, India) is sufficient for TR management objectives. The HyTiCOS is supporting KTR Management by following ways: 1. Capacity building workshops 2. Awareness programmes 3. Tiger and prey monitoring 4. Motivating villagers for relocation 5. Socio-economic surveys 6. Research programmes 7. Dependence on forest resources, surveys 8. Alternative livelihoods 9. Advocacy Tata Institute of Social Sciences (TISS) is doing Research on socio-economic aspects and survey on human wildlife conflict, and their learning's, help in management practices of KTR
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		1. Statement showing list of staff trained in Wildlife Management	The KTR has most of the Officers trained in wildlife management and forestry. The FDO-Jannaram, DFO-Mancherial, FDO-Kagaznagar & Forest Range Officer- Penchikalpet are trained in Wildlife Management at WII Dehradun. Two FSOs of Jannaram Division done one week course in Wildlife Management at WII Dehradun. Trainings in Wildlife management are being imparted to frontline staff regularly at TSFA Dulapalli, Hyderabad. Periodic trainings provided by the TR management to the frontline staff on Phase – IV monitoring. A total of 56 staffs trained between 2014–17 at Telangana State Forest Academy (TSFA). Hyderabad and year-wise details are as give below: 2104 - 6 staff trained 2015 – 26 staff trained 2016 – 11 staff trained 2017 – 13 staff trained
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc . The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		1. List of Staff awarded and rewarded between 2014–17	The awards and rewards at 3 levels- state, district and division levels, linked with the staff management performance. But lot more is required in terms of senior managerial support and guidance in wildlife matters to raise the understanding and motivational level of field staff.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		1. Minutes of the HRC meeting 2. GO and abstract 3. Actionable points under the functions noted in the GO. 4. List of EDCs, activities conducted and details of funds	In a World Bank Project in 2010, VSS have been made, which are now converted into 63 EDCs by KTR Management. These EDCs are not fully functional and have little participation in wildlife management. 217 Haritha Rakshana Committee (HRC) have been formed, under the Telangana Ku Haritha Haram, flagship programme of the state Govt. and so far 222 meetings conducted. The committee members act as the green brigades towards protection of plants. The HRC programme is meant for plantation in entire State of Telangana. Local tribal youth (271) have been engaged as base camp watchers, strike force members and at check posts, to assist in TR protection HyTiCOS a local NGO contributed in wildlife census with the involvement of local communities.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGIs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		1. Register placed in EEC	There is no specific complaint management register or system in place, however one control room with the Toll free No. 18004250058 for receiving the complaints on illegal timber collection, is under operation at Jannaram. A visitor register is placed at EEC Jannaram for visitor feedback. There is no active website and no complaint box is in place.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	✓		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		1. List of activities, mandays generated, funds released	The KTR management involves 271 local people as Protection watchers and Animal Trackers. The total number of mandays generated in the past four years is 307008. The activities of nursery and raising of plantations are taken up under NREGA and also other schemes in the Buffer area of Tiger Reserve duly involving women. The soil and moisture conservation works are also taken up under NREGA. With the involvement of local communities, activities like weed removal and fire control have been done under CAMPA, NREGA, CSS PT.
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		1. TCP 2013-14 to 2022-23 2. Village Relocation Plan for 2 Villages in Nirmal District	The core of the KTR has 37 villages. Out of this 11 villages have been identified for relocation. Proposals have been submitted in 1 st Phase for two villages namely Maisampet & Rampur with 14 Crores and sent to NTCA. Planning is also being made for other 3 villages with active involvement of HyTiCoS, a local NGO.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5. Output

5.1 *Is adequate information on TR management publicly available?*

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		1. Brochures 2. Postures 3. State Website, 4. TGFMS Website,	The KTR has no separate website but information's on management aspects are available in TGFMS. Also some information is available in State Forest Department Website on KTR.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 *Are visitor services and facilities appropriate and adequate?*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		1. Visitor Register 2. EEC	The KTR Management identified Safari Routes or Jungle Trails for Safari Vehicles, foot trekking areas and some bird watching trails. There is an interpretation centre i.e. Environmental Education Centre (EEC) at Jannaram. The Tourism department has also developed facilities for visitors to stay at Jannaram and Kaddam ranges. There are 3 Safari Vehicles (1 KTR, 2 Tourism) and 17 watch towers for tourists. There are no dustbins in field, no field guide for tourists.
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		1. Year wise Research Monitoring Reports	The research on documentation of flora and fauna has not been updated since 2012 after the notification of KTR. However, All India Tiger Monitoring has been done on annual basis regularly as per the standardized Protocol for Tiger, Leopard, Other Carnivores, Ungulates, Vegetation, and Human Disturbance. During 2014-15 the Phase-III monitoring has been done using camera traps with the help of Wildlife Institute of India. During 2015-16, 2016-17 Phase-IV monitoring has been done by using camera traps with the help of NGOs. M-Stripes training have been completed and soon going to implemented
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		1. Maintenance Schedule	The KTR has a systematic schedule of Monthly, Quarterly and Yearly schedule for maintenance of assets and funds are available
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6. Outcomes

6.1 **Are populations of threatened species declining, stable or increasing?**

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		1. Comparative assessment report for last 4 years for populations of threatened species	The populations of the threatened species i.e. Indian Guar, Four Horned Antelope, Chinkara & Black Bucks are increasing.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

*This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.

6.2 **Is the population of tigers showing a declining, stable or increasing trend?**

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		1. Camera Trap pictures 2. Tiger Census Report	Earlier no tiger was reported, however, 2 Tigers are currently moving in core and buffer of the KTR and 4 are in Corridors from 2016 in Chimur and Kagaznagar Divisions.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good	✓		
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

*This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.

6.3 **Have the threats* to the TR being reduced/ minimized? Or is there an increase?**

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		1. Year-wise threat assessment report 2. Discussion with TR Management	Due to the strengthening of protection measures, patrolling strategies and other enforcement measures, the threats are minimized. However, high pressure still exists especially after the separation of the Telangana State from Andhra Pradesh in terms of infrastructure development, linear roads, highways, railway tracks, industrial establishments and expansion of drinking water pipeline etc.
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

*Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		1. Eco-tourism plan under TCP 2013-14 to 2022-23	Since minimal tourism, no requirement of tourism carrying capacity estimation. The KTR Management is doing tourism in only to the tourism zone. Out of the 892.23 Sq.km area of the Core, 132 Sq.km areas are open for tourism, which is 14.79% of the park area. The eco-tourism plan is prepared as per the NTCA guidelines. At present, tourists are being taken into forest by (3) Jungle Safari Vehicles.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair	✓		
Tourism management plan is good and well monitored.	Good			
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

+ Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		1. Discussion with local communities 2. Discussion with TR Management	Some local communities are supportive due to engaging them in base camps for protection and other management activities. Due to the enforcement measure taken by the Forest Department to stop illegal Timber collection, few local communities are anti to the forest department.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	30	60.15%
2.	Planning	07	10	70	42.5	
3.	Inputs	05	10	50	30	
4.	Process	06	10	60	37.5	
5.	Outputs	04	10	40	22.5	
6.	Outcomes	05	10	50	30	
Total		32		320	192.5	

*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	✓	Haritha Haram flagship programme, under which Lakhs of seedlings planted in KTR to fulfill the 33% mandate of green cover of Central Govt.	Climate adaptation requires a preparedness of the habitat to withstand stressors of climate change. A plan should be drawn in consultation with experts.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓	Plantations made to increase carbon capture in KTR	Biomass studies should be initiated, followed by requisite interventions.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

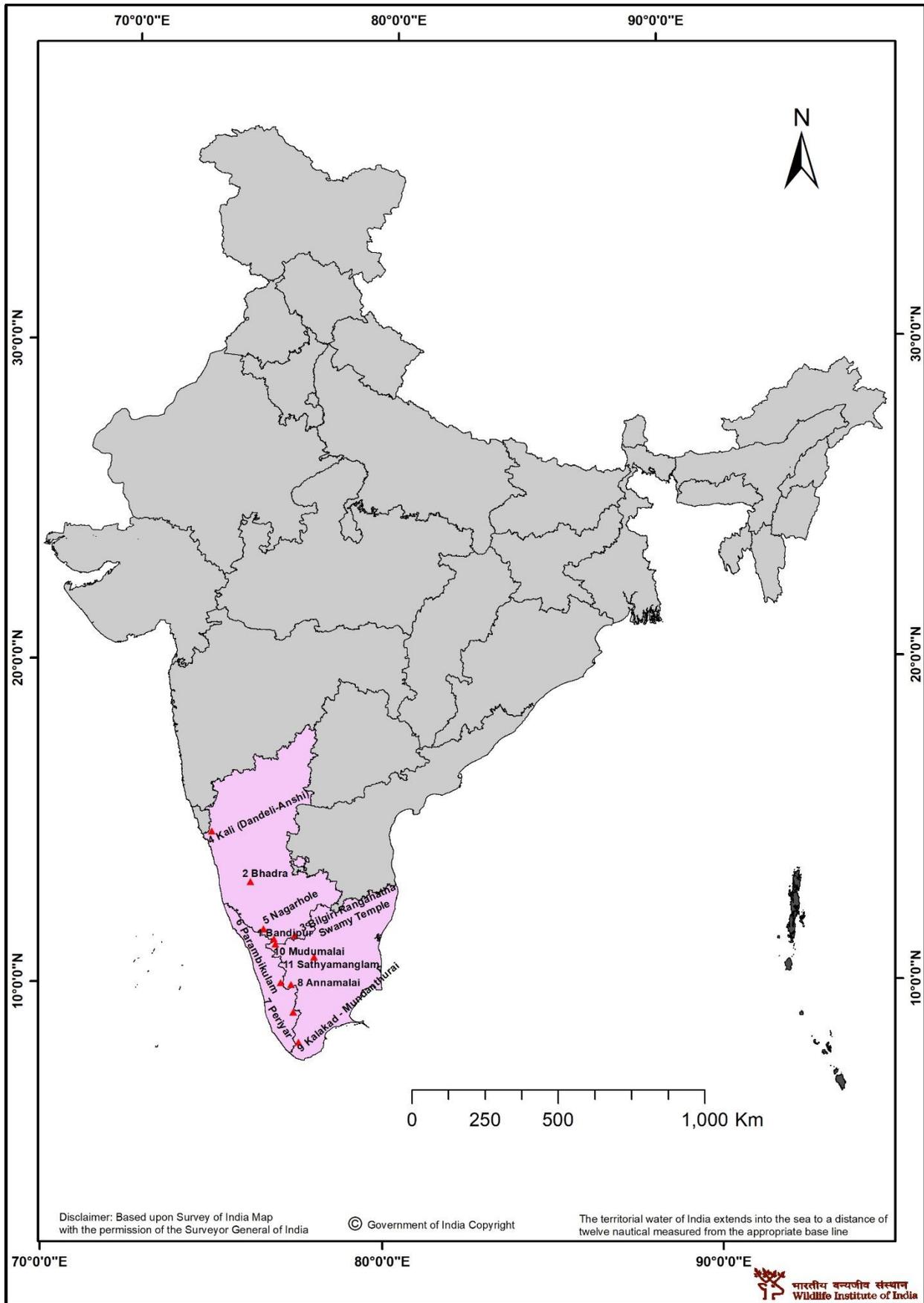
CLUSTER FOUR

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

::520::

List of Tiger Reserves included in Cluster Four

1. Bandipur Tiger Reserve, Karnataka	523
2. Bhadra Tiger Reserve, Karnataka	537
3. Biligiri Ranganatha Swamy Temple (BRT) Tiger Reserve, Karnataka	553
4. Kali (Dandeli-Anshi) Tiger Reserve, Karnataka	570
5. Nagarhole Tiger Reserve, Karnataka	592
6. Parambikulam Tiger Reserve, Kerala	608
7. Periyar Tiger Reserve, Kerala	636
8. Annamalai Tiger Reserve, Tamil Nadu	662
9. Kalakad-Mundanthurai (KMTR) Tiger Reserve, Tamil Nadu	690
10. Mudumalai Tiger Reserve, Tamil Nadu	710
11. Sathyamanglam Tiger Reserve, Tamil Nadu	728



* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1. Bandipur Tiger reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		TCP	Yes. Bandipur TR is a part of the larger ecological landscape of WesternGhat. Values of this TR is very well documented, assessed and monitored. Bandipur TR is flanked by Satyamangalam TR of Tamilnadu to its East, Nagarhole TR of Karnatak towards north west, Mudumulai TR of Tamilnadu to its south and KeralasWyned wildlife sanctuary to its south west. These four protected areas constitute part of the Nilgiri Biosphere Reserve, which is said to be the best stretch of habitat for the tiger and Asiatic elephant. This provides a best possible landscape and elephant movement corridor. The values identified and document for Bandipur TR are; (i)Economic, (ii)Ecological/Biological, (iii)Educational and Recreational(iv)Scientific(v)Cultural, (vi)Religious, (vii) Historical etc.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

Categories of values in the tiger Reserve

Sl. No.	Value categories	Remarks
1	Economic	a)Part of the catchment areas of the River Kabini, Nugu&Moyar. b)Generates employment and revenue through Eco-tourism. c)Agricultural productivity in the Buffer Zone, due to water source.
2	Ecological Biological processes	a)Part of Bandipur-Nagarhole-Mudumalai-Wayanad Tiger landscape, home to the largest breeding population of Wild Tigers in the world. b)Vital link between the Nagarhole Tiger Reserve and the Sathyamangalam Tiger Reserve. c)Constituent of Nilgiri Biosphere Reserve (5550 sqkm.) connecting the Western with the Eastern Ghats and having a unique bio-diversity of the flora and the fauna. d)An important catchment area for the major rivers like Kabini, Nugu, kannegala, and Moyar. e)Presence of Dry Thorn Scrub Forests, having high Carbon-Sequestration Value. f)Co-existence of Sympatric carnivores-Tiger, Leopard and the Wild Dog (Dholes). g)Largest congregation of Asiatic Elephants in the world at Kabini back-water during summer. h)Intact assemblage of the Seven large Ungulates. i)Presence of rare and endangered species like Four horned Antelope (Chowsinga). j)Existence of about 250 sps. of Avian fauna of terrestrial (woodlands) and aquatic habitat. k)Around 8 species of mammals, some birds and reptiles are listed as threatened species under IUCN Red data book.
3	Educational and Recreational	a) Eco-tourism, open to the public all round the year. b) Eco-tourism has significant educational values. c) The Reserve attracts large number of tourists of National and International origin.
4	Scientific	a)Ongoing long term Research and Monitoring studies of the Tiger source population. b)A Tiger Reserve having large number of international publications on the Wildlife research in general and the Tiger in particular.
5	Cultural	a)Historically, the Reserve I shome for many indigenous Dravidian Adhivasis like Yeravas, Paniyas, JenuKurubas, BettaKurubas, Odigas and soligas, who were hunter-gatherer and honey gatherers.
6	Religious	a)One of the oldest Pilgrim sites (More than 800 years old) i.e. the HimavadGopalswamy Hill shrine b)Occurrence of other temples /darga like Ainurmarigudi, BeladakuppeMahadeshwaraSwamy and GundreDarga etc.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		TCP Annual Report 2015-16	Yes. Invasive species, mainly, lantana is a threat to its habitats for herbivores. The other threats are fire Hazard, water scarcity in certain pockets mass flowering of bamboo 4 years back and no regeneration yet, Man-elephant conflict in buffer areas, National Highway passing through the TR Rabies in 29 stray dogs cases detected. Poaching and MFP collection have reduced. The core area is free from any human settlement threat.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		TCP Annexure-I, II, III	Core area is free from any human habitation as there are no human settlement inside the tiger reserve area. But while talking with PCCF(WL) Shri P. Anur Reddy on 19.06.17 it was pointed out to the committee that the shifted villagers are asking for community rights under FRA. Besides the TR has along 217 km boundary and in Buffer areas, there are 112 villages with nearly 132,064 population and 86,836 cattle population that exerts pressure on park resources.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good	✓		

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones-by under the Field Director would also be taken into account.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		TCP and other documents presented to the committee, meeting minutes etc.	Core or critical tiger habitat was declared vide notification no FEE 299 FWL 2007 Dated 20-12-2007. TCP is approved; State level steering committee is constituted; tiger straying SOP is followed. Tiger conservation foundation has been established and its meetings are held regularly. The state level steering committee, though has been conducted, but no meeting has yet taken place under the Chairmanship of Chief Minister. However under the Chairmanship of Forest Minister both the Committee are held regularly. Three cases of Tiger straying out to human settlements in last 3 years was reported one of it was gun shot, since it was a men cater, other two were captured.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

+Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses

1.5. Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR under different management	Poor		"Core" was declared vide notification no FEE 299 FWL 2007 Dated 20-12-2007 and "buffer" was declared vide notification no FEE 136 FWL 2008 dated 31-08-2010 Annexure-I, II & III	Core and critical Tiger Habitat was declared on 20.12.17 Buffer zone around Bandipur Reserve was declared on 31.08.2010. Eco-sensitive zone was notified on October, 2012. There is unified management of field director in both core and buffer. Out of the total park area of 1025 sqkm, core and critical Tiger habitat area was 872 sqkm and the rest are Buffer area. Eco-sensitive zone was declared in 2012, which is the 1 st eco-sensitive zone notification in India. But unfortunately, the Eco-sensitive zone boundary is only 0.5 to 1.5 km from the park boundary.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very good	✓		

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) +?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		NTCA letter no. F.No.1-14/2001-NTCA-(part I) dated 31-12-2014	TCP is approved from 2014-15 to 2023-2014. The NTCA has accorded approval to TCP of Bandipur TR for the period 2014-15 to 2023-24, under sector 380 (1a) of wildlife Protection Act on 31.12.2014.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguard the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		TCP Annexure-9	Habitat management is taken up on priority basis. Provision has been made in the annual plan for removal of invasive weeds, showing of grass seeds to create grass meadows in place of lantana, de-silting of water bodies creation of check-dams for soil moisture conservation annual fire management plan to prevent fire occurrence. The TR authorities claim that every year, they are showing bamboo seeds in the bushes, for regeneration of bamboo. In fact mass flowering of bamboo has occurred 4 years back and no sign of regeneration yet, due to failure in monsoon in last two year. There are 50 APC placed at vantage points to prevent poaching and illicit removal of resources.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		TCP Table 4	Yes. Stakeholders like eco-development committee, Jungle lodge and resorts and NGPs representative take part in the planning process. Regular meeting are conducted with the stakeholders to get their inputs in the management systems. There are 22 eco-development committees in the TR, who participate in protection activities, involved in making eco-friendly articles made out of invasive weeds like lantana jungle lodge and Resorts as a partner in eco-tourism activities and they are also contributor in development of park by CSR fund.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good	✓		

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		TCP, various photographs and habitat management reports presented to the committee. Fire management plan	Habitat management programmes are done in terms of clearing Lantana spp., clearing wetlands desilting ponds etc. But it was observed that Lantana is one of the key problems in the park. Vigorous process is required to remove lantana from the TR. The findings of two Scientific research reports on Lantana may be considered and implemented. Bamboo regeneration is slow and proper initiatives may be taken in this regards. De-silting of waterholes and feeding water in the waterholes through solar powered pump is a good initiative observed in the TR.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

*This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Various reports and documents presented to the committee. Annexure-10	Yes. TR has an effective protection strategy in place. APCs are places in various areas of the park and well maintained and well equipped for protection inside the park. It can be noted that a legal adviser has been appointed for providing legal assistance for entire tiger reserve. Range level forest guard is exclusively deployed to monitor the court cases. The TR has got a special Tiger Protection Force (STPF) constituted by Govt. of Karnatak during 2010-11, as per the guidelines of NTCA. A total of 112 posts sanctioned. One unit later on was
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

comprehensive and very effective PS and SA.				transferred to Nagarhole TR once it was created by carving out from Bandipur TR. Other protection and security measures followed are, patrolling in Forest Areas using Hejje software, Regular patrolling along the Forest Boundaries and along the interstate boundaries, monsoon patrolling Using sniffer dogs for detection of crime, snare combating, control of illegal fishing in the Back water of Kabini, Nugu and Taraka dams. The TR authorities also employ DRONES for surveillance.
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		TCP and various documents and reports presented to the committee.	Human-wildlife conflict is under control to certain extent. Straying of tiger is reported and managed at least few cases in last few years. This is quite normal for a TR surrounded by human habitations. Human-elephant conflict is under control in the fringe areas of the park. Rail-barricades are raised in vulnerable areas to control the straying out of elephants to the nearby villages. During last 3 years 40.136 kms of rail barricade have been raised. . This method found to be very effective. In the last three years, 10 cases of animal death were recorded due to conflict with the fringe villages (7 elephants, 2 tiger, 1 leopard). A total sum of 1.16Cr was paid as compensation in last three years. There is considerable reduction in number of electrocution death of wild elephants. Also there is a marked decrease in cattle grazing. A Rapid Response Unit has been established for immediate response to man-animal conflict. The unit is stationed at Hadiyala.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		TCP	Yes. Bandipur TR is well connected into a wider ecological network / landscape of Western Ghat. Towards Tamilnadu, it is connected with Madhumalai TR. Towards Kerala it is connected to Waynad. The landscape is also connected with Nagarhole, BTR and Satyamangalam TR. There are no identified corridors, But effective initiatives are being taken to acquire adjacent private/revenue lands to increase buffer zone of TR and to create corridors.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Staff documents presented to the committee. Annexure-13	There are 341 numbers of sanctioned posts ad currently 220 are posted in the TR. So, 121 numbers of posts are vacant at this moment. It can be noted that 38 numbers of forest guard and 33 numbers of forest watcher posts are lying vacant. It is very crucial to fill the frontline forest staffs for proper protection and monitoring of the TR. It can also be noted that age classification of existing frontline staffs is very good and most of them are under 40 years. (nearly 80% of available staff strength). The vacant posts of mahout and Kawadis can be filled up from local tribals.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Various reports and registers presented to the committee.	There are 69 vehicles are in service in the TR which includes 20 two wheelers. Out of this, 52 are used in protection purpose. Which is very good. There are 185 building in the TR under various ranges used as office buildings, residential quarters and other purposes. There are 399 numbers of camera traps in the TR. It may be mentioned that the TR lacks in tranquilizing equipment. 16 safari vehicles also operate, whose carrying capacity is around 60. Desirable number of cameras for tiger estimation and safari vehicles for eco-tourists are available.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Various reports and documents presented to the committee.	Financial resources other than those of State linked to priority actions are found to be very good. In the last three financial years a total of 1281.326 L was released and out of which 1157.043 L was utilized. This include CSS Project Tiger, CSS Project Elephant, IDWH etc. The year wise break up is given. Year Amount Amounts in Released Utilized 2014-15 371.686 371.35 2015-16 227.981 222.669 2016-17 681.695 563.024 The balance funds of 2016-17 are carried out to next year.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

**Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.*

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Various documents and reports presented to the committee	The financial resources from the State linked to priority action and funds are found to be adequate and very good. In the last three financial year an amount of 6136.949L was released and out of which 4459.854 L was utilized. The actual date of receipt of funds at the field level is very good. Funds reach the field actually starts from the month of June. Which is very good. The APOs are submitted to the PCCF(WL) office in 22th of April, 3 rd of March and 16 th of May in last three FY and finally submitted to NTCA on 12 th of May, 23 rd of March and 19 th of May respectively. No problem pointed out to the committee regarding delay in release of funds.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

**Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.*

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Various reports and documents presented to the committee.	NGOs provide mainly in kinds supports to the TR. Some NGOs provide training to the front line staffs in patrolling, Camera trap training etc. NGOs are also helping the TR by conducting nature camps, supporting in offence cases, informer services, wildlife rescue and rehabilitation efforts, disease investigation and captive animal care (for elephants). The NGOs associated are Bandipur TR are (1)Centre for Wildlife studies, (ii)Wildlife conservation foundation (iii) Himgiri Wildlife Conservation foundation (iv)Vanya, Barfalore and (v) Wildlife conservation Trust.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Reports and documents presented to the committee Table 42	All together 14 staffs were trained in wildlife management in last three years. However, none of the officers are trained in institute like Wildlife Institute of India in last three years. Staffs may be encouraged to go for such capsule training regularly to some prominent institutes. The TR authorities pointed out that non undertook training in wildlife during 2015-16. However 6 officers took training on wildlife in 2016-17. A time bound HRD plan may be prepared to train all the frontline staff in wildlife management, conservation and protection.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Reports and documents presented to the committee	Seven numbers of Staffs were promoted based on their performance in the TR. However no staff was awarded or got appreciation certificates from the authority in last three FY. Management may be encouraged to institute awards for excellence services specially for the front line staffs and protection workers. State level awards should also be given to field staff no uplift their morale.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Reports and documents presented to the committee	TR authorities has provided a total of 7145 numbers of LPG connections to the fringe villages in last three FY. 13729 numbers of cattle were vaccinated. 52 numbers of villagers got subsidized solar fence. However the impact of such services are yet to be studied, as reported by the authorities. Some results may be seen in terms of reduction of electrocution of elephants and reduction of grassing inside the TR. For avoiding man-elephant conflict in periphery villages, 180 km of EPT has been done. As a part of peoples support to TR management, use of secret services (informant), driving of wild elephants, co-operation of people in Fire protection, co-operation in protection measures, restriction of people entering temples, no fresh encroachment, less dependence on fuel wood, controlled grazing are some of the manifestations.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGLs in population estimation may be taken into account*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Reports and documents presented to the committee	Petition register / complain registers are maintained at Sub division office / range forest offices as well as at the Director's office. These complained are handled by the concerned unit as priority basis. On receipt of the enquiry report necessary actions are being taken, periodically.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Reports and documents presented to the committee	As mentioned in the earlier point, as many as 7145 numbers of LPG connections were provided to the fringe villages which directly addressed the need of the women community. This is found to be quite good in the TR and it is reflected in less collector of fuelwood from TR. Some EDC units are provided Lantana free of cost for their furniture unit.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

*The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Reports and documents presented to the committee	Core area is entirely free from settlements. No villages has been relocated so far from buffer areas. Application for community rights are received in Hedyala, N. Begur, Omkara and Gundulpet ranges. Since, BTR is declared as core critical tiger habitat in 2007, whether community rights to be conferred under Scheduled tribe and other traditional forest dweller (recognition of forest rights) Act, 2005, is sought directions from PCCF (WL) and NTCA. Directions are yet to be received.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good	✓		

*Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Reports and documents presented to the committee. Webpage of the TR.	Information regarding Bandipur TR is updated in www.bandipur.tigerreserve.in . There is a interpretation center located next to the Director's office of the TR. There are brochures and booklets available for public. This is found to be good. Reservations and safari booking is done on online. Mechanism to submit feedback and suggestions in the same website and through e-mail.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good	✓		

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Reports and documents presented to the committee	Bandipur TR is highly visited park by the visitors. There is one VIP Guest house, 9 cottages and 4 dormitories. Apart from that there are numbers of good private resorts located near the Park boundary. All accommodation facilities are with canteen facilities, public toilets etc. Safari activities are done through buses and Gypsy. Visitor services and facilities and found to be appropriate and adequate. The park has an Interpretation centre, which introduces tour to
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good	✓		the parks and is helpful to create awareness and appreciation amongst tourists in respect of wildlife conservation. Tourism zone is in 10% of core area, i.e. over 82 sqm.km. total tourism road length is 112 km. Permitted no. of vehicles per day is 22. During 2016-17, India tourist numbering 174751 and foreign tourists 4463 visited the park.
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***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feedback on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Reports and documents presented to the committee. Lists of research project permitted by PCCF WL etc.	There are 15 numbers of research projects are going on in the TR by various scientists and researchers of various institutes. But these research projects' input in park management is limited, as reported by the authority. The following researches are on (i)Ecology and conservation of leopards (ii)Meta population dynamics of tigers, Floristic diversity of Angiosperms and conservation strategies etc. Checklist of Birds at Bandipur, checklist of Birds, Reptiles Mammals, Flora etc. Two reports on Lantana management and Restoration of lantana in tested forests are also there. But research findings are not systematically followed.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Reports and documents presented to the committee	Registers are being maintained for store, buildings, road, vehicles etc at Range offices level for the cost of maintenance and constructions. In the last three FY, 220.523L and 284.855L were spent in maintaining roads and vehicles respectively.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Reports and documents presented to the committee Table 49	Populations of threatened species are found to be stable in the park. There are about 1200 numbers of elephants recorded in the last population estimation (2012). Recently, elephant population estimation was carried out in 2017, but results are yet to come out. There are 136 minimum numbers of tiger recorded in the TR.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Reports and documents presented to the committee	Population of Tiger found to be stable in the TR. The last three population estimation of tiger (2014-15, 2015-16, 2016-17) was 137, 140 and 136 respectively (minimum number).
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good	✓		

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Reports and documents presented to the committee	The threats to the TR being reduces in terms of animal offences. However, habitat threats in terms of invasive species found to be still a major problem specially for the herbivores. Moreover drying of bamboo culms due to large scale flowering 4 years back and no regeneration yet is a major threat.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR have a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		Reports and documents presented to	Expectations of visitors are generally met. Tiger sighting records are very good in the park. If not tigers, visitors can see many
Expectations of many visitors are	Fair			

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

met.			the committee	other important wildlife even from the main highway. The team could met few visitors and their feed backs on animal sightings were quite satisfactory.
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good	✓		

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Reports and documents presented to the committee	The park authority has dome much for the local people in terms of eco-development works, LPG connections, solar power fencing etc. The local people in returns too are supporting the park authorities. The number of electrocution of elephants has been reduced considerably, grassing pressure has much reduced in the recent years. The local people found to be supportive of park management. There are 22 EDC in buffer zone only, who are playing as a supporting hand in park management. ChinaraVanaDarshan'- an awareness programme for high school students run entirely from Karnatak Govt. fund is a major success.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good	✓		

+There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

7. MEE Score Card⁺

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	45	87.5
2.	Planning	07	10	70	60	
3.	Inputs	05	10	50	45	
4.	Process	06	10	60	47.5	
5.	Outputs	04	10	40	37.5	
6.	Outcomes	05	10	50	45	
Total		32		320	280	

***Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 31 Assessment Criteria including 'normalization'.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category* (Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	The committee felt that no specific and exclusive steps have yet been taken on climate change. Only there is a mention in TCP, that in the park, the presence of Dry Thorn scrub forests are having high carbon sequestration value.	
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good		
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good		

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category* (Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	Guidelines may be issued by NTCA on WII to assess the impact of Climate change and measures for adaptation so as to prepare specific plans and incorporate them in the TCP. The guidelines may also indicate various measures to be adopted for reducing carbon loss and increasing carbon capture without compromising the primary objective of managing wildlife habitat.	
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good		
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2. Bhadra Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		TCP(Core) Para 1.1.2, 2.2, 2.3, 2.4.1, 11	Values of Bhadra Tiger Reserve has been well documented, details are as follows. The Tiger reserve is located in malanad region, which is in the Western Ghaht. It is a vast unbroken stretch of forest area. The reserve mainly constitutes southern moist mixed deciduous forest, southern dry mixed deciduous forest and Shola forest. The reserve is home to around 40 species of mammals like Tiger, Leopard, Leopard cat, Elephant, Wild dog etc. Many of them are endangered. Two to three perennial rivers have originated from Bhadra T.R. Eco-tourism have significant role to play in wildlife conservation, recreation for the public.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		TCP (Core) Para no.3.4, 6.4.1, 6.4.2, 6.5	Threats to Tiger reserve documented which is based on SWOT analysis in the TCP. Major problem to the protected of the reserve is analyzed in the TCP, A) Poaching: A few cases of poaching actives is found in peripheral of the core area. B) Timber Smuggling & Illegal entry: Timber Smugglers targeted at tree like teak and rose wood. C) Grazing: The peripheral village herds of cattle, which happen drive cattle in to the reserve. No grazing is reported for last 3 year. D) Forest Fire: Major fire incidence in BTR are manmade. Due to which nature of regeneration is ether lost are stunted. E) Habitat Management: the reserved as been invaded by weeds like lantana, eupatorium, Parthenium. These weeds occupied mainly open areas, all along the patrolling roads, safari roads and acquired agriculture land. Which reduces the grazing land of ungulates. F) Spreading of invasive species like Lantana, Eupatorium, parthenium cassia spectabilis. G) There is a need for a comprehensive annual management action plan for eradication of invasive weeds.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		TCP Para:4.6, 5.4	There were 16 villages inside the Core/Critical Tiger Habitat out of which 10 villages have been totally rehabilitated consisting of 420 families. This year 4 families has been given land as per package & Rehabilitated. Further, action is being taken by the Director to Rehabilitate 2 more villages. The five villages inside T.R. which are yet to be relocated are located around. "Paradeshppanna" Mutha. So religious constraint is there. LPG connections given to fringe village so as to reduce their dependence on collection of firewood from core area. The Buffer area, though notified is yet to be brought under unified control of Field Director.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		Copy of notifications were made available to the committee	Legal delineation and notification of the Core and Buffer areas took place on 20-12-2007 for the Core area and on 29-01-2011 for Buffer Area. In buffer area, there are also some private lands. Bhadra Tiger Conservation Foundation was Constituted vide GO No: FEE 104 FWL 2007/P1, Bangalore Dated: 02-03-2009. Tiger Conservation Plan for the period 2014-15 to 2023-24 is approved by the Government of India, Ministry of Environment, Forest and Climate Change, National Tiger Conservation Authority, New Delhi vide their Letter No.1-14/2011-NTCA(Part-I), Dated: 31-12-2014. A State Level Steering Committee under the Chairmanship of Chief minister has already been constituted. But meeting could not be held. All the parameter in MOU have been complied with. There was no straying of Tiger however guidance to executive staff and field staff has been given with, three standard operations. (SOP)
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor			<ul style="list-style-type: none"> Buffer area management each still under control of parental Deptt. Committee is told that efforts have already been initiated to bring these areas under unified control.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good	✓		
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very good			

2. Planning:

2.1 Status of Tiger Conservation Plan (TCP)??

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Copy of the TCP was made available to the committee	Tiger Conservation Plan for the period 2014-15 to 2023-24 is approved by the Government of India, Ministry of Environment, Forest and Climate Change, National Tiger Conservation Authority, New Delhi vide their Letter No.1-14/2011-NTCA(Part-I), Dated: 31-12-2014 for Core buffer and Corridor. It is reported that due participation of local people and wildlife have been done while preparing TCP.
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		TCP core Chapter 10.2, Reports the steps be taken for the protection of threatened flora and fauna of the reserve.	The chapter covers Antipoaching camps, Plan for Boat patrolling, Establishing Informant network etc. Along with Mstripes formats the patrolling staff maintain a register to record their patrolling path and observation made in the field. Through eco development activities of EDCs. Efforts are made to reduce pressure on forests.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Discussion with the Field staff	Meetings are conducted in EDC on a routine to discuss issues of park management, as reported. There are 18 EDC, but only 1 EDC is active and co-operating with T.R. Management. It is stated that Rs.1.0 lakh grant is given to each EDC, but they are yet not active.
Stakeholders participate in some planning processes.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very Good			

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Habitat management has been discussed in detail in Chapter 7 of the TCP for core area.	The Centre for wild life studies and NGO is doing research in Bhadra Tiger Reserve regarding long term monitoring of Tiger and its habitat, their findings suggest that the Tigers are in a healthy state and their habitat has also improved over time. For the expansion of population and for the exchange of genetic material over a wide geographical area existence of corridors is very essential, detailed plan has been prepared for the maintenance of corridors of bhadra in an ecologically sustainable form. Bamboo is sufficiently available for elephant. There are 12 perennial streams. 99 water tanks created. The corridor is with Shettihally WLS. However steps taken to can that threat from invasive weeds is not visible in the field.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		In chapters 7.2.2.10, 7.2.2.12 and 7.3 of TCP for core area detailed discussion has been made regarding the protection strategy and	A detailed discussion is made regarding the security issues of the park, foot patrolling, boat patrolling etc. A security audit is also in place through M-STRIPES. Only fire management plan is available. No other annual management plan is available. There is a good network of Anti poaching camps (39) in the reserve. They are very effective and located in strategic points. Crime figure has drastically come down.
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

			<p>monitoring of tigers.</p> <p>Security plan and intelligence gathering is discussed in Chapter 10 of the TCP for core area.</p>	
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2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor			<p>Man-animal conflict in buffer area only -In areas where human habitations are along the Resave boundary, Elephant proof trenches have been dug to prevent Elephants from crossing over to farm lands and raiding the crop. Elephant proof trench also prevents cattle and people from entering the reserve. They also help in boundary consolidation by preventing encroachment.</p> <p>Solar fence play a vital role in preventing elephants from crossing over from reserve to forest areas, solar fences work very efficiently in the reserve with the cooperation of EDC members of adjoining villages.</p> <p>Crop compensation is paid timely to prevent frustration and anxiety among people.</p>
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		<p>Chapter 7.2 of Buffer plan of TCP</p> <p>Photographs of workshops conducted to impart training to officers of adjoining forest divisions like Shimoga, Bhadravati and Chikmagalur regarding methodology of All India Tiger estimation etc were made available to the committee.</p>	<p>While preparing the TCP for buffer areas adequate care was taken to see that the wildlife values in the buffer area are protected because the fact that the buffer areas are part of corridor that connects Bhadra Tiger Reserve with other protected areas.</p> <p>Prescriptions have been made regarding the amendments that are to be made to the working plans of the territorial divisions in which the buffer exists, so that they are brought under the protection circle and the area becomes ecologically sustainable.</p> <p>It is observed that there is no corridor connection with other protected areas. Park area in disjointed from other landscapes.</p>
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Report on Sanctioned post and vacancy in each category of post. Discussion with field officials.	There is still requirement of more front line staff for the reserve especially watchers and the committee was told that the vacant posts will be filled shortly.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor			The reserve has adequate quantities of all resources, as reported to the committee. But increase the numbers and quality of the resources are always welcome. Total camera new available is 170. But they need 400 cameras some more vehicle is needed.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		The committee was briefed on the various funds released from State and Central schemes. It was timely released.	The funds are released under various State and central sponsored schemes as per the approved APO. Budget is adequate as reported by F.D. Annual budget received is Rs.
Some specific allocation for management of priority action. Funds are inadequate and there is	Fair			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

some delay in release, partially utilized.				8 to Rs.9 crores. Another Rs. 3/- crores they got from state Govt. towards compensation. Non timely release of NTCA funds. So, almost every year Rs. 2/- crore remain unspent.
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		The committee was briefed on the fund released positions and it was found OK.	The financial resources are sufficient and more often released timely but if there is any delay then the gap is filled by Bhadra Tiger Conservation Foundation especially to make payment to APC watchers, and timely release of compensation amount / Allotment & expenditure position for last 3 years.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor			NGOs like Wildlife conservation Trust have assisted Tiger Reserve Management by providing vehicles for protection and some facilities to patrolling camps. But this assistance is not regular. We could meet some of the NGO members who assisted the part on such activities. Wildlife week is being celebrated in Bhadra Tiger Reserve in collaboration with Wildcat-c an NGO for a long period of time. This NGO has been instrumental in imparting nature education and bringing awareness in public regarding the importance of nature and wildlife. Wildlife conservation trust a Mumbai based NGO has given a lot of material to Bhadra Tiger Reserve to be used in conservation efforts which
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				range from jeeps to rechargeable torches. Centre for wildlife studies an NGO headed by Dr. Ullas Karanth has been doing research in Bhadra Tiger Reserve regarding monitoring of Tiger and its habitat, and has provided useful inputs to the department.
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Process:-

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Human resource management has been discussed in detail in Chapter 8.4 and 8.5 of the TCP for core area.	Trainings are imparted from time to time regarding the eight day protocol, All India Tiger Estimation, Camera trapping etc. Other than this there is a need for trained personals in wildlife conservation for effective TR management. Need to send personnel for training at WII /other training institution of importance.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Details of staff performance monitoring is provided in MstripesChapter 7.3	Performance can be analyzed by the park manager from time to time using the Mstripes and can fine tune the Staff performance so that management objectives are achieved. The performance is always linked to management objective. Data monitoring done regularly through M-stripes and every month submitted to WII.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓	Details of provisions for Awards and Rewards are discussed in Chapter 8 of TCP for Core	
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor			Every year wildlife week is celebrated in Bhadra Tiger Reserve in collaboration with a local NGO Wildcat-C, Lot of people from all walks of life participate in the event where in awareness and education is imparted to them regarding the importance of wildlife and nature. During the All India Tiger estimation exercise a lot of volunteers are involved in the exercise to
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			maintain transparency in the exercise and also give an opportunity to public to see the inviolate areas of core During Fire season local people especially members of the EDC are employed as fire watchers. This not only provides a source of income for the people but also ensures community participation in TR management. There are 3 honorary Wildlife wardens for the park, who provide regular suggestions.
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4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		The complaint registers were presented to the committee	All complaints are registered in this register and prompt timely action is taken 7 complaints were received during last year. The valuable suggestions given by the public is taken very seriously and relevant suggestions are incorporated into management activities. Visitors register could not be produced. It would have been good if there is an online system for this.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Microplans of EDCs	Local community is not much dependent on Tiger Reserve for their livelihood. This is because the presence of other forests and coffee estates areas around Tiger Reserve. There are no traditional tribes in and around Tiger Reserve. Suitable families in the fringe villages are identified and given LPG sets at subsidized rates, this ensures reduction in dependence of these families on forests. Solar lights & Honey Bee Boxes are also provided. Suitable families in the fringe villages are identified and given seedling silver oak, mangoes etc so that their economic stability is improved and also resource dependency is reduced.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Assessment criteria*				
Condition	Category*	(Tick)	Reference document(s)	Remarks
No planning and no implementation	Poor			All these villages have been successfully relocated from the reserve and are now more than 25 kilometers away from the reserve, relocation of these villages is first of its kind in the country and a success story. The committee visited a relocation village MC, Halli, relocated in 2002. But the relocated village should be constantly helped and their problems be solved. A district level committee headed by the Deputy Commissioner deliberates on these issues.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good	✓		

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Brochures and books published by the park management.	Through face book page it has become possible to connect the park administration to the public any concerned citizen can offer suggestions for improvement of park management and also can comment on any short comings if any in the system so that they can be rectified. Webpage is opened and maintained. At Salimali interpretation center discrete information regarding the Reserve and flora and fauna in it has been displayed for the benefit of the public. Informative brouchers are published by Bhadra Tiger Reserve which give concise information about various aspects of the Reserve to the park visitors. No of tourists have increased in last 3 years, which should be restricted.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good	✓		

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		The chapter 11 of the TCP for core gives lot of emphasis on ecotourism and	Wildlife safari is provided in the tourist zones of Muthodi and Lakkavalli ranges. The cottages at Muthodi and sahyadri IB at lakkavalli are given to public and
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are	Good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

monitored from time to time and are fairly effective.			interpretation.	all basic facilities are available here, park related brochures are available at both these places which give the visitors an insight into the park activities. The "River Tern" Jungle lodges and resorts at lakkavalli also provides lodging and safari services to the public which is also a Govt. undertaking.
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		TCP for core Chapter 7.2.2.12	In the TCP, importance of research and scope for research in Bhadra Tiger Reserve has been discussed in details and a detailed road map is laid down for research activities in the TR. Though tiger is well monitored and researched in the park, there is a need of research and monitoring of general flora and fauna of the park.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓	TCP for core Chapter 8	
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		List of Table in TCP 1) Table 1 2) Table 13 3) Table 14 Annexure-2a Annexure-2b Annexure-10f	Following registers are being maintained for systematic maintenance of assets/ infrastructure. 1. Register of Buildings. 2. Register of motor vehicles. 3. Register of Roads. 4. Register of wells & tanks 5. Register of Check dams 6. Register of stores. 7. Register of assets. Based on the entries in these registers a detailed maintenance of schedule is prepared by the Forest Range Officers. Funds for maintenance of these assets is sourced from State Govt. Schemes, maintenance funds are adequate as reported.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very Good	✓		

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		TCP Para:3.3 Reports and Discussions with field officials	All the population of the threatened and endangered species is slowly increasing in the reserve, with due to effective patrolling by anti poaching camp watchers, boat patrolling and fire protection camp watchers. The data's collected for Phase-IV protocols sent to WII Deharadun for analysis in details results are awaited. The increase in number of prey indirectly shows the increased number of predator population. Analyses made by the NGO-CWS shows increase in the threatened and endangered species.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good	✓		

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		TCP Para:3.2	Population of Tiger's is showing an increasing trend. Direct sightings and camera Trapping figures showing an increasing trend of Tiger population. Details collected for Phase-IV Protocols sent to WII Deharadun for analyses. Tiger 2005-06=11, 2011-12=22, 2016=17-37 Elephant 2012=73, 2017=163
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good	✓		
Population of tiger has significantly increased	Very good			

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Threats faced by the Tiger Reserve assessed and documented.	Threats to the Tiger reserve reduced due to strict patrolling inside and adjoining area of the core zone from the Anti poaching
Some threats to the TR have abated, others continue their presence	Fair			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		<p>staff and regular patrolling of staff and inspection of the officers. The details of the daily patrolling of Anti poaching camp staff are recorded in the M-STRIPES software.</p> <p>Details of the daily patrolling is maintained in the proforma designed for it.</p> <p>Fire incidences reduced drastically only one case is registered in past 3 years. (only 1.00ha ground fire noticed)</p> <p>No new encroachment is noticed in the last few years (only 28 old encroachment case, encroachment done before declaration of Tiger reserve) only threat from invasive weeds is increasing.</p>
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor			<p>Guidelines issued by the NTCA on tourism have been followed in Tiger reserve.</p> <p>In Tiger reserve only 12% of the area is using for the Eco-tourism activities.</p> <p>Most of the expectation of the visitors is generally met.</p>
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good	✓		
Expectations of all most all visitors are met.	Very good			

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		List of EDC's were presented to the committee.	<p>The local communities are supportive of Tiger reserve management in protection.</p> <p>There are 18 EDC's formed in adjoining villages of the core area. But out of them, only 1 EDC is functional and co-operative. Due to regular patrolling by staff only one fire incidence occurred in the periphery of the core for the last 3 years</p>
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

7. MEE Score Card

Frame work element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and %age
1	Context	05	10	50	37.5	
2	Planning	07	10	70	50	
3	Inputs	05	10	50	37.5	
4	Process	06	10	60	45	
5	Outputs	04	10	40	32.5	
6	Outcomes	05	10	50	37.5	
Total		32		320	240	75%

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

::550::

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		<ul style="list-style-type: none"> • Parambikulam Tiger Reserve is nestled in the picturesque and extensive Anamalai-Nelliampathy landscape of the Western Ghats Mountains in Palakkad and Thrissur districts of Kerala State. It is one of the premier Tiger Reserves in India endowed with the bounty of nature in terms of remarkable species, habitat and ecosystem diversity, and characterized by notable human ecological affinities. The habitats comprise predominantly of mixed deciduous forests, whereas evergreen and semi-evergreen forests occur in more moist areas. • The climate change is mainly due to the changing forestry practices and developmental activities. Presently Parambikulam TR does have more than 60% of the area under core which is primarily kept as inviolate area and devoid of any interventions which lead to carbon emission and climatic change. • The Reserve is strictly protected from fire and apart from the fire outbreak from Tamil Nadu side during 2017, there is no fire incidence from 2004. • Reduction in biomass removal through reduced firewood collection, etc helps in carbon reduction as natural forests under continuous cover management can be a permanent carbon sink. • No extraction is allowed in the core of the reserve which helps for permanent carbon sink. • The Parambikulam Tiger Reserve is blessed with both natural and artificial water sources. The Sholayar, KarapparaAr, ParambikulamAretc originate from within the Reserve. The entire area forms the catchment of Chalakkudy River. The sanctity of core of is maintained such that the watershed values from the forest to these rivers are not affected. • The approved TCP contains all possible measures for better management of the Park in relation to the global climatic changes and more precisely at the adjoining areas. 	<p>Carbon capture involves trapping the carbon dioxide at its emission source, transporting it to a storage location (usually deep underground) and isolating it. Following activities in the Park further reduced the impact of climate change:</p> <ul style="list-style-type: none"> • No extraction is allowed in the TR since it is a PA that helps for permanent carbon sink. • The approved TCP contains all possible measures for better management of the Park in relation to the global climatic changes and more precisely at the adjoining areas.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		<ul style="list-style-type: none"> • Protection is strengthened through an effective protection/fire protection plan which has helped in preventing degradation of the area from extensive fire and resultant carbon loss. • The carbon emission activities are reduced through eco-development activities especially encouraging the local communities for using fuel efficient choolahs, discouraging firewood collection and using LPG. • There is no timber extraction activities in the Core of tiger reserve which has helped in stocking carbon. • NTFP collection in the PA is minimal and returns from NTFP are increased by value addition through the successful implementation of Ecodevelopment initiatives. • The waste disposal mechanism especially plastic recycling, drinking water plant (reverse osmosis unit) are being carried out as part of eco-development activities. • Grazing pressure in the sanctuary is prevented by taking out all cattle from the sanctuary, which is now 100% cattle free. • Issues related to increase in atmospheric carbon dioxide and increasing global climate are discussed in the awareness camps and the people are sensitized for taking remedial actions. • Publicizing the slogan 'Global Warming – Tree is the Answer', Kerala Forest Department has promoted extensive tree planting activities. Measures for reducing carbon emission and global warming are taken up as part of the 'Green Kerala Mission' programme of the State Government. 	<ul style="list-style-type: none"> • In TCP it is mentioned to study the effect of Bhadra reserve on climate change. The study should commence quickly.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3. Biligiri Ranganatha Swamy Temple (BRT) Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		i. List of values from TCP has been annexed. (Annexure 1.6) ii. Population estimation data from scientific sources has been annexed. (Annexure 6.6) iii. Vegetation map showing variety of habitats has been annexed. (Annexure 1.7)	The following values have been identified in TCP. They are; i) Biological value ii) Ecological value iii) Cultural value iv) Religious value v) Historical ,Recreational, Educational Scientific and Economic values.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

The TCP is for the period 2014-15 to 2023-24. The TCP got approval of NTCA on 31.12.2014.

Biological value, it is found that BRT TR is a part of tiger landscape contiguous with the Nagarhole-Bandipur – Mudumalai(T.N)and Waynad (Keral) Tiger landscape. It serves as a biological bridge between the Western Ghats and the Eastern Ghats.

It is also a part of Nilgiri Biosphere Reserve declared under UNESCO’s Man & Biosphere programme, 2000.

TR is a home to three sympatric carnivores-tiger, leopard and wild dogs (dhole). Presence of rare and endangered species like four horned antelope, slender loris and Indian Giant flying squirrel. From floral side, the TR consists of variety of habitats ranging from dry deciduous to evergreen and Moist deciduous to shola forests and grasslands.

Ecological – Lots of small and big streams originate from the TR.

Presence of dry thorn scrub forests, which holds high carbon sequestration.

Cultural Value:-

This is also home for indigenous sholiga tribes.

Religious –The famous Biligiri Ranganathswamy Temple, which is thronged by pilgrims of all the tribes from entire south India is situated at a hill top inside TR. Historical – The first elephant capturing operation, called “Kheda” in south India were started from this TR by PC Sandersan. Old forest guest houses and resorts were used by Mysore Maharaja as hunting lodges.

All 9 values, are distinctly identified in the TCP. Some of the values such as biological values are monitored through population estimation, data for various species etc. Values are also classified as Global, National, Regional, State & Local.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		i. List of threats from TCP has been annexed. (Annexure 2.4)	The threats are systematically identified and assessed through SWOT analysis. Major threats are (a) Fire, (b) Man-animal conflict (c) Threat from invasive species such as Lantana (d) Poaching for ivory, tiger skin & bone, Illegal cutting of Chandan trees. It is seen from the records that threat from man animal conflict has been reduced due to intervention from TR authorities and prompt payment of compensation. (Within 3 months) The threat due to religious activities of visiting pilgrims to Ranganathswamy temple has been controlled, by stopping all the vehicles at the foot hill and allowing pilgrims to travel in Govt. run buses to temple. Experimentation is also going on to control the threat of invasive species like Lantana through biological method.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		i. List of settlements inside the core area and buffer area has been annexed. (Annexure 1.4 and 1.5, respectively)	There are around 10 tribal settlements of sholiga tribe, the entire BR Hills enclosure have settlements and a small town and 5 coffee estates are also inside core area. The total number of tribal families residing inside core is 461. These tribes were issued land pattas under FRA Similarly in the Buffer, there are nearly 2500 settlements. The committee was told that the pressure from livestock grazing is minimized, but it is felt during field visit that the livelihood dependence of people from NTFP collection, grazing and cultivation is going on unabated. The labourers working in 5 coffee estates inside core are also found to be behind man-made fire threat.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones-by under the Field Director would also be taken into account.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		i. Notifications have been appended in annexure. (Annexure 1.2,1.3)	The legal delination of core extending over 359.10 sqkm and buffer extending to 215.72 sq.km has been done vide Karnatak Govt. notification dated 24.01.2011. Tiger conservation foundation has also been notified in 12.09.011. State level steering committee has been formed under the Chairmanship of C.M. but no meeting yet. Tripartite MOU between FD, state Govt. and NTCA has also been signed. SOP has been formed in the tiger mortality eases and disposal of caracasses, as seen from the record. All the statutory Requirements (SR) and the SOP are complied with.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

1.5: Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		Govt. of Karnatak notification no. FEE 133FWL-2008 dated 24.01.2011 declaring core and buffer, and declaring the entire core as critical Tiger Habitat.	The adjoining forest area of 35.22 sqkm in the buffer zone are not under control of F.D. They are currently being managed by the territorial wing of the Forest Deptt. Core Area-359.10 sqkm Buffer area-215.72 sqkm Both core and buffer are under the unified administrative control of F.D.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good	✓		
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) +?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		i. Tiger Reserve has a comprehensive and relevant TCP, duly approved by the NTCA annexed. (Annexure 1.1)	TCP got approval of Govt. of India (NTCA) MOEF&CC for the period 2014-15 to 2023-24 vide F.No. 1-14/2011-NTCA (Part-I) dated 31.12.2014. The core area of the tiger reserve is managed with the objective to protect and encourage the assemblage of biological diversity and strengthen the source population of tigers in the reserve.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		i. Security Plan of the tiger reserve has been annexed. (Annexure 2.6)	A security plan has been prepared as which has identified threats. The plan also includes strategies to safeguard the values of the reserve from the threats. 26 nos. of permanent anti-poaching camps at selected strategic locations of the TR have been installed. The APC staff follow "HULI" daily patrolling monitoring system and not 'm-stripe' as suggested. Fire management plan has been prepared and actions as per prescription of plan taken to prevent fire. The park director has maintained a core group of young Rangers, who regularly sit in every fortnight to discuss about any threat to Biodiversity values. Functioning of EDC was not shown to the committee.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

***Score : Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		i. Meeting photographs have been annexed. (Annexure 2.9)	Yes. Stake holders meeting has been conducted regularly. A meeting with Jungle Lodge and Resorts managers was arranged to chalk out an eco tourism plan. List of 8 such meetings with local villagers and stake holders provided to the committee. 'Chinara' nature camps for 2 days regularly conducted for school children.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		i. Photographs of desilting and lantana removal have been annexed. (Annexure 2.7) ii. Vegetation map has been annexed (Annexure 1.7) iii. Fire occurrence map has been annexed (Annexure 6.3)	Vegetation map of the TR has been prepared and accordingly management strategy has been developed. Location of invasive spp. Like lantana has been mapped and estimated. According to availability of fund lantana removal is done every year regularly. Fire map has been prepared and distribution of fire watchers in highly fire prone areas done systematically. During 2016-17 fire occurrence is only at 10 places. Since water scarcity occurs particularly during summer desilting of existing water holes is focused up on priority basis. Elephant corridor and connectivity plan has been developed between Chamrajnagar and Talmalai at Maddali as well as at Punajur. It is heartening to note that WTI (Wildlife Trust of India) has purchased 25.37 acres of private land and handed over to TR authorities for developing elephant corridor.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good	✓		

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		i. Security Plan of the tiger reserve has been annexed. (Annexure 2.6) ii. Forest offence cases table have been annexed. (Annexure 2.5) iii. The summary of status of court cases and that of recent major court cases related to poaching has been annexed. (Annexure 2.5) iv. Map showing location of APCs has been annexed (Annexure 2.1)	Major threats for the TR is fire, man-animal conflict, spreading of invasive species etc. A comprehensive security plan has been documented for the reserve. Security audit is done by the internal staff. In total 26 APC has been formed and located at strategic points. No of offence cases has comedown from 49 in 2014-15 to 33 in 2016-17. No of poaching cases has also come down from 9 in 2014-15 to 5 in 2016-17 Vehicle entry into tiger reserve restricted between 6 pm to 6 am in the night. Huli - a daily patrolling monitoring system is used by park staff. They claim that Huli is a product born in BRT tiger Reserve. Solar sheds have also been established strategically along the boundary of the reserve. 3-5 FG and watchers, present in these sheds keep patrolling the boundary, as well as solar fencing along the boundary.
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

+This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		i. H - W Conflict data has been annexed. (Annexure 2.2) ii. Map and abstract about elephant barriers have been annexed. (Annexure 6.5) iii. Details about the human deaths and the compensation paid upto 2016 end have been annexed. (Annexure 2.2.1)	<ul style="list-style-type: none"> • The Tiger reserve e has been effective in mitigating human animal conflict. • Elephant barriers have been maintained properly. 156.52 km of solar fencing and 220.96 km of elephant proof trench (EPT) have been erected. • The amount for crop compensation is paid at the spot on the same day of the incident. The amount is paid through the foundation, and is reimbursed later. • The cases have decreased over last 3 years. Human death due to elephant attack has decreased from 4 in 2014-15 to zero in 2017-18 (upto 31.10.17) • The compensation in conflict cases has also decreased over last 3 years.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

+The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		i. Landscape map has been annexed. (Annexure 2.8) ii. Map of corridors has been annexed. (Annexure 2.8) iii. The draft of Eco-sensitive Zone has been annexed. (Annexure 2.12)	<p>The reserve is a part of larger Nilgiri Biosphere Reserve, a part of Western Ghats tiger landscape, and a link between the forests of the Western Ghats and that of the Eastern Ghats.</p> <p>A major benefit of the location of the reserve is that all the surrounding forests in ChamaraJanagar district are protected areas. The forests in the other districts /states to which the reserve is connected are also protected areas only. This leads to strong and long-range connectivity of the reserve.</p> <p>The forest has wide connection with Sathyamangalam Tiger Reserve, and corridors connecting it with Bandipur Tiger Reserve and Cauvery Wildlife Sanctuary. There are 2 corridors for Tiger and 3 elephant corridors. One of which is under both categories.</p>
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

integrated into a wider network/ landscape.				A draft of Eco-sensitive Zone notification has been submitted for approval. This will further strengthen the connectivity with the surrounding protected areas.
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***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		i. Data about staff and their deployment in different ranges has been annexed. (Annexure 3.1, 3.1.2, 3.2, 3.3) ii. List of temporary staff has been annexed. (Annexure 3.1.1)	The personnel are well organized and deployed, but there are around 30% vacant posts, which need to be filled, especially those for Forest Guards, and Forest Watchers. To overcome the deficiency, supplementary PCP watchers and APC watchers and other temporary staff have been hired. (Contractual)
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		i. Lists of vehicles, buildings, wireless equipment, and arms and ammunition have been annexed. (Annexure 3.4, 3.6, 3.5) ii. List of essential and desirable resources is annexed. (Annexure 3.13)	The official buildings are adequate. The residential buildings are adequate for officers, but more buildings should be constructed for the residence of field staff and their families. The number of two-wheeler vehicles needs to be increased for patrolling the roads passing through the reserve. The number of four-wheeler vehicles needs to be increased for vehicular patrolling including the night patrols, on the forest paths. The old wireless set also need to be replaced.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair	✓		
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

*** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		i. Details have been annexed. (Annexure 3.7)	Yes, they are linked to priority actions. Funds from NTCA have been proportionately inadequate and have not been released timely. The details of funds released by NTCA and their utilization for last 3 years in given here Funds Released Utilization 2014-15- 276.591 lakh / 276.591 2015-16- 204.24 lakh/ 200.60 2016-17- 655.24 lakh / 655.10 NTCA approval of annual plan comes only in September.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		i. Details have been annexed. (Annexure 3.8, 3.9, 3.10, 3.11)	Yes, they are linked to priority actions. Funds from the State are adequate and are timely released also. During 2015-16, the TR has received 11.72 crores from State Govt. under plan scheme and 1.03 crores in non plan. During 2016-17 the allotment under plan scheme is again 11.03 crores and under non plan 1.09 crores. The relevant plan schemes funded by State Govt. are fully utilized. Nature conservation of Wildlife, Eco-tourism, under Chinara Vana Darshan, subsidy for Solar fencing compassionate grant under project elephant.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		i. Details have been annexed. (Annexure 3.12, 3.12.1)	Wildlife conservation Trust, Mumbai, WCS/CWS and ATREE are the main contributors for resources from NGOs. WCT is the organization which supports the conserve action activities directly. They give a lot of support in the form of equipment, clothing, vehicles etc. to the frontline staff. WCT had also bought 25.37 acres of land in corridor area to strengthen the corridor. Centre for Wildlife Studies /Wildlife Conservation Society's contribution leaves much to be desired, as they never share data of Tiger, sympatric co-predators and prey species populations with the department, except a sketchy hard copy of the same. ATREE's research is more people /tribal centric than being conservation oriented. Most of the results are not much helpful for management. Local NGOs involved in Chinnara Vana Darshana for school children.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		i. Details have been annexed. (Annexure 4.1)	A number of trainings have been arranged in past, and a good proportion of total staff have been trained in wildlife related matters, such as phase IV monitoring, GPS workshop, camera trap with wildlife crime etc. But non of the staff has been trained in WII in any Diploma on certificate course.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		i. List of promoted staff has been annexed.	Confidential reports of the staff given by their reporting officers are used to judge their performance and promotion is linked to performance and fulfillment of
Some linkage between staff	Fair	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

management performance and management objectives, but not consistently or systematically assessed.			(Annexure 4.2)	the other eligibility criteria for the post, especially the number of years spent in the current post. State Government does not have any scheme under which a staff can be promoted only on the base of performance, without having completed the minimum years required for the promotion.
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		i. Related photographs have been annexed. (Annexure 4.7)	The participation from the locals comes most importantly in the form of intelligence sharing. Many people from tribal settlements have participated in fire drowsing activities over last many years. Volunteers also help the department during festivals like Dodda Jatre of BR temple, and Rotti Habba at Dodda Sampige tree, especially in crowd control. Volunteers also helped in the all India tiger census 2016-17 Wildlife week celebration, awareness camps in school children and fire awareness camps also garner public participation. It makes a difference in creating awareness, in reducing fire incidents, preventing and controlling poaching incidents, crowd management in festivals and estimating wildlife populations. Presently, there are 42 EDC & 5 VFC. But no seed money has been provided to any EDC. No specific attempt by park authorities for education of sholiga tribe children.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGIs in population estimation may be taken into account

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		i. Details of RTI applications received and disposed have been annexed. (Annexure 4.3)	Yes, complaints are addressed effectively. The complaints are received in the Incoming register and forwarded to specific files, if they are relevant to some particular head. Action is taken at the field level to address the complaints. No visitors complaint register could be shown to committee.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		i. FRA settlement document has been annexed. (Annexure 4.8) ii. Data of collections at LAMPS over last 5 years has been annexed. (Annexure 4.6) iii. Livelihood generation details have been annexed. (Annexure 4.4)	Cases under FRA settled. Soligas are local tribes who had been collecting honey and lichens for generations. It has been streamlined by giving community rights to these settlements. The collection has been limited by allowing this activity only in fixed areas, for a fixed period of time. They sell these products to local LAMPS (Large Adivasi Multi-Purpose Society) societies headed by ACFs of the two sub divisions. An initiative e of value addition and branding to this has been started by FD at Kanneri colony. Various activities carried out by department also provide important livelihood opportunities for the tribals, including women. EDCs gain from activities like sale of the above mentioned NTFPs and from the collections from ecotourism. Kanneri Colony EDC gets a share from the wildlife safari fees paid by K.Gudi wilderness Camp (a unit of Jungle Lodges & Resorts Ltd.). The EDC has got around 17.48 lakhs from ecotourism since its inception.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		i. List of settlements inside the core area and buffer area has been annexed. (Annexure 1.4 and 1.5, respectively)	Around 10 Soliga settlements are inside Core Area. Patta has also been given under FRA. Soligas have not yet opted for voluntary relocation, in spite of meetings in past to discuss the relocation packages and their views about relocation. With the new generation going out from the reserve to work, their views are changing, but it will take some more years before they would opt for voluntary relocation. Till now, no implementation has been possible, though the discussions are on with locals on voluntary relocation. TR authorities advocate for symbiotic relationship of tribals and forest.
Plans have been made but no implementation	Fair	✓		
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		i. Related details have been annexed. (Annexure 5.3)	The information about management issues and actions can be made available to the public under RTI. The State Forest Department website is – www.karnatakaforest.gov.in , or www.aranya.gov.in . Website designing in progress. The TR brochures give some basic information about the reserve and the tourism facilities. The TR brochures were overtaken by a booklet about the reserve named –BRT –A Walk Through. It covers the essence of the reserve from various perspectives. It has been circulated widely. The hoardings in the nearby towns also make a mark of the TRs presence
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor			Yes, they are appropriate and adequate. 7 Rooms are provided by the Forst Department to the visitors in K.Gudi and BR Hills tourism area of the TR. Jungle Lodges & Resorts Ltd. Also has 8 tents, 3 loghuts and 3 Delux Suit to offer to the visitors. Safari tourism facilities are provided to the visitors through the Forest Department and M/s Jungle Lodges & Resorts in the K.Gudi tourism area of TR. Vehicle facilities for wildlife safari. (Two safari vehicles such as lodges). The committee did not find any interpretation centre. Restrooms for both genders are available at the place of operation of safaris at K.Gudi.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feedback on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		i. List of research studies going on/finished in the	Yes, routine workshops are conducted by researchers about their finished or ongoing works. This gives constant scientific feedback
Some evaluation and reporting	Fair			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

undertaken but neither systematic nor routine.			TR is annexed. (Annexure 5.1).	and the management implications of their works to the reserve.
Systematic evaluation and routine reporting of trends undertaken.	Good	✓	ii. List of studies used for TCP has been annexed. (Annexure 5.2)	Phase IV monitoring & all India Tiger Estimation was conducted systematically.
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			In toto 43 researches have been conducted on the TR. Some of them are study on population Genetics of Asian Elephants, "Ecology" and impacts of the invasive species, lantana camera, Research on Leopards, Distribution and population Dynamics of Tigers, Impact of NTFP extraction on regeneration, population structure and species composition etc.

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		i. Details of buildings and vehicles repaired under various budget heads have been annexed. (Annexure 5.4)	There is an annual Store and Tools schedule in the form of FAC (Forest Accounts Code)-58,59,60 is maintained at the division and the RFO level. It gives the systematic inventory of all the assets, movable and immovable, of the reserve. They are adequately maintained under different schemes annually.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓	ii. Details of IT equipment and solar equipment provided to the camps have been annexed. (Annexure 5.5)	There are different rules /set norms set by State Govt. for different types of items. For e.g. there is a state sponsored scheme for building maintenance. Maintenance of APCs is done under various state and center schemes. Likewise, there are state sponsored schemes for maintenance of weapons and vehicles. Departmental roads are also maintained in different state and central schemes. For vehicles, tyres are changed and servicing is done as per fixed kilometer readings. Most of other maintenance is done on requirement basis. According to project tiger Authorities funds available to them for maintenance is sufficient.
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key	Poor		- Details	Increased sighting of Four-horned Antelope, Leopard

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

threatened/ endangered species are declining.			have been annexed. (Annexure 6.6)	Cat, Rusty spotted Cat, Elephants, Gaurs etc in the reserve indicates an increasing trend of threatened species. Similarly, there is good conservation of rare and endangered flora over the years. The study conducted by Dr. BR Ramesh of Pondicherry institute has documented various rare and endemic flora of this region. Study of Dr. H.N. Kumara on lesser carnivores, herbivores, including elephants shows a healthy population of the study species. He reported that the biomass is quite high, only seven parks in the country support such high biomass. BRT bird survey conducted in Dec, 2012 had increased the earlier checklist of BRT birds. Some rare species of birds like Eurasian Wryneck and Malayan Night Heron have also been added recently. Phase IV tiger monitoring revealed increase in tiger population (63 nos.). BRT has also got a very healthy prey population.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		- Genotyping faecal samples of Bengal tiger (<i>Pantheratigristigris</i>) for population estimation: A pilot study for earlier population estimations. - WCS document titled 'Meta-population Dynamics of Tigers in the Malenad-Mysore Landscape of Karnataka' for the later population estimations. - A table of individually identified/monitored tigers has been annexed. (Annexure 6.2)	Population of tiger is showing a strong increasing trend, from 29 in 2006, to 33 in 2010, to 59 in 2013. Camera trap studies during 2015 estimated 55, during 2016, 63 tigers, from Phase IV monitoring. This shows an increasing trend of tiger population.
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good	✓		

***This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.**

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		i. Detail about forest offence cases has been annexed. (Annexure 2.5) ii. Detail about fire incidents has been annexed. (Annexure 6.3) iii. Detail about compensation for human-wildlife conflict has been annexed. (Annexure 2.2)	Overall threats to the TR have reduced over time. Reduction in cases of top three priority threats, viz. Forest /wildlife offences, human-wildlife conflict and forest fire shows that the threats have been reduced. The graphs for these 3 threats have been shown to committee. The fourth topmost threat is the visitation of pilgrimage centers inside
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

efficient system is in place to deal with any emerging situation				the forests by hordes of people. An impact-reduction initiative has been taken up by the Forest department in collaboration with some NGOs, like vana Jagruthi.
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***Does the TR have a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		- Pages from visitors' book at K Gudi have been annexed. (Annexure 6.4)	The expectations are generally met. The visitors book at K.Gudi shows that usually visitors are happy with their wildlife experience.
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good	✓		
Expectations of all most all visitors are met	Very good			

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		i. Related photographs have been annexed. (Annexure 4.7)	Intelligence sharing and fire drowsing are tow critical activities in which the reserve is helped by the locals. The participation from the locals comes most importantly in the form of intelligence sharing Many people from tribal settlements have participated in fire drowsing activities over last many years. There are 42 EDCs and 5 VFCs in the villages in and around the reserve. They act as an important link between the department and the locals. They help in creating awareness about fire and wildlife conservation. The participation by locals in wildlife week celebration, awareness camps in school children and fire awareness camps also garner public participation. Their support makes a great difference in creating awareness, in reducing fire incidents, preventing and controlling poaching incidents, crowd management in festivals and estimating wildlife populations.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	04	10	50	35.0	74.2%
2.	Planning	07	10	70	57.5	
3.	Inputs	05	10	50	35.0	
4.	Process	06	10	60	40.0	
5.	Outputs	04	10	40	30.0	
6.	Outcomes	05	10	50	40.0	
Total		31		320	237.5	

*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 31 Assessment Criteria including 'normalization'.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	✓		The research plans for long term vegetation and weeds monitoring plots.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor			Protection measures over the years have increased the green cover. In the past, these forests were subjected to heavy grazing, logging for timber and firewood, bamboo harvest, frequent fires, karada grass /elephant grass cutting for special paper making by MPM. These negative activities have been curtailed completely by adopting rigid protection , which has resulted in the good coppice growth and regeneration. This will certainly increase the carbon sequestration value of the forest. All the APCs, Forest Rest Houses and staff quarters are equipped with green practices like solar lighting, Gujarat boilers, solar water heaters, which arrests carbon release. Forest fringe villages and inside enclosures have been provided with a total of 12410 LPG connections over last 8 years, which reduced the firewood consumption of these villages, leading to similar effect as mentioned above.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good	✓		
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4. Kali Tiger Reserve, Karnataka

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1.1.A) TCP Chapter 6	1. The values of DATR(KTR) have been identified categorized and documented as follows. a. Biological value b. Scientific value c. Ecological process and functions. d. Educational Value e. Recreational vale f. Economical value g. Historical value h. Religious and Cultural value 2. A portion of KTR has been identified as Elephant corridor and the area has been protected for the movement of elephants. 3. In Kasturirangan report the importance of Western Ghats are mentioned where most of the villages reported in Kasturirangan report are inside DATR. Values of the area is assessed by the KRR. 4. No specific record could be produced for assessment and monitoring of different values mentioned in TCP.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good		1.1.B) Government of Karnataka Notification No. FEE 245 FWL 2015, Bangalore, dated 11-12-2015. 1.1.C) Elephant Reserve Notification Dt: 26-03-2015 1.1.D) Kasturirangan report on Western Ghats Forest area	

1.2 Are the threats to TR values well documented and assessed*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		1.2.A) Threats to TR	Threats to TR are well documented. 1. As the Tiger Reserve is having vast grasslands, teak and bamboo forests. Bamboo has flowered and forest fire is the major threat. A Fire Management Plan has been prepared, where highly fire prone areas and moderately fire prone areas are identified and a detail firefighting action plan is suggested. 1.A.T.R. has not yet been strengthened by a disaster risk management plan and with security plan.
Threats generally identified but not systematically assessed.	Fair		1.2.B) TCP Chapter 7 P.No.62	
Most threats systematically identified and assessed.	Good	✓	1.2.C) Photos & List of Teak plantations.	
All threats systematically identified and assessed.	Very good		1.2.D)Photos of Flowered bamboo. 1.2.E) Map of Power Project	

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

			<p>1.2.F) Map showing enclosures within KTR.</p> <p>1.2.G) Compensation details of man animal conflict documents</p> <p>1.2.H)Ulavi Protection Strategy.(Letters correspondence)</p> <p>1.2.I) Immunization to the local cattle Photos.</p>	<p>2. Presence of large dams and atomic energy stations at a distance of less than 10 kms. Is a major threat to the wildlifecorridor. The establishments of Karnatak power corporation (KPC) is also a threat.</p> <p>3. Many enclosures are distributed inside the core/critical area of DATR causing threat of straying of wild animals.</p> <p>4. Man animal conflict is the major threat of the PA, for the crops raised by the villagers.</p> <p>5. Ulavi&Kavala temple Pilgrimage is another threat for TR especially during Festive season which is effectively controlled.</p> <p>6. Outbreak of diseases like HS and FMD due to presence of large no. of cattle in revenue enclosures. But immunization programme to peripheral cattle population is seriously taken up.</p>
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***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		1.3.A) TCP Chapter 5 P.No.51	<p>Though TR has number of habitations they are basically non-tribal agrarian families who do not venture into forest for livelihood are collection of NTFP.</p> <p>1. DATR (KTR) is having two major forest dwellers like KUNBI and GOWLI's.</p> <p>Many enclosures are small agrarian non-tribal hamlets which do not depend on forests for livelihood.</p> <p>2. A major area of 9708.70 ha. has been covered by local villagers by growing agricultural crops.</p> <p>3. An extent of 1.33 ha. of encroachment in reserve forest has been evicted in KTR . From around 4500 families living in core area, 109 families have been relocated since, 2014. Out of 87 villages inside core and Buffer area, mostly 62 villages are in core only.</p> <p>4. The biotic pressure like collection of Minor Forest Produce (MFP), Cattle grazing, kindling fire has drastically reduced by convincing local people through EDC's.</p> <p>5. Buffer area notified under DATR (KTR) has been handed over to TR and there is unified control. The total area under administrative control of F.D. is 1353 sqkm.</p>
The 'Core Area' has some human and biotic interference.	Fair		1.3.B) A detail of enclosures along with human population is enclosed.	
The 'Core Area' has little human and biotic interference.	Good	✓	1.3.C) No. of Encroachment List	
The 'Core Area' has no human and biotic interference.	Very good		1.3.D) No.of Encroachment Progress Report 1.3.E) Core & Buffer Area village List 1.3.F) Handing over & taken over letters of Buffer area in Kumberwada&Anshi Ranges.	

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		1.4.A) Notification of Core/Critical area of Tiger Reserve	1. Critical tiger habitat of Dandeli-Anshi Tiger Reserve(Renamed has KALI Tiger Reserve Notification No. FEE 245 FWL.2015 Dt: 11-12-2015) has been notified as per G.O No. FEE 299 FWL 2007 dt: 20-12-2007.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair		1.4.B)Notification of Buffer Area	2. Subsequently an area of 163.3303 sqkms and 282.63 sq. Kms has been declared as buffer area of the Tiger Reserve.
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			3. An additional area of 248.0661 sq. kms has been declared as sanctuary and added to DATR(KTR). Notification No. FEE-302-FWL-2011-(I) dated: 27-12-2011.
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	✓	1.4.C) Certificate of Registration for DATCF 1.4.D) DATCF received 80G Exemption Under Income-tax Act 1961 1.4.E)Constitution of Steering Committee Notification No. B/CR-61/2006-07, Dated: 27/05/2009 1.4.F)Compliance report on Tripartite MOU	4. Tiger Conservation Foundation has been established by registering the DATR Foundation Karnataka as a trust on 06-12-2007. 5. KTR is the only tiger reserve in Karnataka to enjoy the honor of Income Tax exemption under 80G of Income Tax Act, this mutually beneficially provision can be availed by businessmen, Corporate, and salaries class etc. 6. A state level steering committee under the Chairmanship of Honorable Chief Minister is Constituted as per G.O notification No. B/CR-61/2006-07, Dated: 27/05/2009. But no meeting have yet been done. 7. The compliance report on Tripartite MOU has been prepared and submitted to the NTCA up to 2013-14 through proper channel

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.5 **Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?**

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		Govt. Notification declaring core /critical area. State Govt. Notification declaring buffer area.	<ol style="list-style-type: none"> The entire Kali Tiger Reserve with an area of 814.88 Sq.km was notified as core / critical tiger habitat by the state Govt. vide order no. FEE 299 FWL 2007 dated 20.12.2007. The State Govt. under section 26A of the Wildlife (Protection) Amendment act 2006 vide its order no. FEE_16_FWL_2008 dated 21.08.2009 and notification no. FEE 123 FWL 009 dated 01.09.2010 notified an area of 282.63 sqkm. to be buffer zone of the Kali Tiger Reserve. Both core and buffer zone and in addition some extra forest area is under administrative control of FD.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good	✓		
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very good			

2. Planning

2.1 **Status of Tiger Conservation Plan (TCP)*?**

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		2.1.A) Tiger Conservation Plan Approved by NTCA Dt: 23.04.2015	<ol style="list-style-type: none"> The Conservation Plans for Core and Buffer zone have been prepared and submitted to the Principal Chief Conservator of Forests and Chief Wildlife Warden. A revised Plan as per the guideline of National Tiger Conservation Authority, New Delhi has been prepared in final shape and submitted to the Principal Chief Conservator of Forests and Chief Wildlife Warden for approval. <ol style="list-style-type: none"> Final TCP was approved 23.04.2015. The plan period is from 2013-14 to 2023-24. While preparing TCP, the consultation with stake holders at various level was done.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		2.2.A) TCP Chapter 7 P.No.64	<p>Tiger reserve safeguards all threatened Bio-diversity values.</p> <p>1. Hunting is totally banned and effective protection has improved wildlife status.</p> <p>2. Threat of disturbance is safeguarded by relocation. Rehabilitation process has already been started which helps in creating inviolate areas there by conserving bio-diversity.</p> <p>3. Local People / tribals have been given jobs in anti-poaching camps which has won the heart of many villagers in conserving bio-diversity.</p> <p>4. There are 43 anti-poaching camps in DATR situated in all vulnerable areas. Which helps in protecting the wildlife.</p> <p>5. Night traffic Checking gate is banned to provide inviolate habitat to animals. Traffic movement in the roads passing through TR is stopped between 6 pm and 6 am. Presently there are 8 check posts and each post is manned by a F.G and Two watchers.</p> <p>6. Threat of lack of public support is safeguarded by Awareness programmes conducted in villages and schools not to hunt and eat species like Hornbill, Malabar Gaint Squirrel, Pangolin, Wild Boar, etc.,</p>
TR safeguards a few threatened biodiversity values.	Fair		2.2.B) District level rehabilitation committee meeting proceeding	
TR safeguards a large number of threatened biodiversity values.	Good	✓	2.2.C) Gramasabha meeting held for rehabilitation in Anshi&Kulgi Ranges.	
TR safeguards all threatened biodiversity values.	Very good		<p>2.2.D) Daily Patrol log has been maintained in Huli Software.</p> <p>2.2.E) Map of APC</p> <p>2.2.F) Letter of DC to Director regarding movement of vehicles banned during night time.</p> <p>2.2.G) Street plays done by SudarshanHegde Awareness Activities photos.</p>	

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		2.3.A) Register of meeting held with stakeholders. Proceeding held on Dt: 27-09-2015	<p>Yes stakeholders are given opportunity to participate in planning process.</p> <p>1. The protected area has been declared as Tiger Reserve during 2007, of taking the stakeholders into fold of the planning and implementation process.</p> <p>2. All Stakeholders, other departmental officials, media</p>
Stakeholders participate in some planning.	Fair		2.3.B) Co-ordination committee meeting copy enclosed	
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>persons, NGO's and elected representatives involved in planning process.</p> <p>3. The EDC's have been consulted in Eco-tourism planning and implementation there by involving them in planning participation.</p> <p>4. NGO's and Home stay resort owners are involved in the advisory committee to regulate the eco-tourism.</p>
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***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor			<p>Habitat management and programmes, practices have been planned and executed as per the prescription of the management plan. In the Tiger Conservation Plan, the following habitat management practices have been incorporated.</p> <p>1. To Conserve valuable wet evergreen shola, grassland, moist deciduous eco system.</p> <p>2. Protect and maintain the rare, endemic, endangered and wild plant species in their own habitat.</p> <p>3. Intensive fire protection measures have been prescribed in bamboo flower areas and sowing of bamboo seeds in open areas has been suggested to provide fodder and soil stability.</p> <p>4. Control burning/ early burnings proposed in grasslands and bamboo flowered areas. But committee observed that controlled burning is not done in T.R.</p> <p>5. Soil conservation works like creation of waterholes and check dams are constructed at a strategic places in the reserve to provide water facilities during pinch period and for moisture conservation.</p>
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓	2.4.A) Vegetation map of KTR	
Habitat management programmes are thoroughly planned and monitored.	Very good		2.4.B) Fire Management as per TCP Chapter-7)P.No. 76	
			2.4.C) Soil & Moisture Conservation Chapter 7 (P. No.62)	
			2.4.D) Waterhole map of DATR	
			2.4.E) Weed Management as per TCP Chapter 7 (P.No.72)	

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>6. Weeds like Lantana camara, Eupatorium odoratissimum species is removed to encourage local grass species on experimental basis. But annual removal area is quite scanty.</p> <p>7. No specific strategic habitat management plans could be shown to the committee for threatened species (IUCN Category).</p>
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***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		2.5.A) Daily monitoring Report of APWs (2.2.D)	<p>The following protection measures are undertaken to protect the Tiger and its co-predators and other wild animals.</p> <ol style="list-style-type: none"> 1. Surprise raids are organized in vulnerable areas of the Tiger Reserve to monitor the movement of poachers. 2. Steps are taken by frontline staff to prevent entry of poachers from outside the state like Goa. 3. Strategically there are 43 Anti-poaching camps spread over, in 6 Ranges with 215 APC camps watchers, who are equipped with weapons, Binoculars, Cell Phones, Walkie Talkies, Torchers etc. 4. The section and beat staff are halting in the APC camps on rotation basis to co-ordinate the functioning of the camps. 5. Monthly reports on the functioning of the APC camps are being received from the rangers and reviewed. 6. Daily monitoring is carried out by the field staff and APC watchers with GPS tracking through regular patrolling for the movement of Tiger and its co-Predators.
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓	2.5.B) Statement showing the offence detection and disposal. (Shown in TCP)	
TR has a comprehensive and very effective PS and SA.	Very good		2.5.C) Checking Gate Map of KTR 2.5.D) APC Map as shown in (2.2.E) 2.5.E) Daily Monitoring TCP Chapter-9 P. No.99 2.5.F) Letter for obtaining Camera Traps. 2.5.G) Letter of DC to	

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

		<p>Director of KTR regarding movement of vehicles banned during night time. (2.2.F)</p> <p>2.5.H) Fire Management TCP Chapter No.7 (P.No. 76)</p> <p>(2.5.I)GPS Tracking map of APC 2.2.D)</p> <p>2.5.J) Letter written to RFO's on action taken for Fire Protection.</p> <p>2.5.K) Map showing features</p> <p>(2.5.L) Sniffer Dog Squad photos</p>	<p>7. Monsoon patrolling has been intensified in the vulnerable areas.</p> <p>8. Camera traps are being setup at vantage points to monitor the movement of Tiger and other animals and also movement of the offenders.</p> <p>9. Prohibited Night traffic between Potoli to Marada 16 Nos of chek posts are operating in the vulnerable places.</p> <p>10. All the APC Camps are regularly monitored and their day to day activities for obtained and recorded in the control room through wirelesand GPS.</p> <p>11. Comprehensive & Effective fire control measures were implemented to protect park from fire damage.</p> <p>12. Comprehensive management map showing different layers such as topo sheet, village boundary, cadastral map, section beat boundaries, road network, APC & Checking gates are prepared range wise for better protection.</p> <p>13. Sniffer Dog squad will help in enhancing protection capability of the TR.</p> <p>14. No security plan is there and security audit has not been done.</p> <p>15. No special tiger protection force ESTPF is there as it is not a sensitive the Tiger Reserve as per park authorities</p>
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		2.6.A)A detailed note on Human Animal Conflict in DATR Dandeli.	To tackle man animal conflict the following effective measures have been undertaken. 1. Staff have been trained in mitigatingman-animal conflict situation like driving strayed animals safely into the forest
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

human-wildlife conflicts.			<p>2.6.B) Compensation Progress report (1.2.G)</p> <p>2.6.C) Letter to PCCF WL regarding control room operation during fire season. (2.5.J)</p> <p>2.6.D) Photo of Solar Powered Pump set to bore well at remote forest area.</p>	<p>areas, tranquilizing equipment's and relocating the problematic animals.</p> <p>2. Adequate compensation for affected people is given as early as possible in accordance with the eligibility prescribed by the Government.</p> <p>3. The Police and local administration and local people have been greatly aiding in the measures to control man-animal conflicts.</p> <p>4. Around the clock control room number 08284-231585 has been installed in office of the Director, DATR Dandeli. to convey messages regarding Human-Animal Conflict.</p> <p>5. During last two years no human kill or human injury reported.</p>
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***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		2.7.A) TCP Chapter 6 (P.No.59)	<p>1. Kali TR is a part of nearly 8800 sqkm of tiger conservation landscape of protected areas and reserve forests.</p> <p>2. The vision of the tiger reserve is to ecologically and scientifically manage the park on the principles of landscape management.</p> <p>3. Comprehensive of Map of DATR vis a vis a vis neighboring divisions made to help landscape management.</p> <p>4. Elephant corridor has been identified and steps have been taken to managed the landscape mitigate man animal conflict.</p> <p>5. Interstate negotiation and co-ordination meeting with Goa is done regularly.</p>
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓	2.7.B) Map of Landscape	
TR is fully integrated into a wider network/ landscape.	Very good		2.7.C) Corridor connectivity map (TCP Map P.No. 190,197,198)	

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		3.1.A) Statement showing details of qualification & Age	1. Young adequate well organized staff deployed in the Tiger Reserve. As on date out of the vacancies of F.G. 74 have already been filled and only 11 posts are vacant.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair		3.1.B) Sanctioned & Vacant post List. And Staff Strength Charts.	2. It is the state policy to deploy new recruits to Tiger Reserves. The park has 32 staff over the age of 45 but 89 personal are below the age of 45 which clearly indicate the frontline staff of Forest Guard, Watchers & Dy.RFOs is young and energetic.
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good		3.1.C) Ltr to Gungargati for Uavi Jatra & Phase IV Monitoring.	
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		3. A Forest Guard training centre is next to the DATR & the personal are available for emergency & extensive operations.

**This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)*

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		3.2.A) Statement showing maintenance of Quarters.	1. The funds allotted from the state and Central schemes have been judicially utilized to maintain the staff quarters in the last two years. Further a number of residential quarters have also been constructed for the staff.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓	3.2.B) Statement showing Vehicle Details.	2. 27 Vehicles have been procured through the State and Central fund and also the Rapid response vehicle allotted by 2012 have been fully utilized for the purpose Highway patrolling and to mitigate the Human-Animal Conflict.
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good		3.2.C) Statement showing Arms, Details of	3. The TR Authority is suggesting for the replacement of some old vehicles with

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

			Wireless, Computers, GPS etc.,	new one. 4. Essential equipment's such as Darting Gun, Medicines, Cages etc., have been procured and placed in Rapid response vehicle and kept in Dandeli to mitigate the human animal conflict. 5. The funds made available in the State and Central fund have been utilized to procure equipment's such as Arms & Ammunition, Wireless, Statics & Walkie Talkies, Computers, Laptops, GPS, Binoculars & Camera for office and field to fulfill the management objectives.
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* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		3.3.A) Statement showing details of release funds expenditure	1. DATR received funds under NTCA, FDA & CAMPA. The funds released and utilized under Centrally sponsored schemes are enclosed.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair		3.3.B) Progress Report under the budget heat Project tiger	2. There is no time gap between the issue of funds from central and to the state. There is smooth & timely transfer of funds.
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		3. There is timely submission of utilization certificate by the KTR. 4. But there is a huge gap noticed between plan allocation and expenditure between last 4 years i.e. , 2013-14 to 2016-17 out of total plan allotment of 2224.48 lakh, expenditure is only 943.00lakhs, leaving a balance of 1281.48 lakhs.
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		3.4.A) Progress report under the budget head Project tiger (3.3.B)	DATR received funds under Project Elephant, KFDF, 13 th Finance, Cultural operation, Nature Conservation, Buildings, Western Ghats and other state budget heads. The funds released and utilized under State sponsored schemes are enclosed.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		3.5.A) The details shown activities done by the NGO's are enclosed herewith.	1. Number of NGO's are functioning in the Tiger Reserve area viz., 1. Wildlife Conservation Society, Bangalore 2. Nature Conservation Foundation, Mysore. 3. Asoka Trust for Research in Environment and Ecology 4. Asian Nature Conservation Foundation 5. Centre for Environment Education. 2. Wildlife NGO's provide basic information of Wildlife census data used in analyzing status of prey and predators 3. NGO's provide basic data of statistics on social status of people involved in rehabilitation. 4. Educationist NGO's provide information and assist conducting eco-education programmes.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair		3.5.B) Broachers Scanned Copies are enclosed	
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good		3.5.C) Education activities by CEE	
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good	✓	3.5.D) ChinnaraVanadarshana for School Childrensphotos	
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good	✓	3.5.E) Tree Wealth of KTR by Prof. Kukarni	

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		4.1.A) Statement Showing Trained man power resources in Wildlife Conservation. 4.1.B) elephant Movement Tracking Workshop	Yes – DATR staff is trained locally and in training institutes on various aspects of protection, Wildlife conservation & Management. DATR staff is given regular training in different aspects 1. Phase – IV Monitoring 2. Weapon Training 3. Legal Training 4. Man-Animal Conflict Training 5. Guide Training 6. GPS Training Non of the staffs are trained from WII. A vertical training needs to be arranged by WII /NTCA for 10 days.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		4.2.A) Awards to KTR	Management performance for most of staff including the field Directors are directly linked to achievement of relevant management objectives. 1. During 2014-15 and 2016-17 the fire incidents were drastically reduced in comparison to the last five years due to the fire watchers engaged in the fire prone areas as well as fire line cleared in the vulnerable areas as per the assessment of fire vulnerability. 2. The threats like man animal conflict, Forest Fire, Poaching, illicit cutting of trees, interferences of human and cattle into the tiger reserve have been totally controlled. Poaching was virtually nil.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		4.3.A) Awareness Programme & Wildlife week Celebrations photos and awareness boards are enclosed. 4.3.B) Ltr to DC, and Doctors for Ulavi Jatra 4.3.C) Photos of Law, Legal and SHG Workshops 4.3.D) Paper cutting of the Wildlife week (5.1.C)	1. Participation of public is ensured in activities like eco-awareness programme, Wildlife Week Celebration, World Environment Day and World Earth day celebrations, in addition to this the NGOs, students of schools and colleges are involved in creating awareness messages time to time. 2. During 2013-14 the estimation of Wildlife population have been carried out with full transparency by involving all people throughout the nation like, Doctors, Engineers, Teachers, Students, NGOs, etc., as volunteers.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good	✓		

**The involvement of NGOs/ NGLs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		4.4.A) Feedback register Kulgi & Anshi Nature Camp 4.4.B) Visitors register	1. Grievances and complaints of the staff are enquired and discussed in monthly meetings. 2. Sub-Division level officers are entrusted with the job of enquiring into allegations, petitions, complaints etc., Most of the grievances of the staff are settled expeditiously. 3. Registers having receipt of the compliance are systematically maintained.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of Owomen?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		4.5.A) Photos of the Beneficiaries	Livelihood issues relating to Kunbi and Gowli's the only two tribal groups are given utmost attention by the Tiger Reserve Administration. Their urgent needs are attended. Facilities have been provided to improve their life standard.
Few livelihood issues are addressed by TR management.	Fair			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Substantial livelihood issues are addressed by TR management.	Good		4.5.B) Free Medical Checkup Photos	1. They are mainly agrarian society and efforts are made to strengthen their agriculture livelihood by reduce conflicts
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good	✓	4.5.C) Statement showing generation of Mandays.	2. Solar lights, solar lanterns were provided to the local villagers enabling them to practice alternate livelihood activities. 3. Free medical checkup has been carried out in Bazarkunang of Castlerock Wildlife Range for the local villagers. 4. Able tribal youths have been employed watchers in 43 APC camps functioning in different ranges. They are being paid daily wages in addition to feeding charges. 5. Eco-development committees have been involved in conducting safari for the tourists with their vehicles, thereby enhancing their livelihood. 6. Local villagers was trained as guides and naturalists. 7. During the last 3 years large number of mandays was generated among the tribals/locals giving them livelihood. 8. The total number of LPG distributed to fringe villagers, under different head is 936 during 2016-17 and 100 during 2017-18.

***The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		4.6.A) District level committee meeting (2.2.B)	1. KALI Tiger Reserve has identified 3910 No. of families residing in side the reserve. Out of which 542 families have been identified the rehabilitation purpose. 2. Rehabilitation process is already is going on in Anshi and Kulgi ranges. 96 families in Anshi range has got approval for rehabilitation by the district level committee. 3. 131 families have already been given partial money for the rehabilitation purpose in option-I 4. Check Issue for Rehabilitation Families 5. The rehabilitation and relocation process is not wholesome in Kali TR. In some cases, only partial relocation has taken place.
Plans have been made but no implementation	Fair		4.6.B) Funds released to KTR under Govt. order (2.2.B)	
Plans have been made and some implementation is in progress	Good	✓	4.6.C) Note sheet amount released to beneficiary. 4.6.D)Cheque Issue and house shifting photos of Rehabilitation	
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good		Rehabilitation families.	

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

*Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		5.1.A) Home page of website. www.kalitiger.com 5.1.B) Paper cuttings Law Workshop 5.1.C) Paper cuttings of Wildlife week celebration. 5.1.D) DATCF Membership.	Yes the information on TR management is made available to public, media, stakeholders at large. 1. A comprehensive website is created covering information's such as History, Flora Fauna, Status of tiger, Tiger foundation, Tourism facilities etc., 2. Workshops on Hornbill, King Cobra were conducted and widely publicized for public. 2A. Hornbill interpretation centre near Dandeli is quite good. 3. Wildlife week celebrations and other activities are reported in local/state newspapers. 4. Activities of the TR are planned implemented involving public representatives and stakeholders who are made members of DATCF.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good	✓		

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		5.2.A) TCP Chapter 4.4.1, 2,3,4 (P.No.44) 5.2.B) Interpretation centre photos. 5.2.C) KTR Brouchers, 5.2.D) Feedback register.(4.4.A)	Yes there are adequate and appropriate facilities available for tourists visiting KTR . 1. Tourist visiting DATR will be accommodated in KulgiNature Education Camp,Anshi Evergreen Camp, and also in Adventure Camps of Castlerock wildlife range. 2. Services such as wilderness camp, Safari, bird watching, white water river rafting, trekking, interpretation hall are available in the reserve. 3. Trekking service is main attraction with number of trekking routes such as Barpali to Kadra, AnshitiNesarthamb, Bargadda to Kamargaon,
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

			5.2.E) Watch Towers Photos.	<p>S.R.Bhagwath point, Sykes point &Kavala caves.</p> <p>4. Kadra view point, UlaviChennaBasaveshwara temple, Basava Falls, and evergreen forest all along the Vakinala are the star attractions of Anshi Nature Camp.</p> <p>5. Doodhsagar falls and trekking path to Doodhsagar top are the star attractions of Castlerock Adventure Camp.</p> <p><u>Eco- Tourism Facilities:</u></p> <p>a. 14 Log houses, 18 deluxe tents, 2 bed rooms, 4 double bedrooms, and 4 dormitory's are available for visitors.</p> <p>b. One safari bus and ten safari jeeps are provided to the visitors in the morning and evening hours at Kulgi Nature Camp.</p> <p>c. Advance and current booking facilities over phone is available in the reception center at Dandeli division HQ.</p> <p>d. Most of the Log houses, tents and rooms have been renovated and drinking water as well as hot water for bathing purpose are provided.</p> <p>e. 2 interpretation center in Kulgi&Anshi Nature camp which gives the tourism map of in and around DATR and a self-description of the insects, birds and amphibians presence in the DATR. Tiger reserve related publication like, films, videos, books, brochures are publication kept in the interpretation center for visitors.</p> <p>f. Educated disciplined local youth were selected from among interior hamlets of the tiger reserve and trained as naturalist in interpretation, art of communication, manners and etiquettes. These locals are engaged as guide accompany the visitors during wilderness trail, timber trail, bird trail, trekking etc.,</p> <p>g. Watch towers are constructed in many important places of the TR to watch the wild animals in their wilderness.</p> <p>h. There are many paragolas constructed in near view points and also in nature camp for the visitor's facility.</p> <p>i. Vehicle parking is provided in Anshi&Kulgi NC, & Near Phansoli wilderness tour entry point, syntherirock entry point.</p> <p>j. Two safari vehicles & one mini bus are available for the wilderness tour.</p> <p>k. One big size water purifier is installed in kulgi NC for drinking water.</p> <p>l. Visitor's feedbacks registers are maintained in Kulgi&Anshi NC, one at Interpretation center, one at Phansoli wilderness tour entry point and it will be made available for the tourist to write</p>
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				<p>the feedback.</p> <p>m. Broachers and leaf leaflets with the information are being distributed to the visitors.</p> <p>n. Centralized canteen is available for serving refreshment and food to the visitors in Kulgi&Anshi NC.</p> <p>o. One well-built Nagazari hall is constructed in Kulgi NC used for showing Nature education Films, Conducting seminars, and nature education programmes etc.,</p>
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***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feedback on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		5.3.A)TCP Chapter 8 P.No.79	<p>1. DATR situated in the heart of Western Ghats, encompassed wide range of forest types 3B/C1, 3B/C2, 2A/C2, 2B/E3, 2B/E1 wide range of rainfall from 800mm to 5000mm is haven for researchers and explorers. Various research institutes like BNHS, IISC, CWS, WCS. WWF, CEE & many more organizations have conducted extensive research whose outputs are used in park management.</p> <p>2. Research report received by the Director have been analyzed and some of the research projects like conservation of Hornbill, Birds communities, Shola grasslands, orchids, and other Endemic species, which are incorporated in TCP.</p> <p>3.It is suggested to systematically compile all research papers and also get feedbacks both from the researchers and the concerned field officials, how the findings of the research will be helpful for park management.</p> <p>4. Phase-IV monitoring and All India Tiger Estimation was conducted systematically by involving volunteers.</p>
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓	5.3.B) List of research activities undertaken in KTR	
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good		5.3.C) Phase IV monitoring Letter to Gungargatti& RFOs. (1.2.H) 5.3.D) Tiger and Associated Species report front page. 5.3.E)Tiger monitoring reports 5.3.F)Camera Trap Images 5.3.G) Documents of Phase-IV Monitoring	

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

+Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		5.4.A) Photos of Building Maintenance.	1. Every year Annual proposal has been forwarded to the competent authority under State and Centrally sponsored scheme for the maintenance and management of infrastructure / Assets. 2. Accordingly receipt of the fund are utilized and systematic inventory is carried out in the Registers like, Stores, Roads, Buildings, Wells, etc., Further the annual maintenance are taken care of. Infrastructures like, Roads, Buildings, Check Dams, Percolation Pond, etc., have been entered upto 2013-14. In addition, separate Assets registers are also maintained. 3. Maintain building, vehicle and other infrastructure maintenance register properly.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		6.1.A) TCP Chapter 3P.No.26	1. In KTR, periodically Tiger and co-predator population are monitored and estimated by national and regional level census. 1997 census has revealed the presence of 13 Tigers and co-predator such as 9 Leopards. All India Tiger estimation (2008), has revealed presence of 33 (31 to 34) tigers in the landscape referred as Sharavathi valley-Dandeli-Khanapur population. The density of important wild animals found in the Dandeli-Anshi Tiger Reserve. The population of threatened species are almost stable.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair		6.1.B) Camera trap surveys in KTR 2008-11	
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓	6.1.C) Line transect survey 2008-11	
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		6.2.A) TCP Chapter 3 P. No.26	1. In DATR, periodically Tiger and co-predator population are monitored and estimated by national and regional level census. 1997 census has revealed the presence of 13 Tigers and co-predator such as 9 Leopards. All India Tiger estimation (2008), has revealed presence of 33 (31 to 34) tigers in the landscape referred as Sharavathi valley-Dandeli-Khanapur population. The density of important wild animals found in the Dandeli-Anshi Tiger Reserve.
Population of tiger is stable	Fair		6.2.B) Preliminary results of line transect surveys Table 3.2, 3.3 & 3.4 (TCP Chapter 3 p.no.35)	
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good	✓	6.2.C)Tiger and associated species report (5.3.D)	

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		6.3.A) TCP Chapter 5(P.No.55)	1. The threats like Man-animal conflict, Forest Fire, Poaching, illicit cutting of trees, interferences of human and cattle into the tiger reserve have reduced considerably. 2. During 2013-14 there Cattle kill 55, Crop damage 102, Human injury whereas 2014-15 there cattle kill 35, Crop damage – 85. Human kill and human injury has reduced to nil in last two years. 3. The rescue and Disaster management center along with the rapid response vehicle have been setup in Dandeli to tackle the emergency situation like human animal conflict, Fire disaster and disasters due to natural calamities. 4. Rescue teams have been setup at range level during peak summer to control fire hazard.
Some threats to the TR have abated, others continue their presence	Fair		6.3.B) Statement showing the Compensation paid during (1.2.G)	
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good	✓		

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		6.4.A) Feedback register of Nature camp (4.4.A)	1. The visitor's expectations are met by providing basic amenities in nature camps. 2. Steps have been taken to provide
Expectations of many visitors are met.	Fair		6.4.B)Feedback	
Expectations of most visitors are met.	Good	✓		

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

Expectations of all most all visitors are met.	Very good		register of Interpretation center. (4.4.B) 6.4.D)OM on Tourism activities.	Rafting facility for the visitors staying in Kulgi NC along with safari. 3. Eco-tourism activities in the TR are in strict compliance of supreme court/ NTCA guidelines.
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***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		6.5.A) EDC Meeting proceedings of AurlIDt: 25-05-2014 6.5.B) photoSwatchaBharath	Generally local communities are supporting of DATR management. 1. Phansoli EDC is interested the task of providing safari service to visitors and the village is benefited and the people are very supportive. 2. AurlI EDC is interested with the task of managing Syntheri rock tourism area, the village receives revenue and people are supportive. 3. Many Eco-Development Committee, local NGO's and stakeholders like Homestay owners and resorts have taken into confidence for the effective management of the reserve.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good	✓		

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	40	84.37 %
2.	Planning	07	10	70	55	
3.	Inputs	05	10	50	42.5	
4.	Process	06	10	60	52.5	
5.	Outputs	04	10	40	35	
6.	Outcomes	05	10	50	45	
Total		32		320	270	

***Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 30 Assessment Criteria including 'normalization'.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		No specific action plan or exclusive programme is implemented to record and monitor climate change data. Only thing is that the TR is acting as a carbon sink. But carbon sink potential has not also been estimated.	A comprehensive action plan on this regard and monitoring mechanics procedure be issued from NTCA or WII.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		Illicit felling in the tiger reserve has been stopped all together preventing any further carbon loss.	
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5. Nagarhole Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Yes. This tiger reserve has been extensively studied and documented. Ref. TCP and various research documents.	Biogeographically, Nagarhole tiger reserve lies in one of the richest biodiversity areas of the country, representing "5B Western Ghat Mountain Biogeography zone" The TR previously known as "Rajiv Gandhi National Park" was named after a small river Nagarhole (literally meaning snake stream in Kannada) that meanders elaborately within the TR before joining Kabini River. The TR spreads over two districts (a) Mysore and (b) Kodagu of Karnataka state. During 2003, this park finally got the status of tiger reserve under project tiger as a part of Bandipur TR. And only in 2007 Nagarhole was declared as a separate tiger reserve. In the TCP for 2014-15 to 2024-25, a number of values have been assigned to the reserve. They are; <ul style="list-style-type: none"> • Economic value • Biodiversity value • Ecological value • Cultural value • Recreational value etc. • Scientific value
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

Cultural Value: The British established control over the area in 1850 by overpowering the local king. Prior to independence, the national park was largely inhabited by tribal hunter-gatherers and other people carrying agriculture within the area. Currently about 1500 tribal families mostly belonging to Janukuruba, BettaKuruba and Yadavaslive within the T.R. and maintain their cultural identity.

Biological Value: Nagarhole tiger reserve is a high density tiger reserve in southern India. Tiger and elephant are two flagship species of this TR. Other large carnivores found here include the leopard and the dhole (Asiatic wild dog) both of which are found in high densities in the T.R.

The Phase-IV tiger monitoring identified 72 individual adult tigers during 2014-15 and during 2016-17, the number of individual adult tigers found is 90. The elephant density in some part of the park goes as high as one individual per sq.km. Both these flagship species have crossed their ecological carrying capacity. The high density of large carnivores in Nagarhole T.R. is attributed to the presence of healthy population of large herbivores, which includes Gaur, Sambar, Deer, Spotted deer, Four Horned antelope, Banking deer, Wild pig etc. There are 32 species of larger mammals, over 330 species of avifauna, 32 species of reptiles, 13 species of amphibians and 10 species of fishes.

Ecological Values – The drier eastern limits of the park consists of dry deciduous forests. Moving west there is a gradual increase in rainfall which signals a shift in the vegetation from deciduous forests to tropical moist and semi evergreen forests. Interspersed with these forests are unique grassy swamps, locally called Hadus which provide forage to herbivores, right through dry summer period. These diverse habitats contribute to the phenomenal abundance and enormous diversity of wildlife in Nagarhole T.R.

Economic Value :The area was declared as a timber reserve as early as 1870 to harvest valuable timber from the forests. Between 1870-1988, monoculture plantation of teak was raised which currently occupied 14% of the park area. After declaration of T.R., the timber harvest has stopped.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Yes. A research on meta-population dynamics of tiger in Malenad-Mysore Landscape of Karnataka conducted by Centre for Wildlife Studies.	Though the TR attains some of the highest densities of wildlife, it faces similar threats typical in many other protected areas. They are; <ul style="list-style-type: none"> • Ungulate poaching • Fire • Illicit removal of forest produce • Habitat degradation • Passage of a High way through the reserve • Human –wildlife conflict • Excess tourism etc. By maintaining good communication system, regular patrolling and establishment of APC at vulnerable locations has reduced the poaching and illicit removal of forest produce to a great extent. 82 no. of EDC s have been formed. With their intervention grazing and collection of forest produce from forest has come down.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		TCP Annexure, I, II and III	The entire core area is critical Tiger Habitat, which was declared on 20.12.2007. The core area comes to 643.35 sq.km. The Buffer area of 200.57 sq.km. declared vide notification dated 14.08.2012. Draft Eco-sensitive zone issued by GOI on 25.07.2017, but not yet finally notified. Core area is not free from human settlements. Total 33 villages are recorded in the TR with 1461 families. The presence of tribal settlements inside the core area of the tiger reserve results in considerable biotic pressure on the forest resources, which require voluntary relocation on a priority basis. Likewise management of weed requires attention immediately.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones-by under the Field Director would also be taken into account.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		TCP. Tripartite MoU. NTCA SoP followed. Annexure-6,7,8	NTR is 643.39 sq and having 220 km boundary of eastern(kodagu district) and western (Mysore district) boundary total length of 150km. Straying of tiger into human habitation is very frequent. To overcome this following legal delineation of core and buffer has been done. Buffer zone of 200.57 sqkm declared by including adjoining reserve forest areas. However, where there is no adjoining forest areas to the core of the reserve, 361.84 sq.km of village community lands have been included in the buffer area and this portion is more porous, leading to more and more man animal interface. Around 150 km of boundary of tiger reserve is surrounded by coffee estates and agriculture fields. Both Tiger conservation foundation and state level steering committee has been formed under the Chairmanship of Hon'ble forest Minister. Already 7 th meeting of the foundation has been done. The SOP in case of tiger straying and for disposal of tiger carcasses has been followed.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

1.5. Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Cate-Gory	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR under different management	Poor		Core or critical tiger habitat was declared vide notification of FEE 229 FWL 2007 Dt 20/12/2007	Core and Buffer of the tiger reserve is not under the control of field director. But the adjoining forest areas in the buffer zone are currently being managed by the territorial wing of forest department. The park is divided into 3 subdivisions namely Nagarhole, Mettikupa and Hansur. Each subdivision is headed by an ACF. Identification of new eco-sensitive zone for Nagarhole TR is under process.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good	✓	Buffer zone around NTR was declared vide notification no FEE 145 FWL 2010 Dt 14/08/2012	
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)+?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		NTCA had accorded approval of TCP of NTR for the period of 2014-2024 under section 380(1)(a) of the WPA vide No. F.No. 1-14/2011-NTCA (part 1_ Dt. 31/12/2014.	TCP is duly approved by NTCA, for the period of 2014 -2024, during 28.02.2015. The PA has got stake holder committee. Eco development committees. The stake holder committee consists mainly hoteliers and resort owners. EDC members participate in protection activities and anti-depredation activities. But the involvement of local people while preparing TCP was not much visible.
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		TCP.	Yes. NTR has been widely studied for threaded biodiversity values. The landscape is not only important for tiger but also many other threaded tax like elephant, gaur, sambar etc. The committee entered the park through 'Dharmakanta' gate. The forest roads area well maintained and 50 meter clearance on both sides. We entered through dry deciduous forest, where Anoglislatifolia trees are more and these species were earlier worked for timber. Other timber species are Adenacordifolia Terminaliaspp etc. Prey population seems to be good. Solar panel driven feeding water facilities created for providing water to animals in summer seesoo.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		TCP and various meeting minutes presented to the committee.	Stakeholders do participate in the planning process of the TR management. Eco development committees participate in the protection activities, anti-depredation and fire protection works. There are 80 numbers of EDCs in NTR.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		TCP and various other documentary proofs presented to the committee	Following habitat management operations were carried out in NTR. 1. Removal of lantana, 2. Sowing of grass seeds to create gross meadows, 3. Sowing of bamboo seeds, 4. Desilting of water bodies, 5. Maintenance of existing roads inside TR. 6. Soil moisture conservation activities viz check dams etc. 7. Erection of solar power pump sets for providing assured drinking water to the wildlife, 8. Fire protection measures. A fire management plan is there. We could visit Disilwadi water tank spread over 4 ha. (10 acres). During the year 2016-17, the TR authorities have removed 100 ha. of lantana weed, de-silted 29 nos. of waterholes, maintained 100 ha of Hadlu, installed 17 nos. of solar powered bore wells, constructed 18 no. of check dams for soil-moisture conservation and maintained around 1832 km of fire line and 314 km of road.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good	✓		

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		TCP and various documents presented to the committee on protection strategy. Patrolling register, Hejje software, Special patrolling strategy document etc.	NTR has 32 numbers of Anti poaching camps distributed all the landscapes. It also has 33 numbers of patrolling posts as part of the patrolling strategy. A map showing the location of APC was shown to the committee. The patrolling is done from 65 locations covering the entire TR with each patrolling team covering about 9-10 km daily. Anti-poaching camp staff patrolling recorded through "HEJJE" mobile soft wire and reported to H.Q. Twice a day border vehicular patrolling, besides foot patrolling by staff, elephant squad patrolling and Anti-snare combing is take up regularly. 30 offences cases booked last year and most are sandal theft case. No conviction yet. Besides these, a special Tiger Protection force was provided by NTCA both for Bandipur and Nagarhole TR. These area 3 platoons at Handpost for Nagarhole TR, having staff strength 35, 32 and 34 respectively. But in all 3 cases head of the platoon, i.e. Range Officer Post is vacant.
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		TCP and various other documentary proofs shown to the committee.	Tiger straying out from the park is not uncommon. As the density of the tiger is high and the TR is surrounded by village tiger and elephant straying out from the TR is quite common. Effective measures are taken when such incidents takes place. In the recent times few tigers were died due to suspected poisoning cases. NTR has an effective rapid response team along with a vehicle in place for tiger rescue operations. NTR has a rescue squad for elephant depredation cases. Necessary accessories like cage, tranquilizing equipment, trained vets and team in place. The details of wildlife death in last 3 years are elephant-2 (both by Gunshot), leopard-1, Barking deer due to poisoning, Deer, Sambar, Wild Beer-1 each by snaring. During 2016-17 only, there are 937 crop damage cases, 144 cattle kill cases, 3 human death, 2 human injury and 9 property damage cases. Compensation of around 70 lakh paid timely during 2016-17 for mitigation of man-elephant conflict, during 16-17, 12.93 km of erection of Barricade using Railway rails , maintenance and restoration of EPT, maintenance of solar power fence and construction 547 meters of Iron spike fabricated wall or massinay wall was done. Compensation for wildlife damage occurring within an area of 5km radius from the periphery of the TR falling in the neighbouring forest divisions is also paid by TR authorities.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		TCP	With two other nearby Tiger reserves, NTR is well integrated into a wider ecological landscape following the principles of ecosystem approach. It is one of the best known tiger reserve situated over the table land of Deccan plateau and climbed upto the western ghat mountains. With the continuation with nearby protected areas like Bandipur, Waynad and Mudumalai it is also on the be finest continuous habitat of Asian elephant. It is also India's first Biosphere Reserve and encompasses an area of 5500 sqkm. There are 3 major elephant corridors, one is towards the Southern side of TR (since submerged in the Kabini River project), the other is towards western and North western side of the TR linking Nagarhole, Wynad Wildlife sanctuary with the Brahmagiri WLS. The Indian Institute of Science Bangalore has also identified the Brahmagiri-Tirunnelli corridor on Karnatak-Kerala Border. This is an extremely important corridor to maintain habitat contiguity for elephant population in the western Ghats. No effort has yet been made to rationalize land use along TR. The coffee estate people had made them own solar fence and EPT restricting free movement of elephants.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Office document on staff strength.	There are 386 sanctioned staffs in NTR. Out of this 264 are filled at the time of visit and 122 are vacant.. Notable vacancy in forest watcher (45 nos), Deputy range forest officer (30 nos out of 38) and elephant mahout (21 nos) are the critical vacancy seen during the visit. The staff strength sanction for Dy. Range F.O. is 38, forest watcher 78 and elephant Mahut 50. Hardy tribal communities are expert as Mahuts, so they could be employed. Out of filled staff strength, 37 are between age group 51-59, and 27 are between 41-50.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

*This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Office documents shown to the committee	There are 44 numbers of protection vehicles out of 58 available vehicles in NTR. This is found to be good. One elephant rescue vehicle, one rapid response vehicle are also there. There are 400 camera trap, which seem to be adequate. There are also 4 safari, buses for tourist. Major tourism done in this TR is through Jungle lodges & Resorts. Quarters are sufficient for staff. There are around 287 residential quarters, 13 office buildings,, 32 APC camps for the staff.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks												
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents shown to the committee on the allocation and utilization of funds.	Financial resources other than state linked to priority actions are found to be good and adequate. Funds released by NTCA & their utilization (In lakhs). <table border="1"> <thead> <tr> <th>Year</th> <th>Allotment Released</th> <th>Utilized</th> </tr> </thead> <tbody> <tr> <td>2014-15</td> <td>310.085</td> <td>310.085</td> </tr> <tr> <td>2015-16</td> <td>244.655</td> <td>244.655</td> </tr> <tr> <td>2016-17</td> <td>495.094</td> <td>495.099</td> </tr> </tbody> </table>	Year	Allotment Released	Utilized	2014-15	310.085	310.085	2015-16	244.655	244.655	2016-17	495.094	495.099
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2016-17	495.094	495.099														
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair															
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good															
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		Funds from centre have been released under project Tiger and project elephant. All the allotments have been fully utilized in last 3 years.												

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*																									
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																					
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Documents shown to the committee on the allocation and utilization of funds.	Financial allocation from the State linked to priority action and funds are adequate. Committee founds that funds are timely released and utilized in time. <table border="1"> <thead> <tr> <th>Year</th> <th>Funds allotment</th> <th>Utilized</th> </tr> </thead> <tbody> <tr> <td>2014-15</td> <td>2787.15+</td> <td>2275.817</td> </tr> <tr> <td>Plan Non plan</td> <td>212.454</td> <td>204.948</td> </tr> <tr> <td>2015-16</td> <td>3080.053</td> <td>3080.006</td> </tr> <tr> <td>Plan Non plan</td> <td>309.325</td> <td>305.284</td> </tr> <tr> <td>2016-17</td> <td>4187.499</td> <td>4186.139</td> </tr> <tr> <td>Plan Non Plan</td> <td>330.519</td> <td>318.913</td> </tr> </tbody> </table>	Year	Funds allotment	Utilized	2014-15	2787.15+	2275.817	Plan Non plan	212.454	204.948	2015-16	3080.053	3080.006	Plan Non plan	309.325	305.284	2016-17	4187.499	4186.139	Plan Non Plan	330.519	318.913
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***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Reports presented to the committee.	Centre for Wildlife Studies, Bangalore, LIFT, Wildlife First and Vanya, National Institute Advance Studies and elephant Research and Wildlife Conservation Trust (WCT) etc are few of the NGOS who are supporting NTR in research and awareness activities. They do not provide any financial support, but provide by kind such as uniform, vehicle for protection and even Drone for surveillance.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Documents presented to the committee	FD, one ACF and one RFO is trained in Wildlife conservation training programme. But committee would love to see more trained people from this tiger reserve. Other front line staffs are hardly exposed to any systematic training schedule. A definite staff development plan is also missing.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and a fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Documents presented to the committee	The frontline staffs are well trained in wildlife monitoring exercise using the "HEJJE", GASTHU technology. They are also trained to information networking services and fire protection services etc. So, the performance of the staffs are well linked with the management objectives. 3 frontline staff have got state wildlife Award, one forest range officer has got Sevaratna award. The Nagarhole Tiger foundation has received Karnatak State environment Award during 2016-17.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Photographs EDC activities, Field visit.	Public participation in the TR management is found to be limited. This is due to the incidents of tiger straying out of the park and human-elephant depredation issues etc. But we could see that efforts are on to take public participation in the TR management. Rail barricades seems to be loved by the nearby people. Various activities carried out through EDCs under Eco-development project yielded positive result. Firewood collections by the adjoining villagers has become almost nil. Grazing has also come down. Department has effectively managed straying of wild elephants into human habitation by EPT RCC Pillars SSM wall etc. People participated in helping department in fire protection work and checking illegal activities.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGLs in population estimation may be taken into account

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Complain registers.	Public complains are registered in the complain registers in the entry-exit gates. Complains are also registered in the lodging facilities. Complains are addressed time to time based on the priority basis. An website has been launched to receive suggestions from public about TR management.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Field trips, meeting with EDCs. Office documents.	80 EDCs are formed and the total amount of village development fund is 2 crore. The amount will be utilized for various eco-development activities. In 14 tribal villages, community rights have been settled and livelihood issues in the form of fishing, collection of NTFP has been addressed. LPG connections were provided to the villages which has definitely helped the women folks of the villages. A total of 5076 numbers of LPG connections were provided in last three years. Immunization to live stock of fringe villages and provision of solar fence at subsidized rate is also done.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

+The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Field visits, office documents.	There are about 33 tribal settlements in the CTH of core area. All together 1376 numbers of individual and community rights were identified in NTR. Out of these 1006 were already settled. Few villages were relocated from core area namely Kallahalla, Kolengere, Madenoor, Gangoor, Kattibetta of Coorg district and Bogapura, machur, machurkere villages of Mysore district. The committee also visited a relocated forest area at Bhimavahalla, from sallepura RF. Altogether 210 houses were built. Each family was provided with 3 acres of agricultural land. Along with NTCA assistance, they have also got Rs. 15.0 lakhs under Tribal sub plan of state Budget for each family.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

+Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Visitor book, Website, broacher, books etc Different news item in print media.	Yes. Adequate information on TR management is publicly available in the form of website, books, broachers and booklets etc. Information regarding Nagarhole TR is available in the website www.nagarholetigerreserve.com . There is mechanism to submit feedback and suggestions in the same website and also through e-mail.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor			Yes. Visitor services are found to be adequate in NTR. There is one VIP guest house, four cottages, two dormitories. There are public toilet system, canteen souvenir shops etc. Wildlife safaris are conducted regularly. There are also popular private facilities nearby from jungle lodges and resorts. Presently, there are two tourism zones in Nagarhole TR both situated inside inviolate areas. One is Nagarhole tourism zone and other is Sunkadakatta tourism zone presently, the safari activities in Sunakadakatta zone (Permitted 25 vehicles/day) and Nagarhole tourism zone (16 vehicles/day) Total tourism road length is 126.38 km.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good	✓		

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feedback on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Research permission letter from CWLW, research reports etc Annexure 19.	CWLW has permitted a numbers of research in NTR. So, research in NTR is found to be good. A research on Meta. Population Dynamics of tiger in the Malenad-Mysore landscape of Karnatak conducted by Centre for wildlife studies. Though tiger reserve is used by various agencies for research, most of the time agencies provide no information for the management of TR. No research work has specifically been entrusted to any agency for monitoring critical issues inside the reserve.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Assets registers and other office papers Table 45	Yes.Registersarebeing maintained for store, building, road, vehicles etc at range level. The funds provided for maintenance work is quite adequate. Maintenance schedule were seen in the resister. In the last three years 210.39 lakhs were spent in vehicle maintenance. 278 lakhs were spent in road maintenance. 131 lakhs were spent in existing building maintenance.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Tiger population estimation reports and documents.	Population of tiger has increased from 72 in 2014-15 to 90 in 2016-17 on NTR. Population of the other prey species are also in in the on increasing trend. Elephant population is 1690 (2012 estimate) and density was 2.1/Km ² . Estimation of elephant population was conducted in May, 2017. But the final result is not available. The eco-system potential is capable of managing these large numbers, as there is good corridor connectivity to other surrounding TR and WLS.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good	✓		

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Tiger population estimation reports and documents.	Population of tiger has increased from 72 in 2014-15 to 90 in 2016-17 on NTR. The density of tiger from 8.60 / 100 km ² has gone upto 10.45 / 100 km ² .
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good	✓		

**This assessment should be based in the context of available population estimate (2010-11) and the outcomes of the currently ongoing Phase-IV analyses.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Tiger population estimation reports and documents.	Threats to the TR are now minimized due to actions from the authority. There is 18 km of EPT was done, which is now being ungraded and extended upto 137 kms. Railway barricades were done for 22 km. No fresh encroachment are happening due to proper boundary demarcation processes. Deployment of anti depredation squad on vulnerable areas has reduced the problems in a great way.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR have a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Are the expectations of visitors* generally met or exceeded?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		Visitor register and other documents and visitor feedbacks.	Tiger sighting and sighting of other wildlife in the TR is very good and hence visitor's expectations are generally met. The TR has a very good internal road network too.
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good	✓		

***What is the compliance status on Supreme Court/ NTCA Guidelines on Ecotourism in TRs?**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Various photographs showing community participation	Local communities are found to be supportive as the TR management has taken enough steps to check human-animal conflicts in the area. The steps are excavation of EPT over 18 km. Upgradation and widening of existing EPT over 137.50 km, erection of Railway Barricade-22.23 km, Deployment of Anti Depredation camps in the sensitive areas simultaneously to elicit support of local people, awareness programmes to farmers, school children, EDC members and youths on wildlife conservation is going on.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	40	81.25
2.	Planning	07	10	70	55	
3.	Inputs	05	10	50	40	
4.	Process	06	10	60	47.5	
5.	Outputs	04	10	40	32.5	
6.	Outcomes	05	10	50	45	
Total		31		320	260	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 31 Assessment Criteria including 'normalization'.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		Through Bangalore based (ISRO Bangalore) the TR authorities and trying to put 3 automatic weather forecast stations outside the park.	NTCA &WII may issue further guidelines on the matter.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		Tree felling and illicit removal has been minimized to almost zero, preventing any further? Carbon loss.	
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6. Parambikulam Tiger Reserve, Kerala

Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		<ul style="list-style-type: none"> • Para 4.1 of TCP (Pages 3-17) • Para 4.2 of TCP (Pages 3-17) • Para 1.1.2 of TCP (Pages 3-17) • Para 14.2 of TCP (Pages 298) • Study reports on tiger monitoring, biodiversity survey reports, population estimation of major mammals, etc. 	<ul style="list-style-type: none"> • Parambikulam has a history which dates back to 1891 where stump planting of teak was done. A major milestone in the history of Parambikulam was the introduction of Tramway which was in place by 1907. During 1962, about 30 sq.km area was declared as Parambikulam Wildlife Sanctuary which was managed under four Ranges, viz., Sungam, Parambikulam, Karimala and Orukomban. The Sanctuary was notified as Parambikulam Tiger Reserve in 2007. Later during 2009, the core and buffer areas of the Tiger Reserve were notified. The total area of Tiger Reserve is 643.66 Sq. Km, which includes Core area of 390.89 Sq. Km. and Buffer area of 252.77 Sq. Km. • Parambikulam T.R. is a well protected ecological portion in the Nelliampathy. Anamalai landscapes of Southern Western Ghats in India. • There are four ethnic tribal communities viz., Kadar, Malassar, Malamalassar and Muduvans. • Parambikulam Tiger Reserve has a mosaic of habitats consisting of diverse vegetation types such as West coast tropical evergreen forests, West coast tropical semi-evergreen forests, Southern moist mixed deciduous forest, Southern dry mixed deciduous forests, Southern montane wet temperate forests (sholas) Reed brakes and Moist bamboo brakes. • The critical conservation status of the recorded species is ascertained based on IUCN criteria. Among the recorded species, 145 are categorized under critical conservation status. Of these, 40 species are endangered, 38 vulnerable, 49 rare and remaining under other categories. Among the rare and endangered species, 85 are endemics. <i>Haplothismiaexannulata</i>, thought to be extinct has been recorded from Parambikulam TR. • Kerala being part of the southern Western Ghats almost represent more than 75% of the vertebrate species belonging to mammals, birds, reptiles and amphibians recorded from the Western Ghats. • The presence of extensive water bodies such as reservoirs and network of perennial streams in
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>the area is one of the main factors responsible for high rate of endemism in aquatic and semi aquatic group of fauna. In mammals six species are endemic viz Nilgiri langur, Lion tailed macaque, Nilgirthar, Nilgiri marten, brown palm civet and jungle striped squirrel.</p> <ul style="list-style-type: none"> • Various values of the Tiger Reserve such as ecological, economic, cultural, catchment, human ecological, aesthetic and scientific values are well assessed and documented in Chapter 1 of TCP. • Regular monitoring of these values are carried out by various short and long term studies mainly by the Tiger Reserve Management, Tiger Foundation, NGOs and various research organisations.
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1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		<ul style="list-style-type: none"> • Para 3.4 of TCP (Pages from 58 to 72) 	<ul style="list-style-type: none"> • SWOT analysis have separately been carried out and provided in TCP Chapter 6 for core and buffer. The SWOT analysis for core and buffer reveals that the number of strengths and opportunities are higher than the number of threats in many cases.
Threats generally identified but not systematically assessed.	Fair		<ul style="list-style-type: none"> • Para 6.4 & 6.5 of TCP for core (Pages from 118-130) • Para 6.4 & 6.5 of TCP for buffer (Pages from 384 - 395) 	<ul style="list-style-type: none"> • Threats include the proposal for alternate entry points/roads (Environment Impact Assessment report of KFRI) • Invasive species - Systematic monitoring of Invasive species and periodical eradication. Vayal journals are maintained at Section level.
Most threats systematically identified and assessed.	Good			<ul style="list-style-type: none"> • Fire –Fire management plan prepared, Fire prone areas identified and assessed, Fire protection watchers are engaged and creation of fire line undertaken as preventive measure.
All threats systematically identified and assessed.	Very good	✓	<ul style="list-style-type: none"> • KFRI EIA study report • Fire management Plan • Vayal Journal 	<ul style="list-style-type: none"> • Management interventions for tackling these threats and weaknesses are prescribed from Chapters 7 to 12 (page from 131 to 265) for core and from Chapters 16 to 24 for buffer. • The Management Priority Matrix based on threat perception is also prepared periodically for addressing management issues in a dynamic manner.

***This assessment should be based on number, nature and extent of threats**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		<ul style="list-style-type: none"> Approved TCP of Buffer Micro plan of various EDCs Register of FDA Minutes 	<ul style="list-style-type: none"> There are no settlements within the core area, but still 145.76 km² area of core is under non protective status. No major biotic interference in Core area. 100% Cattle free Tiger Reserve. To reduce forest dependency, Gas Cylinders have been provided and alternative livelihoods given to tribals through FDA. Agricultural practices confined only to one settlement. However, some of the settlements and irrigation projects within the buffer are technically enclaves in the core. To reduce the biotic pressures from these settlements, various programmes are formulated and implemented as part of the ecodevelopment initiatives. The individual rights under FRA have been successfully settled and title was issued in all the six tribal settlements. The TCP for the buffer including various strategies for the settlements within the buffer as well as mainstreaming the various land use patterns therein is in place. The Tiger Cell established for the Tiger Reserve has the mandate of identifying existing conflicting land use policies affecting Tiger and prey habitat and resolve through Multi-sectoral dialogue. Though the buffer is not under the control of Field Director, the Chief Conservator of Forests and the Conservator of Forests in charge of the areas forming part of the buffer are members of the Tiger Cell and are appraised of any conflicting issues in management and are taking necessary correcting measures. To discuss the conflicting landuse patterns in adjoining Divisions and to propose strategies for mitigating the negative impacts on the tiger reserve, the Working Plan Officers of the adjoining Divisions are also invited for the Tiger Cell meeting.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

**This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.*

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		References document(s): <ul style="list-style-type: none"> Notifications of core and buffer zones Approval letter of NTCA for TCP (from 	<ul style="list-style-type: none"> The TCP is approved from 2013 to 2021. The core of Parambikulam TR was notified as per GO (P) No.53/2009/F&WLD dated 16.12.2009. The buffer of Parambikulam TR was notified as per GO (P) -54/2009/F&WLD dated
Two of the four SR, 50% conditions of the Tripartite MoU	Fair			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

and SOPs complied			2013 upto 2011)	17.12.2009.
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good		<ul style="list-style-type: none"> Notification of Steering Committee formation Notification of Parambikulam Tiger Conservation Foundation 	<ul style="list-style-type: none"> Parambikulam Tiger Conservation Foundation has already been established as per GO (MS) No. 87/2013/F & WLD. Tiger Conservation Plan for core and buffer of Parambikulam TR was approved by NTCA on 21.03.2013. State-level Steering Committee has also already been constituted vide G.O. (Rt) No.72/2009/F&WLD dtd.12/02/2009 & so far two meetings of steering committee is held. The 3 SOPs on tiger mortality and disposal of carcasses followed scrupulously.
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	✓		

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		<ul style="list-style-type: none"> Para 7.2.2.1.1 of TCP Para 7.2.2.1.10 of TCP Government Orders Annual Report of Foundation 	<ul style="list-style-type: none"> The core of the Parambikulam Tiger Reserve is under the overall control of the Chief Conservator of Forests (Wildlife) & Field Director (Project Tiger), Parambikulam Tiger Reserve. However only part of the buffer is under his administrative control. Major part of the buffer area is still falling under the control of territorial Divisions of Chalakkudy, Vazhachal and Nemmara Divisions (--sq.km). A formal proposal is now under the active consideration of the Government to transfer the administrative control of buffer areas of TR to Field Director. In the interim, various measures have been taken by TR management to influence conservation friendly practices in the buffer areas such as: <ul style="list-style-type: none"> Providing financial assistance to establish Antipoaching Campsheds, habitat management activities, engaging antipoaching/fire protection watchers. Providing financial support for the Education, health and other developmental activities to the settlements in Buffer. Conducting Medical and environmental awareness camps. Conducting surveys and population estimation. Speed Boat allotted to Sholayar Dam in the buffer area of Vazhachal Division for patrolling.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair	✓		
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) +?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		<ul style="list-style-type: none"> Approval letter of NTCA for TCP 	<ul style="list-style-type: none"> Tiger Conservation Plan for core and buffer of Parambikulam TR was approved by NTCA letter No. F.No. 1-14/2011-NTCA dated 21.03.2013. <ul style="list-style-type: none"> For the preparation of TCP for core, buffer and adjoining areas, stakeholder meetings were conducted, in which the vision, goal and objectives were set, threats/ problems in achieving the objectives were discussed and broad strategies for mitigating the problems /threats were identified. Chapter 6 of core and buffer are written based on the Stakeholder workshop outputs.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

*Score: 2.5; Fair: 5; Good: 7.5; Very Good: 10

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		<ul style="list-style-type: none"> Map of illegal activities (facing page 144 in TCP) Map of anti-poaching camp sheds /watch towers (facing page 144 in TCP) Map showing joint patrolling and camping in PKMTR landscape (facing page 144 in TCP) Chapter 10 of TCP (Pages from 252 to 253) Chapter 7 of TCP (Pages from 131 to 224) Chapter 9 of TCP (Pages from 237 to 251) Chapter 12 &13 of TCP for buffer (Pages from 424 to 429) Vayal Journal Waterhole Journal Tiger Monitoring Report 2015-16 & 2016-17 	<ul style="list-style-type: none"> Various threatened biodiversity values of the Reserve are identified and safeguards proposed TCP. Complete removal of cattle from the TR (core area) is a major achievement towards safe guarding the threatened biodiversity. Extensive network of 27 anti poaching camps, engagement of protection watchers. No poaching cases reported during last 13 years from the TR. (After 2004) Protection which is the most important part of tiger conservation has been accorded top priority by TR management and is addressed elaborately in protection plan in chapter 10 of TCP. Various zone and theme plans, under various themes such as fire management, habitat management, participatory forest management etc are included in the TCP to address the threatened biodiversity values. Regular monitoring of habitats like Vayals and Waterholes Scientific monitoring of tigers, co-predators, prey and their habitat are detailed in chapter 9 of TCP and are being adopted as per the directives of NTCA.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		<ul style="list-style-type: none"> List of participants in the management plan workshops. Copy of approved microplans Order constituting the FDA Minutes of FDA meetings Minutes of EC & GB of EDCs Order constituting the Foundation Chapter 8 (pages 404 to 413), 9 (pages 414 to 416) and 14 (pages 430 to 464) of TCP for Buffer Minutes of Gramasabha, Adalath, EDC Meetings, JanajagrathaSami thi 	<ul style="list-style-type: none"> Stakeholders are involved very much in the planning process. The TCP which forms the basis of management was prepared with the participation of various stakeholder groups, right from the setting of vision, objectives and strategies. Indigenous communities in the TR are actively participating in various management activates. There are 11 settlements in PKMTR, all of which are constituted into Eco-development Committees. At present, there are 7 EDCs. The activities of the EDCs are based on the microplans, which are prepared after extensive PRA exercises following the guidelines issued by GoK. The activities include protection of resources, ecotourism/visitor management, NTFP management etc. All the EDCs are confederated into Forest Development Agency, PKMTR, the Executive Committee of which also includes representatives from all the line departments. Various activities of the Reserve involving the stakeholders are planned and APOs prepared based on the discussions in the monthly meetings, meeting of Executive Committee & General Body of FDA and the Executive Committee & General Body meetings of EDCs. The Parambikulam Tiger Conservation Foundation is also constituted which is another stage for stakeholder participation in the planning process. A social auditing is also taking place in the EDCs & FDA
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good	✓		

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		<ul style="list-style-type: none"> Chapter 7 (para 7.2.2.3) of approved TCP for Core. The documents displayed before the evaluation committee Vegetation map of the Reserve. Waterhole – 	<ul style="list-style-type: none"> Habitat management programmes are undertaken based on the prescriptions in the theme plan for watershed and habitat management in para 7.2.2.3 (pages from 205) TCP and the activities are regularly monitored also. The programmes include, Management of watershed (para 7.2.2.3.1 (Page 205 of TCP) Management of water holes (para 7.2.2.3.2 (Page 209 of TCP). There are 58 waterholes. The seasonality is mapped and a waterhole
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good			
Habitat management	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

<p>programmes are thoroughly planned and monitored.</p>			<p>seasonality maps</p> <ul style="list-style-type: none"> • Waterhole management Journal • Vayal Management Journal 	<p>management journal was prepared and updating regularly. Maintenance activities like deepening, etc is done periodically. Additional water harvesting measures have been taken up as per requirement of wildlife.</p> <ul style="list-style-type: none"> • Management of vayals/grassy blanks (para 7.2.2.3.3 of TCP). There are 103 vayals. A journal is maintained for each vayal. Vayal maintenance is taken up regularly. • Management of weeds: (para 7.2.2.3.4 of TCP) The main weeds that pose threat to wildlife in PKMTR are Mikenia, Lantana, Eupatorium and Rhynchospora. Uprooting during the initial stages of growth is the most effective control method. • Clearing vista/view lines (para 7.2.2.3.5 of TCP) is taken up along the selected road/trek path. • Management of teak plantations (para 7.2.2.3.6 of TCP) There are 69.18 Sq. km teak plantation in core of PKMTR. The KFRI has studied the habitat utilization of Gaur in teak plantation and has observed the utilization for foraging. The prescription for management of teak plantation is to retain the same during the plan period. • Various studies are conducting by research organizations like KFRI to generate information of scientific habitat management • Protocols for monitoring of various components of habitat as proposed in TCP are carried out.
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****This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations).Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as Lantana, Mikenia etc. would be examined.***

****Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10***

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		<ul style="list-style-type: none"> • Chapter 7 of TCP (para 7.2.2.1 & 7.2.2.2) Pages from 137 to 204) • Map showing the anti-poaching camp sheds and other protection related infrastructures. 	<ul style="list-style-type: none"> • Top priority is given in the TCP for the protection of tiger and its habitat and the strategies for strengthening protection are dealt elaborately in protection plan in chapter 7 (para 7.2.2.1 of TCP). • All vulnerable and sensitive areas prone to illicit activities have been identified and the areas are mapped (Map No.14 in the TCP for core) • Patrolling schedule is prescribed. • There are 27 anti-poaching camps established in vulnerable areas and 3 more proposed during the Plan
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

and very effective PS and SA.			<p>(Map 13. facing page 144 in TCP)</p> <ul style="list-style-type: none"> • Map showing areas prone to illegal activities and illegal entry routes (Map 14 facing page 144) • Map showing locations of joint patrolling and camping (Map 15 facing page 154) • Map showing fire prone areas (Map 16 facing page 180). • Annual Report of Foundation 	<p>period.</p> <ul style="list-style-type: none"> • All APCs are manned and wireless connected. M-stripe is yet to be used. • Monsoon patrolling is ensured for ganja prone areas. • Participation of EDC members in protection is also ensured in core as well as buffer zones. A Social Tiger Protection Force is established with about 190 members from the local community. • The protection plan also contains strategies for improving infrastructures, communication facilities, vehicles, arms and ammunition, deployment of staff, capacity building, intelligence gathering, joint patrolling, interdivision and interstate co-ordination etc. • Highway patrolling has been started in Malakkapara-Vazhachal road in buffer zone of the TR to reduce illegal activities and road kill. • Each camp shed is strengthened by a Forester, two forest guards and two to four watchers. Staff rotation is effectively implemented in all the camp sheds. • Offence register is maintained. • Conducting inter division patrolling and interstate patrolling apart from regular patrolling. • A fire prevention and control plan has been prepared and is practiced in the fire prone seasons. • Inter-state level meetings are being conducted as per the Inter-state Protocol.
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****This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.***

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria ⁺																											
Condition	Category*	(Tick ✓)	Reference document(s)																								
Human-wildlife conflicts are significant but poorly addressed.	Poor		<ul style="list-style-type: none"> • Compensation to victims by wildlife attack • Road kill/ Natural death/ Animal Sighting Register 																								
TR has been able to mitigate few human-wildlife conflicts.	Fair																										
TR has been able to mitigate many human-wildlife conflicts.	Good	✓																									
TR has been effective in mitigating all human-wildlife conflicts.	Very good																										
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2016	-	-	-																								
<p>However, following measures are taken up to prevent such</p>																											

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>conflicts.</p> <ul style="list-style-type: none"> Solar powered fences, trenches and stone walls are erected as barriers to reduce the damage due to the animals straying into the human habitations. Timely ex-gratia payments. <p>Dealing of human-wildlife conflict issues have been brought under the provisions of Right to Service Act, and time limit is prescribed for payment of compensation.</p> <ul style="list-style-type: none"> The formalities related to claiming compensation is described in the Citizens Charter (2006) issued by the Department. Night traffic in Sethumadai-Parambikulam road and Malakkapara- Vazhachal road is under strict control to reduce the risk of road kills and conflict.
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*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*																																						
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																		
TR not integrated into a wider network/ landscape.	Poor		<ul style="list-style-type: none"> TCP for Core: Description of landscape (page 1) GO constituting the PaTCoF 	<ul style="list-style-type: none"> Parambikulam Tiger Reserve is nestled in the picturesque and extensive Anamalai-Nelliampathy landscape which is spread over 4705 km² of which 3225.73 Km² is in Kerala and 1479.27 Km² in Tamil Nadu. The list of protected areas in Anamalai landscape are listed below <table border="1"> <thead> <tr> <th>Name</th> <th>Area (Km²)</th> </tr> </thead> <tbody> <tr><td>Nenmara Division</td><td>205.51</td></tr> <tr><td>Vazhachal Division</td><td>413.94</td></tr> <tr><td>Chalakkudy Division</td><td>279.7</td></tr> <tr><td>Malayatoor Division</td><td>617.76</td></tr> <tr><td>Mankulam Division</td><td>90.06</td></tr> <tr><td>Munnar Division</td><td>440.49</td></tr> <tr><td>Marayoor Sandal Division</td><td>13.97</td></tr> <tr><td>Chimmony WLS</td><td>85.06</td></tr> <tr><td>PeechiVazhani WLS</td><td>40.41</td></tr> <tr><td>Eravikulam NP</td><td>97</td></tr> <tr><td>Chinnar WLS</td><td>90.44</td></tr> <tr><td>Kurinjimala WLS</td><td>32</td></tr> <tr><td>Anamudishola NP</td><td>32.84</td></tr> <tr><td>Pambadumshola NP</td><td>11.75</td></tr> <tr><td>Thattakadu Bird Sanctuary</td><td>25.16</td></tr> <tr><td>Anamalai TR of Tamil Nadu</td><td>1479.87</td></tr> </tbody> </table>	Name	Area (Km ²)	Nenmara Division	205.51	Vazhachal Division	413.94	Chalakkudy Division	279.7	Malayatoor Division	617.76	Mankulam Division	90.06	Munnar Division	440.49	Marayoor Sandal Division	13.97	Chimmony WLS	85.06	PeechiVazhani WLS	40.41	Eravikulam NP	97	Chinnar WLS	90.44	Kurinjimala WLS	32	Anamudishola NP	32.84	Pambadumshola NP	11.75	Thattakadu Bird Sanctuary	25.16	Anamalai TR of Tamil Nadu	1479.87
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Some limited attempts to integrate the TR into a network/ landscape.	Fair																																					
TR is generally quite well integrated into a network/ landscape.	Good																																					
TR is fully integrated into a wider network/ landscape.	Very good	✓																																				
				<ul style="list-style-type: none"> A Tiger Conservation Foundation has been 																																		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>constituted for PKMTR to co-ordinate the management activities of the TR and the adjoining landscape.</p> <ul style="list-style-type: none"> • Activities such as engaging protection watchers, distribution of camping equipment's, providing project allowances are done in adjoining landscape too. • Proposal for Eco-sensitive zone submitted for approval • Eco-friendly buildings for tourism, Plastic free zones, solar power are followed in the reserve especially in camp sheds
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***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize land use around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		<ul style="list-style-type: none"> • Approved TCP • Microplan of EDCs • Annual Report of Foundation. 	<ul style="list-style-type: none"> • Each camp shed has strength of Section Forest Officer, 2 Beat Forest Officer, 3/4 Forest Watchers • Required strength - 122 , current strength - 103. Vacancy exists in frontline staff. • PKMTR is managed under 4 Ranges viz., Parambikulam, Thunakkadavu, Orukomban and Karimala. • At present there are 13 Sections which form the units for protection • It is proposed to establish 7 new Forest Stations with additional staff strength. • About 111 daily waged mazdoors are engaged in protection activities as 'Social Tiger Protection Force' • About 122 daily waged mazdoors are engaged in various community based ecotourism activities • Local communities are also supporting the park management in protection as their reciprocal commitments, mutually agreed in the microplans. • In addition, there is professional support through FDA/Foundation
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

*Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		<ul style="list-style-type: none"> • Para 4.3.1.1.8, 4.3.1.1.9, 4.3.1.1.10 (Pages from 91 to 93) of TCP 	<ul style="list-style-type: none"> • Vehicles <ul style="list-style-type: none"> • Toyota Innova – 1 • Mahindra Camper – 3 • Mahindra Thar – 3 • Mahindra Invader - 1 • Mahindra Jeep – 2 • Bike – 2 • Safari Vehicles - 9 • Ambulance – 1 • Arms – 26 Nos • Buildings <ul style="list-style-type: none"> • Office buildings – 5 Nos. • Rest House/IB/Govt. Cottages – 2 Nos. • Type I quarters – 13 • Type II quarters - 9 • Type III quarters - 4 • Type IV quarters - 1 • Other quarters – 20 • Dormitory - 2 • Community Hall – 4 • Other Buildings – 37 Equipment <ul style="list-style-type: none"> • Camera Traps (Cuddeback digital) – 1200 Nos • Laser Range Finders – 27 Nos • Binoculars – 23 Nos • GPS - 57 • Compass - 75 • Wireless main set – 21 • Walkie-talkie – 36 • Wireless Mobile set - 5 • Metal Detector - 2 • Handicam - 1 • Digital Cameras -17 • Spotting scope – 1 • Night vision Binocular – 1 • Search Light – 6 • Torches • Field Tent • Chain saw • Rescue cage – 3 • Fire controlling equipment • Snake handling equipment • Rescue Net • Requirement for increasing and improving buildings for protection related activities are
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>provided in the TCP and these are being taken annually based on priority.</p> <ul style="list-style-type: none"> • Even though there are sufficient vehicles, few of them are quite old and needs replacement and timely maintenance. • There is also a need to standardize and modernize the availability of arms and ammunitions to strengthen the wildlife protection.
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* These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*																				
Condition	Category*	(Tick ✓)	Reference document (s)	Remarks																
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		<ul style="list-style-type: none"> • Progress Report • Audit Report of PaTCoF & FDA • APOs 	<ul style="list-style-type: none"> • Details of funds received from NTCA during last 3 years and their utilization by PKMTR is given below. (in Rs. Lakh) <table border="1"> <thead> <tr> <th>Year</th> <th>Allotment Sanctioned</th> <th>Actual Release</th> <th>Expenditure</th> </tr> </thead> <tbody> <tr> <td>2014-15</td> <td>230.951</td> <td>230.951</td> <td>230.951</td> </tr> <tr> <td>2015-16</td> <td>170.185</td> <td>170.185</td> <td>170.185</td> </tr> <tr> <td>2016-17</td> <td>350.577</td> <td>350.577</td> <td>350.577</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • Foundation Annual Report • FDA Annual Report • Both the reports are made available. • Normally, 3 to 4 crore is received from NTCA and 5 to 6 crore from FDA. The budget is sufficient presently. 	Year	Allotment Sanctioned	Actual Release	Expenditure	2014-15	230.951	230.951	230.951	2015-16	170.185	170.185	170.185	2016-17	350.577	350.577	350.577
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2016-17	350.577	350.577	350.577																	
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair																			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good																			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓																		

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		<ul style="list-style-type: none"> • Progress Report • Annual Report (FDA &PaTCoF) 	Funds received from various Central & State Budget Heads are the following. This includes Project Elephant, Additional Central Assistance, Forest Protection, Buildings, Roads, Ecotourism, Survey of Forest Boundary, Ecodevelopment etc. Similarly FDA, Parambikulam receiving funds from line departments like SC/ST Department, Local Self Govt., NABARD etc. Provision of funds once adequate and also released timely.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		PaTCoF Annual Report	As there are enough financial resources available from NTCA, FDA, PaTCoF, GIM, FDA and State funds, there is very little reliance on NGOs for financial support. However, collaboration with other NGO's like WWF, FERNs, WCT are made for training, surveys and other technical events. There is no full time NGO attached to Parambikulam Tiger Reserve. However the World Wildlife Fund (WWF) supported technically for the conduct of phase IV tiger
NGOs make some contribution to management of the TR but opportunities for collaboration are not	Fair			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

systematically explored.				monitoring in Parambikulam during 2012-13. The Wildlife Conservation Trust (WCT) from Mumbai donated various field kits to the field staff including two vehicles to the park management. WWF provided input for issues related to Forest Rights Act.
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				Remarks			
Condition	Category*	(Tick ✓)	Reference document(s)				
No trained officers and frontline staff in the TR.	Poor		PaTCoF Annual Report 2015-16 & 2016-17	<ul style="list-style-type: none"> All the Beat and Section Forest Officers undergo in-service training course at the State Forest Training Institute in Arippa and Walayar in combination with 3 months police training with Police Academy. Wildlife Assistant undergone training from SFTI, Walayar and undergone training from CEE, Ahemadabad. Annual training programme for staff, watchers and naturalists was prepared and implemented. Details of Training programmes conducted is given below. No specific staff development plan is maintained and pursued. 			
Some trained officers and few trained frontline staff, posted in the TR.	Fair						
All trained officers and fair number of trained frontline staff posted in the TR.	Good	✓					
All trained officers and most of the trained frontline staff is posted in the TR.	Very good						
				Sl. No.	No. of Days	Subject	No. of Participants
				1	2	Training program on legal provisions	30
				2	5	Training program on GIS	20
				3	2	Training program on Bat Ecology and Conservation.	20
				4	2	Training program on Soft Skill Development for Naturalists	50
				5	1	Workshop on Protection Strategies	80
				6	2	Workshop on strengthening wildlife law enforcement and conservation in India	60
				7	4	Training program on Study and Identification of Moths and Butterflies.	20
				8	1	Workshop on Forest Rights Act	70
				9	1	Training on identification of common amphibians	30
				10	1	Training on conducting 8 Day Protocol for Tiger monitoring	65
				11	1	Training on conducting 8 Day Protocol for Tiger monitoring	35
				12	1	Training on conducting 8 Day Protocol for Tiger monitoring	80
				13	7	Induction training for newly recruited Forest Watchers	33
				14	1	Training to staff and watchers on PIPs	80

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				15	1	Regional Asian Elephant and Tiger Veterinary Workshop	120
				16	1	Training on Camera trapping	90
				17	2	Training programme on Court Procedure and Investigations	23
				2016-17			
				Sl. No.	No. of Days	Subject	No. of Participants
				1	1	Training programme on Tahr Survey	75
				2	2	Training programme for newly recruited ministerial staff	10
				3	1	Training programme on Tiger biology and camera trapping for protective staff and antipoaching watchers	24
				4	1	Workshop on designing of training and need assessment for Guides and Naturalists	47
				5	15	Vacation Computer Course for the Tribal students of various settlements under Parambikulam	82
				6	1	Validation workshop for the preparation of protocol on human wildlife conflict at KFRI Peechi:	117
				7		Training programme on Housekeeping and Nature guiding for Naturalists at Food Craft Institute, Thrissur	70
				8	2	Training programme on Soap and Detergent making for the Kuriarkutty EDC members	10
				9	1	Training program on road safety & vehicle maintenance for Safari vehicle Drivers	12
				10	2	Training on map reading, use of GPS and forest inventory	55
				11	2	Training programme on preparation of estimates for civil works	54
				12	1	Training on PSC exams and one time registration camp for tribal youths	66
				13	2	Workshop on protection strategy for Anamudi Elephant Reserve	
				14	2	Training programme on habitat management, fire protection measures for SFOs at KWLITIC, Pollachi	30
				15	1	Workshop on amendment of Kerala Forest Act 1961 at Forestry College Auditorium, Vellanikara, Thrissur	100
				16	1	Training programme on 8 Day Protocol for BFO trainees of SFTI,	34

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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					Walayar	
				17	2	Workshop on Wildlife Photography for the staff, watchers and Naturalists
				18	1	Training programme on personality Development for Tribal students
				19	1	Training programme on Bird Survey at Anappady
				20	1	Workshop on Tourism – house keeping at Anappady

*Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Annual Report of PaTCof& FDA	<ul style="list-style-type: none"> The SFO and BFO eligible for CM's Award and entry of good performance is made in their service registers. Sri. C. Sumesh, SFO, M.Jagadeesh and Sri. Sudeesh, BFO working in PKMTR has been awarded with CM's Award for best performance. Cash Award for the staff, watchers and naturalists for their best performance. Celebration of Wildlife Week, Global Tiger Day, World Environment Day etc is done with the public participation. <p>Awards and Nominations</p> <ul style="list-style-type: none"> Received the National Tiger Conservation Authority (NTCA) Award from Ministry of Environment and Forests for excellence in the "Innovative Practices" in Parambikulam Tiger Reserve during the year 2012. Received 5th Green Guard Award from the "Junglees" the Kolkata based NGO for the Best Protected Tiger Reserve in India with shield and 1.5 lakhs cash prize for the Forest Development Agency, Parambikulam. Received State Chief Minister Award for Innovations in Public Policy under Developmental Intervention category during 2013-14 Received the WWF – BaghMitra award for best in Tiger Conservation during 2013-14. Received NTCA Award for Excellence in Community Participation in Ecotourism during 2016 (Received from Hon'ble P.M.)
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good	✓		

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick	Reference	Remarks

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

		✓)	document(s)	
Little or no public participation in TR management.	Poor		<ul style="list-style-type: none"> • PaTCoF Annual Report • Survey reports • Micro Plan 	<ul style="list-style-type: none"> • Public participation in management starts right at the level of planning process (preparation of tiger conservation plan, microplanetc) itself. • The ecodevelopment and ecotourism activities in the reserve are taken up based on the approved TCP and approved microplans of EDCs. The microplans are prepared after detailed PRA with the active involvement of the local community. • Public participation is ensured in plastic cleaning programme. • As part of mutual commitments, the EDC members involve in participatory fire management, patrolling in vulnerable areas, monsoon patrolling, etc • Species surveys/estimation process is being taken up with the involvement of various research organisations/student communities. Species Survey, All Kerala monitoring of Tiger, Co-predators and prey populations were conducted by PaTCoF. Details of programme in PaTCoF Annual Report. • There is wide public participation in celebration of wildlife week, Global Tiger Day and important environment day celebrations. • Local tribal people are engaged in Tiger Monitoring activities.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good	✓		

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10* (The involvement of NGOs/ NGLs in population estimation may be taken into account).**

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		<ul style="list-style-type: none"> • Guest books • Feedback book 	<ul style="list-style-type: none"> • Feedback form is kept at the interpretation centre, information centre, where the visitors give their feedback which is reviewed every week and necessary actions taken. • Feed back, review and rating can be posted through FacebookPage. 'https://www.facebook.com/ParambikulamTigerReserve' and Web page www.parambikulam.org' • Guest books are maintained in the IB, camping sites of ecotourism programmes where the visitors can give their suggestions. • There is a suggestion/petition register maintained/monitored in the division. • Public can have any information from the Division under the provisions of Right to Information Act. • A website is maintained by the Reserve, where public can place their suggestions/complaints. There are also regularly monitored by the DD. • There is a Toll free number in the Department in which public can register their complaints also. • Auto email feedback/suggestion system integrated with the website for the tourism bookings. (yet to be implemented) • Suggestions and complains by visitors are swiftly attended to.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks												
No livelihood issues are addressed by TR management.	Poor		<ul style="list-style-type: none"> FDA & PaTCoF Annual Reports 	<ul style="list-style-type: none"> Out of 111 protection watchers, 5 are women members of local communities who are engaged as daily waged anti-poaching watchers. About 120 Watchers and Naturalists are benefited through FDA Employment Registration Camp conducted at Parambikulam Tiger Reserve for the tribal youths. PSC coaching has been conducted for the tribal students Establishment of Akshaya Centre at Parambikulam in progress. It will act as single window for tribals. Financial assistance for the tribal students for their higher studies (52 scholarships given) They are provided with food provisions and camping gears. They are named as "Social Tiger Protection Force". Out of 122 naturalist, 33 are women members from various settlements are given employment in various ecotourism and eco-development programs. 39 monsoon watchers are engaged during monsoon season 65 fire protection watchers are engaged during the summer season 10 women members are given employment through soap and detergent making unit 12 women are trained in crochet art and made them self employed. Supported 6 women from local tribe for the establishment of canteen 3 women are engaged in Dudhi oil production The total number of mandays generated during last three years under various activities is given below. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sl.No</th> <th>Activity</th> <th>No. of mandays generated</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Through Departmental programmes</td> <td>88815</td> </tr> <tr> <td>2</td> <td>NREGS</td> <td>12000</td> </tr> <tr> <td>3</td> <td>Through FDA Activities</td> <td>90000</td> </tr> </tbody> </table>	Sl.No	Activity	No. of mandays generated	1	Through Departmental programmes	88815	2	NREGS	12000	3	Through FDA Activities	90000
Sl.No	Activity	No. of mandays generated														
1	Through Departmental programmes	88815														
2	NREGS	12000														
3	Through FDA Activities	90000														
Few livelihood issues are addressed by TR management.	Fair															
Substantial livelihood issues are addressed by TR management.	Good	✓														
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good															

**The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.*

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		TCP	<ul style="list-style-type: none"> There are no villages in the core,. Land rights under FRA has already been issued. Parambikulam TR is a model for benign co-existence. There is no cattle thereby completely mitigating grazing pressure. There is no poaching since 2004 and the man-animal conflict is minimal. The area is kept near-inviolable with limited
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

implemented/ no human habitation in the CTH				dependency and reduced disturbance. <ul style="list-style-type: none"> The primitive groups of tribes in the area, with reduced 'foot prints' form part and parcel of the system
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***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		<ul style="list-style-type: none"> The survey reports, brochures, pamphlets, coffee table books, posters were displayed before the Evaluation Committee Annual reports (PaTCoF and FDA) 	<ul style="list-style-type: none"> Approved TCP of PKMTR is placed in the Website of the Department http://www.forest.kerala.gov.in/ and that of PKMTR http://parambikulam.org/ Reports of population estimations are published and available to the public Information is also available in <ul style="list-style-type: none"> Social Media channels , Brochures and pamphlets coffee table books Magazines, Coverage in News medias Website Posters Lets of outreach programme such as; Detailed information is available with the publications of the Kerala Tourism Department and Kerala Tourism Development Corporation. Public can access our publications and reports from the library News letters Photo Exhibitions conducted Photo souvenir along with Safari Tickets Nature Awareness Camps
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		<ul style="list-style-type: none"> Ecotourism Plan in TCP Chapter 14 (pages 432 to 464) 	<ul style="list-style-type: none"> The tourism plan has been prepared based on the guidelines circulated by NTCA and approved by NTCA. Tourism sub plans Reception cum information center Canteen facilities at Anappady Canteen facility at Parambikulam under construction Orientation center for the visitors Library Interpretation center for the visitors Parking area Toilets at three spots Waiting/resting area Guides for every visitors Safari vehicles Jungle camps <ul style="list-style-type: none"> Tented Niche – 10 No.s Honeycomb complex – 9 No.s Bear Hut – 1 No.s Tree top hut – 2 No.s Peruvari Island nest – 1 No.s Veetikunnu island nest – 1 No.s Jungle trekking – 3 packages Bamboo rafting at Parambikulam Reservoir Nature awareness camps 2 Souvenir shop (Vanashree Eco shop) Botanical Nursery at Parambikulam Refreshment spots at Parambikulam All these facilities are manned by BFOs/SFOs and directly supervised by the ROs concerned. All these facilities are supported by watchers. The publications on PKMTR and details of brochures and pamphlets are displayed before the Evaluation Committee. The visitor facilities are regularly upgraded and monitored. Information on the available facilities are provided in the website of TR. There is a Wildlife Assistant in the Reserve exclusively to look after the conservation awareness programmes. Deputy Director (Wildlife Education) attached to the Circle office is also giving inputs for improvising conservation awareness/visitor management activities. Professional support has been hired through PaTCof to study and monitor various visitor
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>facilities (parking lots, camping and trekking programmes, transport inside the TR, issuance of tickets, advance booking, etc) and their impacts to make necessary corrections.</p> <ul style="list-style-type: none"> Total annual day visitor is 50,000 out of which only 20,000 visitors stay overnight.
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**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self-guided services in the field, visitor feedback on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		<ul style="list-style-type: none"> Tiger monitoring report 2016-17 Survey reports Permission for conducting research activities in protected areas 	<ul style="list-style-type: none"> The available research studies/information are taken into consideration while preparing the TCP. Recommendations of the Consultancy Report on 'Conservation Review for Rationalization of PA Network in Kerala' by French Institute of Pondicherry (pages 42-43 of report) are considered while notifying the core and buffer of PKMTR. Phase IV monitoring of tigers and co-predators is conducted every year in the entire tiger reserve with the technical support from Parambikulam Tiger Conservation Foundation. The overall prey density of the reserve is assessed every year as a part Tiger monitoring work As part of regular monitoring, 'Daily monitoring protocol' is systematically being implemented and reported. As the PA is 100% cattle free, livestock grazing is not an issue in PKMTR. Weed management is done in the low lying marshy grasslands called vayals and a journal is maintained for each vyal. There is no poaching in the reserve since 2004. Only one minor case is reported in 2017 related to deliberately lit fire. Species surveys are conducted every year An All Kerala Tiger Monitoring programme lead by Parambikulam Tiger Conservation Foundation is in progress Several research projects by different research institutions are in progress, like Genetic improvement of selected tree species, Conservation of <i>Calamusshenthurunni</i> and <i>C wightii</i>, two endangered and endemic Rattans of Western Ghats, through Micro propagation, reintroduction and Cryobanking Survey and documentation of
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>economical and ethno botanical use of endemic trees in India</p> <ul style="list-style-type: none"> To monitor the waterhole management activities, a journal is maintained for each waterhole. Disease surveillance is being done systematically.
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***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		<ul style="list-style-type: none"> Building Register Road Register STP Register APO - FDA 	<ol style="list-style-type: none"> The following registers are being maintained in PKMTR. <ul style="list-style-type: none"> Building Register Road Register STP register Systematic maintenance schedule is followed subject to the availability of funds. Apart from the funds from State and Central share, about 30% of money collected in FDA (from ecotourism programmes) is shared for habitat improvement activities and protection in the Reserve. At present 9 Safari vehicle are purchased under FDA for Jungle Safari. Apart from this 2 more safari vehicle will be purchased during this financial year. (Ecotourism fund-State share)
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria														
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks										
Populations of key threatened/ endangered species are declining.	Poor		<ul style="list-style-type: none"> Tiger monitoring report 2015-16 and 2016-17 Butterfly survey report 	<ul style="list-style-type: none"> The tiger population in Parambikulam is found to be stable which can be attributed to improved park security, intensive habitat management, intact connectivity and effective park-people engagement. The estimated tiger density and number of individual tigers identified in PKMTR is listed below Tiger population trend seems to be stable or likely increasing. <table border="1"> <thead> <tr> <th>Year</th> <th>Institution</th> <th>Density (tigers/100km²)</th> <th>Area covered</th> <th>No of Tigers</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Year	Institution	Density (tigers/100km ²)	Area covered	No of Tigers					
Year	Institution	Density (tigers/100km ²)			Area covered	No of Tigers								
Some threatened/ endangered species populations declining, some are	Fair													

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

increasing, and most others are stable.			<ul style="list-style-type: none"> 2015 Checklist of Butterflies in 2016 Checklist of Birds in 2015 Amphibian survey report 2015 NilgiriTahr survey report 2017 Spider survey report 2014 				(km ²)	identified	
Several threatened/ endangered species populations increasing, most others are stable.	Good				2009	KFD and WII	2.65		
All threatened/ endangered species populations either increasing or stable.	Very good	✓			2011	WII	6.61	197	
			2012		WWF	2.49	400	26	
			2014		KFD and WII	2.33	203.41		
				2015-16	PaTCoF	2.62	643.66	37	

- Density and biomass of prey animals is estimated every year since 2015
- Conducting regular species surveys
- 182 species of birds were identified during 2015 bird survey
- 196 species of butterflies in 2015 and 206 species of butterflies in 2016 were identified these survey also confirmed the presence of five rare butterfly in the reserve namely Palani four ring, Pale green awlet, Spotted royal, Small palm bob) and Nilgiri grass yellow
- Presence of 41 species of amphibians were recorded in 2015 amphibian survey, in that eight species was reporting for the first time from PKMTR.
- Population estimation of Nilgiri tahr was carried in Parambikulam Tiger Reserve as a part of all Kerala population estimation. NilgiriTahr population exists in four locations in PKMTR namely, Karimalagapuram, Vengoli, Pandaravara and Kuchimudi. Of the four Thar locations in the Tiger Reserve, sighting were reported only from Pandaravara in Anappady section, Sungam range. A total of 12 animals were sighted during the survey in Pandaravara.
- The survey of spiders conducted in 2014 recorded the presence of 57 species of spiders in the Tiger Reserve
- 12 species of bats were identified in a study in PKMTR
- Posters of different species such as Fish, Amphibians, Spiders and Butterflies were prepared as a part of species survey.

+ This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria														
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks										
Population of tiger is showing a declining trend	Poor		<ul style="list-style-type: none"> Tiger monitoring report 2015-16 and 2016-17 	<ul style="list-style-type: none"> The tiger population in Parambikulam is found to be stable which can be attributed to improved park security, intensive habitat management, intact connectively and effective park-people engagement. The estimated tiger density and number of individual tigers identified in PKMTR is listed below Seems to be almost stable. <table border="1"> <thead> <tr> <th>Year</th> <th>Institution</th> <th>Density (tigers/100km²)</th> <th>Area covered (km²)</th> <th>No of Tigers identified</th> </tr> </thead> <tbody> <tr> <td>2009</td> <td>KFD and WII</td> <td>2.65</td> <td></td> <td></td> </tr> </tbody> </table>	Year	Institution	Density (tigers/100km ²)	Area covered (km ²)	No of Tigers identified	2009	KFD and WII	2.65		
Year	Institution	Density (tigers/100km ²)			Area covered (km ²)	No of Tigers identified								
2009	KFD and WII	2.65												
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair													
Population of tiger is showing a stable trend but below carrying	Good													

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

capacity				2011	WII	6.61	197	
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good	✓		2012	WWF	2.49	400	26
				2014	KFD and WII	2.33	203.41	
				2015-16	PaTCoF	2.62	643.66	37

• Density and biomass of prey animals is being estimated every year since 2015

****This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.***

6.3 Have the threats+ to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		<ul style="list-style-type: none"> Fire Management Plan FDA Annual report, GIM progress report Offence register Animal sighting register at section office Vehicle register book at check posts Study report of KFRl 	<ul style="list-style-type: none"> Cattle free tiger reserve Controlled eco-tourism activities Stabilized population of Predator and Prey population, as revealed in the study results. Anti-poaching Camp sheds at vulnerable points Proposal for alternate entry points / roads Check posts at every entry points Regular patrolling Night patrolling Speed boat patrolling Interstate patrolling Inter division patrolling Fire protection activities- fire management plans, firefighting equipment Generated alternative livelihoods through FDA Private vehicles are limited inside the sanctuary Provided gas cylinders for the families of tribal settlement Offences drastically reduced Ambulance services for the local tribes Medical Service through Primary Health Centers Minimized night traffic Long standing knowledge of indigenous people indicates that the number of wild animals and the quality of forest has increased over the period because of quality of protection given. People's participation in disaster management. There is no specific disaster management plan. Live Alerts from Indian Forest Fire response and assessment system (ISRO) There is a demand of constructing a new road from Keral side through core area of this tiger reserve. If this demand is agreed to then threat perception may rise.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

+Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?

6.4 Is visitor management+ appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor			<ul style="list-style-type: none"> Controlled eco-tourism Proper guidelines for the visitors Orientation for the eco tourism visitors Eco tourism plans included in TCP Sub plans for the eco tourism Feedback/suggestion registers at main visitor points Billboards suggesting signboards throughout the TR, providing awareness, directions and instructions Information Center – 2 Nos. Accompanying guides throughout the tour Plastic free zone Entry limited to private vehicles inside the TR
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good			
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good	✓		

+Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism

6.5 Are local communities supportive of TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Annual Report PaTCoF& FDA	Tiger Reserve is empowering local tribe through FDA and foundation. The activities includes <ul style="list-style-type: none"> Livelihood activities through EDCs Employment in forestry works Tourism Micro units Skill development/livelihood trainings Education support Value addition and marketing of forest products Sanitation and hygiene development support Drinking water facilities Training programs Providing electrical energy support Fishing in the reservoirs
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

+ There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

7. MEE Score Card+

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	42.5	86.71%
2.	Planning	07	10	70	62.5	
3.	Inputs	05	10	50	42.5	
4.	Process	06	10	60	50.0	
5.	Outputs	04	10	40	35.0	
6.	Outcomes	05	10	50	45.0	
Total		32		320	277.5	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential weightages to the 32 Assessment Criteria including 'normalization'.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

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Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category* (Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good	✓	
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

			entire area forms the catchment of Chalakkudy River. The sanctity of core of is maintained such that the watershed values from the forest to these rivers are not affected.	
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2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		<ul style="list-style-type: none"> • Protection is strengthened through an effective protection/fire protection plan which has helped in preventing degradation of the area from extensive fire and resultant carbon loss. • The carbon emission activities are reduced through ecodevelopment activities especially encouraging the local communities for using fuel efficient choolahs, discouraging firewood collection and using LPG. • There is no timber extraction activities in the Core of tiger reserve which has helped in stocking carbon. • NTFP collection in the PA is minimal and returns from NTFP are increased by value addition through the successful implementation of Ecodevelopment initiatives. • The waste disposal mechanism especially plastic recycling, drinking water plant (reverse osmosis unit) are being carried out as part of ecodevelopment activities. • Grazing pressure in the sanctuary is prevented by taking out all cattle from the sanctuary, which is now 100% cattle free. • Issues related to increase in atmospheric carbon dioxide and increasing global climate are discussed in the awareness camps and the people are sensitized for taking remedial actions. • Publicizing the slogan 'Global Warming – Tree is the Answer', Kerala Forest Department has promoted extensive tree planting activities. Measures for reducing carbon emission and global warming are taken up as part of the 'Green Kerala Mission' programme of the State Government. 	<ul style="list-style-type: none"> • A specific guide line and action plan in this regard needs to be developed.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

7. Periyar Tiger Reserve, Kerala

Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		<ul style="list-style-type: none"> Best Practices in PTR P 10 	<ul style="list-style-type: none"> Periyar Tiger Reserve (PTR) is situated in the Cardamom and Pandalam Hills of the Southern Western Ghats. The major portion of the Reserve forms the catchment of River Periyar and the rest is that of River Pamba. PTR being the most extensive and oldest protected area in Kerala spreads over 925 km² of the forested area of which 881 km² is core zone (inviolable area) and remaining 44 km² is buffer zone Periyar forms the single largest forest administrative unit within the most extensive contiguous evergreen forest tract in the Southern Western Ghats. PTR with the adjoining forested tract in Tamil Nadu and those in Kerala forms an important conservation unit. The tract has a critical role in regional connectivity in the otherwise fragmented forests of Western Ghats. The diverse habitats of PTR account for its unique assemblage of flora and fauna. It has 2000 recorded plant species, 26% of them endemic and 7.5% threatened'. PTR has a Tiger population of over 25 along with associated herbivore species and about 750- 900 elephants. <ul style="list-style-type: none"> Periyar Lake irrigates some 68,000 ha in Theni, Madurai, Ramnad and Dindigal districts of Tamil Nadu. As perhaps the most visited. PA in the country with 7.1 lakh visitors annually, it is vitally important for local economy . This less than 1000 sq. km forest tract is the destination for more than a crore people every year as pilgrims to Sabarimala and Mangladevi as well as tourists. The total area of Tiger Reserve is 925Km², administratively divided into two divisions (Periyar East and Periyar West with a spread of 707Km² and 218Km² respectively) Km, out of the 925 Km², 881Km² is designated as core and 44Km² as buffer. There are five tribal communities viz.,Mannan, Paliyan, Urali,MalaArayan and Malampandaram. Malampandarams are nomadic and keep their own way of life. The tribal communities are settled across five tribal settlements in the park. All together the park has 857 tribal families spread across 728.64 Ha of land designated as tribal settlements. Vegetation Periyar has an array of habitats consisting of <ol style="list-style-type: none"> Tropical evergreen forests Semi-evergreen forests Moist deciduous forests, savanna and grasslands
Values generally identified but not systematically assessed and monitored.	Fair		<ul style="list-style-type: none"> Vegetation <i>Para 2.3 of TCP</i> Flora <i>Para 2.4 of TCP</i> 	
Most values systematically identified, assessed and monitored.	Good		<ul style="list-style-type: none"> Phytoplankton Flora <i>Para 2.3.6 of TCP</i> 	
All values systematically identified, assessed and monitored.	Very good	✓	<ul style="list-style-type: none"> Mammals <i>Para 2.5.1 of TCP</i> Fishes in PTR <i>Para 2.5.5 of TCP</i> Economic Value <i>Para 1.3.2 of TCP</i> <i>Scheduled tribes in PTR Para 5.4.1 of TCP</i> Cultural Values <i>Para 1.3.3 of TCP</i> Human and Ecological Values <i>Para 1.3.5 of TCP</i> Aesthetic Values <i>Para 1.3.6 of TCP</i> Scientific Values <i>Para 1.3.7 of TCP</i> Identified 	

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

			Values	<p>4. Transitional fringe evergreen forests and 5. Eucalypts plantations</p> <p>These vegetation types act as Mosaic of habitat. Apart from these Vayals and Grass lands form unique habitat.</p> <ul style="list-style-type: none"> <p><u>Economic value</u></p> <p>The economic value of PTR is largely due to its tourism potential, pilgrimage Centers and water and catchment values. PTR being an internationally renowned tourism destination provides sizeable revenue to the state. The hotel and tourism industry also has a prominent presence in Kumily due to PTR. The water from Periyar Lake supports substantial agriculture and generation of electricity to Tamil Nadu (PF study report, 2009). In addition, forests of Periyar provide ecosystem services to the society.</p> <p><u>Cultural values</u></p> <p>The Sabarimala shrine is situated as an enclave within the core of PTR and draws about ten million pilgrims annually. Ecological Impact Monitoring at Sabaramal shrine was done in 2014-15. Mangladevi-Kannagitemple (opened only for a day on "Chitrapournami" in a year, is visited by about ten thousand pilgrims) is another archeological and pilgrimage site for people from Kerala and Tamil Nadu.</p> <p><u>Human ecological values</u></p> <p>Though no human settlements exist within the core, the northwest and western fringes of PTR are inhabited. Estimates suggest that 20,000 to 30,000 people in the immediate vicinity are substantially dependent on PTR for their livelihood. This includes about 5000 people belonging to Mannan, Paliyan, Urali, Malampandaram, Ulladar and Malarayan tribes, who have distinct eco-cultural association with the forests of Periyar.</p> <p><u>Aesthetic values</u></p> <p>PTR is a globally known tourism destination due to its pleasant climate, scenic beauty and visual splendor. The panoramic view of undulating mountains interspersed with fast flowing streams, lake, marshes and meadows attract tourists from all over the world.</p> <p><u>Scientific values</u></p> <p>PTR with its rich diversity and endemism of flora and fauna, diverse habitats and varied socio-cultural settings on the fringes offer unique opportunities for research, education and nature interpretation. Various values of the Tiger Reserve such as ecological, economic, cultural, human ecological, aesthetic and scientific values are well assessed and documented in Chapter 1 of TCP. Regular monitoring of these values is being carried out by various short and long-term studies mainly by the Tiger Reserve Management, NGOs and various research organizations.</p>
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1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		<ul style="list-style-type: none"> SWOT Analysis-Core <i>Para 6.4 & 6.5 of TCP</i> SWOT Analysis-Buffer <i>Para 15.4 & 15.5 of TCP</i> Enclosure Acquisition Proposal Fire Management Plan Management strategies for Tackling threats <i>TCP Chapters 7 to 14 (p 137-240)</i> 	<p>The Periyar Reserve is located in between open interstate forest boundaries, and accommodates a large manmade lake of 26 Km² which is a center of tourist attraction and is a source of drinking water to nearby state.</p> <p>The presence of a shrine at Sabirmala inside the reserve towards its southern boundary is a major threat to biodiversity conservation. Regular monitoring and strategic intervention has successfully reduced the impact of pilgrimage on the landscape and is continuing successfully with people's participation</p> <ul style="list-style-type: none"> Enclosures-Proposal has been prepared to acquire enclosures within the park, Fire –Fire management plan is prepared annually, Fire prone areas are identified and assessed, Fire protection watchers are engaged and creation of fire line as preventive measure. Last year fire occurred only at two places. A vyala management is also in place There is a threat from invasive spp. Lantana Poaching of elephants minimized Only a small patch in Thekkady area is somewhat open to human animal interface.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good	✓		

*This assessment should be based on number, nature and extent of threats

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		<ul style="list-style-type: none"> Tribal settlements in PTR <i>Para 4.1.2 of TCP p 81</i> 	<ul style="list-style-type: none"> The Core Area of PTR has no human and biotic interference. All the human settlements/villages from the core zone have already been shifted to the fringe area of the buffer zone. The core zone of PTR is totally free from livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities; and thus, no human or biotic interference exists in the Core Zone of PTR. Individual rights under FRA have been successfully settled and title was issued in all the five tribal settlements. (TCP p 81) Only one private property of 200 ha. (though encircled) is inside the core. It is being proposed to acquire it.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good	✓		

*This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of 'Unified Control' of the 'Core' and 'Buffer' zones under the Field Director would also be taken into account.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and three SOPs met	Poor		<ul style="list-style-type: none"> • Notifications of core • Notifications of buffer zones • Trust deed of PTCF • Approval letter of NTCA for TCP (First two pages of TCP) • Notification of Steering Committee formation 	<ul style="list-style-type: none"> • All the four statutory requirements are successfully complied in PTR <ol style="list-style-type: none"> (1) <u>Legal delineation and notification of Core and Buffer Areas</u> (2) Core zone of PTR has already been notified vide S.R.O.No. 1089/2007 (G.O. (P) No. 75/07/F&WLD dtd.31/12/2007) (2) Buffer zone of PTR has already been notified vide S.R.O.No. 267/2011 (G.O. (P) No. 18/11/F&WLD dtd.22/03/2011) Establishment of Tiger Conservation Foundation. • Periyar Foundation has already been established during 2004 and reconstituted as Periyar Tiger Conservation Foundation in 2012 (Reg. No. 298/12/IV dtd.25/07/2012) (3) Development of a Tiger Conservation Plan • Tiger conservation plans for core and buffer has already been approved by NTCA vide letter No. F. No.1-14/2011- NTCA dtd.21/03/2013. • State-level Steering Committee has also already been constituted vide G.O. (Rt) No.72/2009/F&WLD dtd.12/02/2009. But steering committee meeting not yet been held. • Tripartite Agreement between Field Director, State Government and NTCA has been executed and cent percent complied. • The 3 SOPs on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses are also strictly complied. There are no incidents of tiger straying out from PTR in the last five years. There were five incidents of tiger mortality in the last five years. The carcasses were disposed strictly following the NTCA protocol. • Eco sensitive zone notification also made on 31.03.2016.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	✓		

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor			<ul style="list-style-type: none"> Management of Core and Buffer is under full administrative and financial control of the Field Director of TR. Of the 925 km² 707 Km is under Periyar East Division managed by Deputy Director East and 218 km² under Periyar West division managed by Deputy Director Periyar West.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very good	✓		

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)+?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		<ul style="list-style-type: none"> Approval letter of NTCA for TCP Stakeholders Workshop 	<ul style="list-style-type: none"> PTR has a comprehensive and relevant TCPs for Core and Buffer which is duly approved by NTCA vide letter No. F. No.1-14/2011- NTCA dtd.21/03/2013. The TCP for Core and Buffer of PTR was prepared through participatory process (mentioned in chapter 6 of the TCP) by conducting TCP workshop involving stakeholders, line departments, scientific institutions, political representatives, etc held from 27th to 29th September 2010. A total of 85 representatives of stakeholders participated in the workshop.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

*Score: 2.5; Fair: 5; Good: 7.5; Very Good: 10

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		<ul style="list-style-type: none"> Map of illegal entry routes Map of anti-poaching camp sheds (facing p198) 	<ul style="list-style-type: none"> Threatened biodiversity values of the reserve are identified and safeguarded as per the prescriptions in the TCP The Zero-Poaching status achieved by the Park is a significant achievement.
TR safeguards a few threatened	Fair			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

biodiversity values.			in TCP)	
TR safeguards a large number of threatened biodiversity values.	Good	✓	<ul style="list-style-type: none"> Protection Strategy Chapter 10 of TCP (Pages from 173 to 210) 	<ul style="list-style-type: none"> Participatory management as practiced in PTR has been a model for the nation. Protection which is the most important part of tiger conservation has been accorded top priority of TR management and is addressed elaborately in protection plan in chapter 10 of TCP. Various zone and theme plans, under various themes such as fire management, habitat management, participatory forest management etc are included in the TCP to address the threatened biodiversity values.
TR safeguards all threatened biodiversity values.	Very good		<ul style="list-style-type: none"> Management strategies-Core Chapter 7 of TCP (Pages from 137 to 150) Habitat assessment and Monitoring Chapter 9 of TCP (Pages from 159 to 172) Management Strategies -Buffer Chapter 16 &17 of TCP (Pages from 245 to 260) 	<ul style="list-style-type: none"> Indigenous communities in the TR are actively participating in various management activates as different EDCs Regular monitoring of habitats like Vayals and Waterholes Scientific monitoring of tigers, co-predators, prey and their habitat are detailed in chapter 9 of TCP and are being adopted as per the directives of NTCA. The number of APC are being increased every year. They are also provided with communication facilities. More no. of cameras put up for tiger monitoring purely from Foundation Fund.

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		<ul style="list-style-type: none"> management plan workshop- List of Stakeholders 	<ul style="list-style-type: none"> The TCP for Core and Buffer of PTR was prepared through participatory process (mentioned in chapter 6 of the TCP –by conducting TCP workshop involving stakeholders, line departments, scientific institutions, political representatives, etc. A total of 85 representatives of stakeholders were participated in the workshop. PTR is a well-known TR in the country for participatory forest management which is adopted since 1996. At present 78 EDCs are functioning in PTR under four different categories. 2.25 lakh people in periphery are part of EDC. <ul style="list-style-type: none"> User-group EDCs – 3 nos. Neighborhood EDCs – 58 nos. Pilgrim-based EDCs – 10 nos. Professional Group EDCs – 7 nos. Micro plans are prepared through participatory process. All the stakeholders are identified and are regularly consulted as per the prescriptions given in the TCP. Mangaladevi Pilgrimage planning Sabarimala pilgrimage planning
Stakeholders participate in some planning.	Fair		<ul style="list-style-type: none"> Copies of approved micro plans 	
Stakeholders participate in most planning processes.	Good		<ul style="list-style-type: none"> Minutes of FDA meetings 2017 	
Stakeholders routinely and systematically participate in all planning processes.	Very good	✓	<ul style="list-style-type: none"> Institutional Framework for Eco development Chapter 17 &18 of TCP (Pages from 251 to 262) 	

*The result of participation must show in the field and not merely reported as a routine exercise.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		<ul style="list-style-type: none"> Habitat Management Plan <i>Para 7.2.2.3, of TCP</i> Vegetation map of the Reserve. Vayal and Waterholes location maps Interim report on status and distribution of vayals in PTR (KFRI) maps of perennial water sources 	<ul style="list-style-type: none"> The prime habitats in the reserve includes grasslands of hill top, grasslands of hill slopes and marshy grasslands (vayals) used extensively by the prey species. Habitat management plan aims at managing these prime habitats and water sources of the Reserve. As per the habitat management programmes indicated in the TCP, the habitats for tigers, co-predators, their prey populations (gaur, sambar, barking deer, etc) and other important threatened (IUCN categories) species such as hornbills, NilgiriTahr, etc are effectively managed with emphasis on the breeding and rearing habitat including factors such as food, water & shelter. All riparian habitats that are important for hornbills and other arboreal animals are protected from fire which helps in protecting the vegetation and canopy contiguity. Prescriptions for management of vayals, eradication of invasive weeds, checking invasion of woody species into grasslands and maintenance of water holes are undertaken under habitat management. A total of 94 water holes have been identified in the park the seasonality of the waterholes is mapped. Maintenance activities like deepening, removal of vegetation is done on drying up of the water holes. For Unique habitat types such as tall and marshy grass (vayals), controlled burning (cool burning) practices, etc are managed and monitored periodically. The management of exotic/invasive weeds such as Lantana, Eupatorium, Mikania etc are taken up as part of site-specific habitat management practices as well as grassland and marshy land management. But weed management is to be taken up rigorously. At present there is no invasive spp. Management plan. There is <u>no corridor in the buffer zone</u>. However, the corridor in the landscape is addressed in the TCP for adjoining area (the <u>TCP for adjoining area is submitted for approval</u>). Management of invaded woody areas Management of water holes, Permanent plots for long term habitat monitoring, Species specific habitat management interventions are being practiced for management of biodiversity including habitat specialists and are systematically monitored and maintained. Elephant population is found to be varying from 600-700. Male female ratio is 12.5 NilgiriThar population in the reserve is very small, within 20.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			
			<ul style="list-style-type: none"> Phase -IV Report 2016-17 <i>Management of Waterholes Para 7.2.2.3.4, of TCP</i> Specie specific management interventions <i>Para 7.2.2.3.6, of TCP</i> Management of vayals <i>para 7.2.2.3.1. of TCP</i> weed eradication (<i>para 7.2.2.3.2. of TCP</i>) Management of invaded woody areas (<i>para 7.2.2.3.3. of TCP</i>) Management of water holes <i>Para 7.2.2.3.4. of TCP</i> Permanent plots for long term habitat monitoring <i>para 7.2.2.3.5. of TCP,</i> Species specific habitat management interventions <i>Para 7.2.2.3.6. of TCP</i> 	

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*																													
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																									
TR has little or no PS and SA.	Poor		<ul style="list-style-type: none"> Protection Strategy Chapter 10 of TCP (Pages from 173 to 210) – given as a separate booklet Map showing areas prone to illegal activities and illegal entry routes 	<ul style="list-style-type: none"> Protection of tiger and its habitat and the strategies for strengthening protection is accorded priority in the protection plan of the reserve. Chapter 7 of TCP elaborates the Protection plan of the reserve. The protection plan is designed as a guideline with effective patrolling strategies to mitigate spatial and temporal threats to tigers, co-predators, prey and their habitat and is prescribed for dovetailing and institutionalizing various elements of protection. A major protection challenge existing in PTR is its interstate open boundary extending to almost 90 km which is shared with Tamil Nadu and the illegal entry points, and enclosures within the park. 18 illegal entry points exists which has been properly mapped A total of 63 anti-poaching camps are already established in vulnerable areas, 18 more are planned as per the TCP. The maintenance status of protection related key infrastructure like roads barricades watchtowers and check post were presented. Also a reorganization of the ranges is proposed in the TCP. Though the terrain is highly undulating, most of the difficult areas are having APCs with adequate staff. Hence at present there is no difficulty in effective coverage of entire area. <p>Terrain difficulties Periyar has a highly undulating terrain- there are pockets in the reserve where even foot patrolling is highly difficult but staff engagement is ensured. <u>Interstate border patrol in cooperation with the Tamil Nadu forest department is also happening.</u> Participation of EDC members in protection is also ensured in core as well as buffer zones. 920.45Km of trek path being used for perambulation exists in PTR. A Special Task force has been set up. Training has been imparted by the TamilNadu special Task force. The team is trained in various combat and survival techniques An all-terrain vehicle (ATV) has been recently inducted.</p> <ul style="list-style-type: none"> The details of offence for the past three years are shown in the following table. All offence cases are documented. <table border="1"> <thead> <tr> <th>Year</th> <th>No. of wildlife +other cases</th> <th>Charged</th> <th>Pending</th> <th>Convicted</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>2014</td> <td>4 + 6</td> <td>1 + 6</td> <td>4</td> <td>0 + 0</td> <td></td> </tr> <tr> <td>2015</td> <td>2+11</td> <td>1 + 8</td> <td>3</td> <td>0 + 0</td> <td>1 case compounded and 1 case transferred to territorial range</td> </tr> <tr> <td>2016</td> <td>7 + 12</td> <td>1+1</td> <td>2</td> <td>0 + 0</td> <td>8 cases compounded and 3 cases dropped</td> </tr> </tbody> </table>		Year	No. of wildlife +other cases	Charged	Pending	Convicted	Remarks	2014	4 + 6	1 + 6	4	0 + 0		2015	2+11	1 + 8	3	0 + 0	1 case compounded and 1 case transferred to territorial range	2016	7 + 12	1+1	2	0 + 0	8 cases compounded and 3 cases dropped
Year	No. of wildlife +other cases	Charged	Pending			Convicted	Remarks																						
2014	4 + 6	1 + 6	4			0 + 0																							
2015	2+11	1 + 8	3			0 + 0	1 case compounded and 1 case transferred to territorial range																						
2016	7 + 12	1+1	2	0 + 0	8 cases compounded and 3 cases dropped																								
TR has an adhoc PS and SA.	Fair		<ul style="list-style-type: none"> Anti-poaching camp sheds and other protection related infrastructures 																										
TR has a generally relevant PS and SA but is not very effective.	Good		<ul style="list-style-type: none"> List of Proposed Camp sheds, Maintenance status of Watchtowers, roads, barricades and check posts Reorganization of ranges 																										
TR has a comprehensive and very effective PS and SA.	Very good	✓	<ul style="list-style-type: none"> Patrolling schedule Annual Report PTCF 	<p>No offence is reported in 2017. The protection plan also contains strategies for improving infrastructures, communication facilities, vehicles, arms and ammunition, deployment of staff, capacity building, intelligence gathering, joint patrolling, interdivision and interstate co-ordination etc. Highway patrolling on daily on roads passing through buffer from east to west to reduce illegal activities and road kill.</p>																									

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

		2016-17	<ul style="list-style-type: none"> • A fire prevention and control plan has been prepared and is practiced in the fire prone seasons. • A dog squad has been formed with 2 dogs in the squad.
		<ul style="list-style-type: none"> • Details of offences 	

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

***Score: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		<ul style="list-style-type: none"> • Details of settlements given Para 17.5 (4) of TCP (Page 258) • Details of compensation • Annual Report PTCF 2016-17 	<ul style="list-style-type: none"> • There is minimum human-wildlife conflict in PTR due to the absence of human settlements inside. For other cases the damages are compensated by timely ex-gratia payments. • The human-wildlife conflict measures in the territorial forest divisions contiguous to PTR are also proposed to be tackled in the TCP for adjoining/corridor areas by providing compensation, mitigate measures, etc. • Energized fences, Elephant proof trenches and stone walls are erected as barriers to reduce the damage due to the animals straying into the human habitations. • The Eco development funding based on proposals submitted by the EDCs is prioritized on the basis of projects aimed at mitigating man animal conflicts. For example during 2016-17 a sum of INR 400000 has been spent exclusively to support fencing to avoid human animal interface. For human causality, the compensation is Rs. 5.0 lakh, and for injury Rs. 75,000/-. The compensation is quickly disbursed. • As per mitigation measures, there are primary response Team from local people under wild watch programme.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good	✓		

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?`

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		<ul style="list-style-type: none"> • Draft TCP for adjoining /corridor area. (copy is provided as separate booklet) • Landscape Map • connectivity (map showing the corridor in Aryankavu gap 	<ul style="list-style-type: none"> • PTR has tremendous scope of opportunities on the landscape scale as PTR landscape is the largest compact and continuous landscape and integrated into a wider network in the 'Tiger Conservation Plan for Adjoining Area' (draft TCP for Adjoining Area is submitted for approval). Draft plan is yet to be approved. • The important corridor in Aryankavu Gap has been identified and developed strategies for connectivity • Though the Working Plans of the yester years did not give much concern on biodiversity and wildlife conservation as well as the ecological integrity of the landscape and the conservation ethos often sacrificed for economically significant forestry activities, these are taken in to account to a certain extent, in the present day working plans. All Working Plans of territorial forest divisions in the selected adjoining area, have a special working circle namely 'Biodiversity and Wildlife Conservation Working Circle' or 'Wildlife Management Working Circle' which is often an overlapping working circle covering the entire area of the division. This is mentioned in the TCP for Adjoining Areas. • The areas selected as adjoining area for PTR is based on study conducted by French Institute of Pondicherry (Rationalization of PA Network) & FERL (Identification of corridor in Periyar-Agasthyamalai Landscape). • The main aim of formation of PTCF is the management of PTR and Adjoining Landscape (PTRAL). They have prepared a Tiger Conservation Plan for adjoining areas (2014-15 to 2023-24). • In addition, Biodiversity Conservation and Rural Livelihood Improvement Project (BCRLIP) is envisaged and initiated for the management of Periyar and Agasthyamalai Landscape. • PTR is integrated into the Agasthyamalai Biosphere Reserve in the south. The adjoining / corridor TCP consists of the corridor in the landscape mitigating threats related to biodiversity conservation etc along with incorporation of biodiversity conservation strategies in the working plans of territorial forest divisions in the identified landscape (copy submitted for approval). Only one corridor issue is there.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good	✓		

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize land use around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		<ul style="list-style-type: none"> • Reorganization Table 10.18 in page 195 -196 of TCP • Sections • staff strength • Mandays generated through CBET • Micro Plans of EDCs 	<ul style="list-style-type: none"> • PTR is administrated as two divisions viz., Periyar East and Periyar West with 5 territorial Ranges viz., Thekkady, Vallakadavu, Periyar, Azhutha and Pamba) and 3 functional Ranges (Eco development, Research and Flying Squad). At present there are 36 sections which are the basic unit of protection in this TR. There is a proposal to increase this number to 41 to enhance the protection. • The existing staff strength in Periyar East and West Divisions are presently adequate As of now there is no vacancy. However, while considering growing pressures, PTR management may require more staff strength in future. • Though the terrain is highly undulating, most of the difficult areas are having APCs with adequate staff. There are 38 APC with 4 wireless station. Thus the Park management is always ready to contain any specific threats with staff support and existing facilities. • Establishment of more Forest Stations are envisaged in para 10.1.6.2. of TCP which will strengthen the protection of the 18 identified Forest Stations 4 are already established in PTR. • About 300 daily waged mazdoors are also working in PTR • Community-based Ecotourism Programmes run by PTCF generates manpower for protection • Local communities are also supporting the park management in protection as their reciprocal commitments mutually agreed in the microplans. • PTR has adequate and well-organized strength to take care of the resources in this Reserve.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

*This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

• Assessment criteria+				
• Condition	• Category*	(Tick ✓)	Reference document(s)	Remarks
• Few, if any, resources explicitly allocated for TR management.	• Poor		<ul style="list-style-type: none"> • Infrastructure Para 10.1.7 in (Pages from 196 to 208) of TCP • List of Vehicles • List of equipment 	<ul style="list-style-type: none"> • The vehicles presently available are adequate and are in good conditions. Most of the vehicles are new and maintained periodically as per the provisions in (TCP p 196 to 208). All the vehicles are equipped with wireless communications. • Equipment such as wireless sets, walkie talkies, arms and ammunitions, computers, laptops, camera traps, GPS, Range Finders, Compasses, etc are adequate to meet the objectives of PTR. • All the buildings including staff quarters, office buildings, APCs and related establishments are adequate, maintained periodically and presently used. All the anti-poaching camps are well equipped and well furnished; sufficient buildings are available for the protection staff. • ALL THE ABOVE SAID ITEMS ARE ADEQUATE, HIGHLY ESSENTIAL AND ARE MAINTAINED PERIODICALLY AS AND WHEN REQUIRED. REGISTERS FOR EACH CATEGORY IS PROPERLY MAINTAINED AND REGULARLY UPDATED.
• Some resources explicitly allocated for TR management but not systematically linked to management objectives.	• Fair			
• Some resources explicitly allocated towards achievement of specific TR management objectives.	• Good			
• Adequate resources explicitly allocated towards achievement of specific TR management objectives.	• Very good	✓		

** These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*																																																									
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																																					
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		<ul style="list-style-type: none"> Plan Progress Periyar East Division Plan Progress PTCF Plan Progress Periyar West division 	<ul style="list-style-type: none"> Details of funds received from NTCA during last 3 years and their utilization by PTR is given below <table border="1"> <thead> <tr> <th rowspan="3">Budget Head</th> <th colspan="9">Year (In Lakhs Rupees)</th> </tr> <tr> <th colspan="3">2014-15</th> <th colspan="3">2015-16</th> <th colspan="3">2016-17</th> </tr> <tr> <th>Sanction/Budgeted</th> <th>Release/receipts</th> <th>Expenditure</th> <th>Sanction/Budgeted</th> <th>Release/receipts</th> <th>Expenditure</th> <th>Sanction/Budgeted</th> <th>Release/receipts</th> <th>Expenditure</th> </tr> </thead> <tbody> <tr> <td>Central (Rs. in lakh)</td> <td>376.5</td> <td>333.65</td> <td>333.59</td> <td>378.1</td> <td>353.67</td> <td>346.58</td> <td>602.76</td> <td>602.76</td> <td>593.22</td> </tr> <tr> <td>PTCF (Rs. in crores)</td> <td>8.2</td> <td>7.98</td> <td>7.58</td> <td>7.95</td> <td>9.96</td> <td>6.72</td> <td>9.9</td> <td>9.41</td> <td>8.89</td> </tr> </tbody> </table>						Budget Head	Year (In Lakhs Rupees)									2014-15			2015-16			2016-17			Sanction/Budgeted	Release/receipts	Expenditure	Sanction/Budgeted	Release/receipts	Expenditure	Sanction/Budgeted	Release/receipts	Expenditure	Central (Rs. in lakh)	376.5	333.65	333.59	378.1	353.67	346.58	602.76	602.76	593.22	PTCF (Rs. in crores)	8.2	7.98	7.58	7.95	9.96	6.72	9.9	9.41	8.89
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Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			<ul style="list-style-type: none"> Every year around 9 crore money is spent from PTCF. 																																																					
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓																																																							
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good																																																								

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocations and their utilization.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate	Poor		<ul style="list-style-type: none"> APO PTR APO PTCF 	Funds received from various State Budget Heads are the following. APO for 2017-18 attached In Periyar protection is always given priority. Spending is prioritized in terms of improved protected area management, Anti-poaching

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

and seldom released in time and not utilized.			<ul style="list-style-type: none"> Plan Progress Periyar East Plan Progress PTCF Plan Progress Periyar West Division 	<p>measures, Addressing man animal conflicts eco development etc.</p> <p>The various priority base budget heads, Forest Protection, Buildings, Roads, Ecotourism, Survey of Forest Boundary, Eco-development etc. etc.</p> <p>State funds are also released in time. During 2016-17 out of 400.11 lakh released, only 283.39 lakh spent.</p>
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

Budget Head	Year (In Lakhs Rupees)								
	2014-15			2015-16			2016-17		
	Sanction/Budgeted	Release/receipts	Expenditure	Sanction/Budgeted	Release/receipts	Expenditure	Sanction/Budgeted	Release/receipts	Expenditure
State	200.7	190.75	190.27	409	191.72	189.27	400.11	400.11	283.39

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		PTCF Annual Report 2016-17	As we have enough financial resources available from NTCA, FDA, PTCF, GIM, FDA and State funds, direct dependencies on external agencies has been reduced. However, collaboration with NGO's like WWF, TRAFFIC, TNHS etc. are made for training, surveys and technical support. TRAFFIC India and WWF supported PTR in setting up a dog squad. Training for the squad was given by Border Security Force (BSF). No financial support is taken from other NGO's either
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management	Good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

of some TR level activities.				in cash or kind TNHS is taking up Butterfly survey and Bird survey.
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		PTCF Annual Report 2015-16 & 2016-17 <ul style="list-style-type: none"> Human Resource development Chapter 8 (Pages from 154 to 155) of TCP Training Need assessment Chapter 20 (Page 266) of TCP List of Training programmes 	<ul style="list-style-type: none"> All the Forest Range Officers in PTR have undergone training in wildlife modules at CASFOS. All the Beat and Section Forest Officers undergo in-service training course for one year at the Kerala Forest Training Schools located at Arippa and Walayar in combination with 3 months police training with Police Academy. Apart from the above, all the BFOs and SFOs who join PTR are sensitized in wildlife management through 3 days capsule training by PTCF apart from other frequent wildlife management techniques. Periyar Field Learning Center (FLC) also provides rigorous trainings to field staff on various aspects A training need analysis for wildlife management and conservation was carried out and incorporated the same in the TCP in chapters 8 & 20 of the TCP. Accordingly, PTCF regularly provides a variety of orientation/ refresher trainings especially on habitat management techniques, wildlife population estimation techniques, use of field equipments etc. for all the staff ranging from Forest Range Officers to Section Forest Officer, Beat Forest Officers and Protection Watchers. In addition to the regular trainings being imparted, PTCF also imparts three-day training modules to IFS trainees all the staff in PTR are thoroughly trained in wildlife and habitat management practices for effective protection and management. M-stripe training was conducted by WII.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good	✓		

*Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Annual Report 2014-2016	<ul style="list-style-type: none"> The performances of Range Officers are linked to the achievement of management objectives when their confidential reports are written. The SFO and BFO eligible for CM's Award and entry of good performance is made in their service registers. Joseph Varghese BFO and Sri. Vinodkumar RFO has been
Some linkage between staff	Fair			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

management performance and management objectives, but not consistently or systematically assessed.			<p>awarded with CM's Award for best performance- 2016.</p> <ul style="list-style-type: none"> The transfer and postings of RFOs and SFOs are done by territorial Chief Conservator of Forests High Range Circle and that of RFOs and AFD are done by APCCF Administration There is a rotation policy for the transfers such that the staff may get adequate exposure in territorial, wildlife, social forestry, flying squad, etc. requests are mooted so as to effect postings of personnel interested in wildlife <p>Awards and Recognition</p> <ul style="list-style-type: none"> NTCA Award for Excellence: 2016 (In recognition of outstanding performance in the field of Anti-Poaching) Meritorious Service Medal-Vinodkumar RFO Periyar Range 2016 Meritorious Service Medal- Joseph Varghese BFO Periyar Range.-2016 NTCA Award for Excellence: 2012-14 (Co-occurrence and Eliciting Local Public support) U.N.D.P - India Biodiversity Awards 2012 – Best PA in the country WWF-PATA Bagh Mitra Award 2014 The Chief Minister's Award for Innovation in Public Policy 2013 to one R.O. every year. Kerala State Biodiversity Award 2013 Green Award for better management.
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good	✓	

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		<ul style="list-style-type: none"> PTCF Annual Report Micro Plans (various) CBET Income and Man days generated. 	<ul style="list-style-type: none"> Public participation is the life line of the management strategies in Periyar. There are 78 Eco Development communities associated with the Reserve, comprising of almost 5500 families involved in participatory management. The Eco development committees have active participation in the daily management of the reserve. Almost 290 daily wage mazdoors from the dependent communities are employed in the reserve as protection watchers. <u>The cleaning initiative led by the park on 2 of October every year as part of the Swatch Bharath Abhyan is an event with huge public participation. Almost 1000 people participated in the programme in 2016</u> Vasanthasena, a women EDC involved in voluntary patrolling in sandal region during day-time. Every day, 5 women participate in the voluntary patrolling. <u>The SAPP EDC members clean the traditional routes of Sabarimala and remove plastic wastes. About 200 service centers functioning along the traditional routes to Sabarimala with 1200 members involved in cleaning programme.</u> The Wildlife Week Celebration is being entirely conducted by the locals of Kumily Panchayat. About 25000 people participate in the programme which is an exhibition of conservation participation the local community is extending to the park Following the directions of the National Green Tribunal in
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>2016 parking inside the park was shifted to the fringe, which led to the stoppage of private taxis plying inside the reserve. However the Eco development committees of the Fringe was instrumental in upholding the initiative and generated substantial public support.</p> <ul style="list-style-type: none"> The EDC in the Reserve has been categorized in to four viz- Neighborhood EDCs, Users EDC, Professional EDCs and Pilgrimage EDCs,. <p>The Park is a zero poaching reserve which has been achieved through the active participation of the fringe area communities. Celebration of Wildlife Week, Global.</p> <ul style="list-style-type: none"> The eco-development and ecotourism activities in the reserve are taken up based on the approved TCP and approved micro plans of EDCs. The Micro Plans of the EDCs are prepared after detailed PRA with the active involvement of the local community.
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+The involvement of NGOs/ NGIs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Visitor Books at DDs Office, Boat Landing, Bamboo Grove, Inspection Bungalows etc.	<ul style="list-style-type: none"> A visitor's book is maintained giving scope for visitors to give complaints and comments when required. It is taken note of and responded periodically by the Deputy Directors. Suggestions and comments received through website/email are also responded accordingly by the Deputy Directors. Feedback,review and rating can be posted through Face book Page. The Eco Tourism wing of PTCF conducts random feedback surveys and provides management inputs to the Executive Director. There is also a park co-ordination committee. Complaints received through websites: The following websites maintained at various offices have the facility to receive comments or complaints which are promptly answered www.periyartigerreserve.org, www.periyarfoundation.org, www.bamboogrove.org, www.keralaforestdepartment.org and www.keralatourismdepartment.org. Staff adalath is being conducted for settling the complaints of the staff. <ul style="list-style-type: none"> The comments/suggestions written by visitors to PTR were shown to the members. The Eco tourism officer of PTCF regularly monitors the visitor feed backs But there is need to get an easy mechanism for redressal, suggestion and follow up action.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good	✓		

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		<ul style="list-style-type: none"> • Annual Reports • Man days generated. • Eco Development -direct Support to Eco development Committees. PTCF Plan Progress. 	<p>The 260-km perimeter of the reserve has tribal settlements plantations villages and township within its 2-km fringe. During the beginning of the IEDP period the reserve faced livelihood related threats in huge quantum as most of these livelihood activities were illegal and were threats to the biodiversity and conservation status of the Park. During the IEDP period and the years later, 78 EDCs were formed in PTR under Four different categories based on the nature of dependencies.</p> <p>Most of the livelihood issues present in the park during the past has come down to great extent. Presently Direct dependencies on the park exists in the form of Firewood collection, Thatching grass collection, Grazing, fishing and honey collection. Other forms of dependencies like poaching and illegal collection of NTFPs have come down to zero.</p> <ul style="list-style-type: none"> • Alternative direct livelihood support is provided to almost 300 members of the fringe area community through community based Eco tourism programmes being operated in the Reserve. Members of 78 EDCs in the fringe area are given livelihood support through eco development funding paper bag unit, agriculture improvement, thatching grass collection, micro enterprises, organic farming and marketing, catering, pilgrim service centers, visitor services. Micro enterprises, Micro Credit and Agriculture activities are undertaken by Self-help groups (SHGS) • A total of about 225 SHGs are effectively functioning under the 78 EDCs of PTR. Of which 89 SHGs in the west division and 110 in the East are Women SHGs with 782 women participations in the West Division and 340 in the East Division. These SHGs address the livelihood issues of various resource dependent communities Women EDCs such as Vasanthasena (48 members) and Vanitha EDC (78 members) are active participants in the JFM exercise in the park. • Selected women in this group 'Vasantasena' are provided with alternate employment through various activities narrated above. • 300 LPG gas connection were sanctioned but so far only 100 gas connections are supplied.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

*The number of mandays generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor			The Core Area of PTR has no human and biotic interference. All the human settlements/villages from the core zone have already been shifted to the fringe area of the buffer zone. The core zone of PTR is totally free from livestock grazing, cultivation,
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

being actively implemented/ no human habitation in the CTH				encroachments etc, resource extraction/ livelihood dependence of local communities; and thus, no human or biotic interference exists in the Core Zone of PTR.
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***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		<ul style="list-style-type: none"> Survey reports, brochures, pamphlets, coffee table books, posters Annual reportsPTCF 	<ul style="list-style-type: none"> Information on TR management is available on the various websites maintained; www.pariyartigerreserve.org, www.pariyarfoundation.online www.keralaforestdepartment.org and www.keralatourismdepartment.org. Reports of population estimations are published and available to the public. Information'sare also available in Social Media Brochures and pamphlets coffee table books Magazines, Website Posters Detailed information is available with the publications of the Kerala Tourism Department and Kerala Tourism Development Corporation. News letters Photo Exhibitions conducted Nature Awareness Camps
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good	✓		

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		<ul style="list-style-type: none"> Ecotourism Plan in TCP Chapter 23 CBET programmes Brochures and pamphlets Visitor facilities Promotional videos 	<ul style="list-style-type: none"> The tourism plan has been prepared based on the guidelines circulated by NTCA and approved by NTCA Visitors are offered various community based eco-tourism programmes in PTR, which includes soft trek (2-3 hours), day long trek, accommodation in the buffer zone designated for tourism in the approved TCP. All these facilities are manned by BFOs/SFOs and directly supervised by the Concerned RFO and the Eco Tourism Officer PTCF Brochures and pamphlets (given separately) Short videos for promoting CBET programmes exists and are circulated through various hotels and resorts in Kumily and also through the social media.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction		<ul style="list-style-type: none"> • Visitation • feedback from the visitors(Feedback register attached) • Details of Boats plying in Periyar lake • Annual report PTCF. 	<ul style="list-style-type: none"> • Visitors coming to the Park are very huge in numbers (> 7 lakhs per annum) and needs considerable facilities for visit of the Park especially by boat. • The feedback from the visitors shows good visitor satisfaction(file attached separately) • Boat cruising is one of the most interested activities carried out by the visitors. Visitors cruise in boats in Periyar Lake. • Green PTR is an initiative to collect and remove plastic accumulated due to tourism activity. • Vasanthasena is a voluntary Group of women in PTR engaged in plastic waste removal from the route leading to boat landing • Home stay is also encouraged & Pug mark certification is given. • Garbage disposal facility needed.
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***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self-guided services in the field, visitor feedback on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		<ul style="list-style-type: none"> • List of studies conducted in PTR • Tiger monitoring report 2016-17 • Survey reports 	<p>A total of 200 odd research/ conservation studies have been conducted in this Park by various institutions and majority of which is by the PTCF's professionals These studies have been incorporated while preparing the Tiger Conservation Plan PTCF with its own manpower and capacity is monitoring tigers, co-predators, prey and their habitat regularly and satisfactorily meet the needs of NTCA. Professional support (conservation biologist, ecologist, sociologist, economist, nature education officer, ecotourism officer, etc) is being extended for data analysis and report preparation.</p> <p>Phase-IV monitoring is effectively being carried out in PTR and is timely submitted to the NTCA.</p> <p>Trainings are imparted to the field staff on the procedures and techniques involved. As we have adequate number of trail cameras and in-house technical support from professional of PTCF sampling is done in a single stretch. Advanced spatially explicit capture recapture models under classical likelihood and Bayesian Framework is employed to arrive at a precise estimation of tiger population size and density.</p> <p>As part of regular monitoring a 'Daily Monitoring Protocol' is also systematically implemented in the TR.</p> <p>Vegetation plots has been laid in various habitats of PTR (11 plots with the size of 1 ha. each) for long term monitoring of vegetation dynamics.</p> <p>Participatory management dynamics, pilgrimage and tourism related visitation and socio ecological linkages of dependency are the core areas of research in the eco-development wing.</p> <p>There is also need for various long terms studies on ecosystem resilience and stability with respect to processes in the PTR.</p>
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-Stripes (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		<ul style="list-style-type: none"> • APO For PTCF • APO PTR • Plan Progress Periyar East Division • Plan Progress Periyar West Division • Proposed improvements to the Camp sheds • Recent Addition of equipment • Proposed maintenance of roads in PTR 	<p>Budgetary allocation for maintenance of various infrastructure is provided and is routinely maintained Plan progress and APO under various institutional units operating in the reserve is attached</p> <p>PTCF provides 40% of its revenue for PA management which is also being used for habitat improvement and maintenance of infrastructure related to protection of PTR.</p> <p>It is brought to our notice that approval of Annual Plan by NTCA is getting delayed to July and August.</p>
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good	✓		

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		<ul style="list-style-type: none"> • Phase-IV report 2015 & 2016 	<p>Periyar Tiger Reserve is home to several threatened species of mammals, birds, her petofauna and fishes. The status of some of the species like the Tiger and Leopard is monitored annually through automated cameras and indirect sign surveys. These methods reveal that the population of both these species is stable. Since Tiger is the flagship species for biodiversity conservation, its stable population indicates that the population of its prey species (herbivores) is also stable.</p> <p>Regarding Elephants, the last count put the population between 700-750 individuals. 2017 elephant population result is not out. There are 66 species of mammals in PTR. There is good population of Smooth-coated Otter and Nilgiri Marten both of which are vulnerable. A few troops of the endangered Lion-tailed Macaque are also present in PTR.</p> <p>The reserve is home to 20 species of threatened birds. There is a good population of Great Hornbill, which is a Near Threatened species. Twenty-one species of amphibians and 10 species of reptiles which are globally threatened have been recorded in PTR. Estimation of herbivore biomass is useful index for determining carrying capacity of an area (Schaller 1967, Bervic 1974, Karanth and Sunquist 1992) As such herbivore biomass has been estimated</p>
Some threatened/ endangered species populations declining, some are increasing, and most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

All threatened/ endangered species populations either increasing or stable.	Very good	✓		and is given in the Phase-IV report 2016. Vegetation analysis and surface density models for prey species are under preparation. This may be used for advanced analysis of Tiger population size and carrying capacity. There is also a need for in-depth studies on weed invasion, NilgiriThar and wild dogs.
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+ This need to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria																													
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																									
Population of tiger is showing a declining trend	Poor		<ul style="list-style-type: none"> Phase IV Report 2015-16 and 2016-17 	<p>The population of Tigers in PTR is stable as revealed by the annual camera trap exercise. In the last count, 25 tigers were identified based on their unique stripe patterns. It is estimated that the reserve may contain 35-40 tigers. Tiger density in the reserve is 1.82/100sq.km.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Institution</th> <th>Density (tigers/100km²)</th> <th>Area covered (km²)</th> <th>No of Tigers identified</th> </tr> </thead> <tbody> <tr> <td>2013</td> <td>PTCF</td> <td>3.8</td> <td>925</td> <td>23</td> </tr> <tr> <td>2014</td> <td>PTCF</td> <td>3.2</td> <td>925</td> <td>23</td> </tr> <tr> <td>2015</td> <td>PTCF</td> <td>3.6</td> <td>925</td> <td>25</td> </tr> <tr> <td>2016</td> <td>PTCF</td> <td>1.8</td> <td>925</td> <td>25</td> </tr> </tbody> </table> <p>A detailed Tiger Monitoring Protocol in PTR along with previous figures of estimation is given in chapter 9 of TCP. PTR is a good base as a source for various tigers.</p>	Year	Institution	Density (tigers/100km ²)	Area covered (km ²)	No of Tigers identified	2013	PTCF	3.8	925	23	2014	PTCF	3.2	925	23	2015	PTCF	3.6	925	25	2016	PTCF	1.8	925	25
Year	Institution	Density (tigers/100km ²)			Area covered (km ²)	No of Tigers identified																							
2013	PTCF	3.8			925	23																							
2014	PTCF	3.2			925	23																							
2015	PTCF	3.6	925	25																									
2016	PTCF	1.8	925	25																									
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair																												
Population of tiger is showing a stable trend but below carrying capacity	Good																												
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good	✓																											

***This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.**

6.3 Have the threats+ to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria										
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks						
Threats to the TR have not abated but have enhanced.	Poor		<ul style="list-style-type: none"> Fire Management Plan FDA Annual report, GIM 	<ul style="list-style-type: none"> The biotic interference in the form of firewood removal, grazing, ganja cultivation, fire, etc. has been considerably reduced by management intervention. Threat caused due to heavy pilgrimage in Sabarimala and the large number of visitors in the rest of the area are being addressed now. The reduction in resource dependency in PTR is given below: <table border="1"> <thead> <tr> <th>Sl.</th> <th>Type of resource</th> <th>Collected Value</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Sl.	Type of resource	Collected Value			
Sl.	Type of resource	Collected Value								
Some threats to the TR have abated, others continue their presence	Fair									
Most threats to the TR have abated.	Good	✓								

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

The few remaining are vigorously being addressed			progress report	No.		1997	2016
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good		<ul style="list-style-type: none"> • Offence register • Animal sighting register at section office • Vehicle register book at check posts • Study report of KFRI 		Firewood	2648480	142920
					Fish (Sale)	135220	11093
				3	Black Dammar	57068	0
				4	Thatching Grass	345892	27810
				5	Grazing	1114 (families)	42(families)
				6	Pole	76164	0
				7	Bamboo	247353	0
				8	Honey	10295	2324
				9	Cinnamon bark	30135	0
				<ul style="list-style-type: none"> • Thatching grass collection is being practiced as a management tool to prevent extensive forest fire as well as to provide fresh shoots of grass for the herbivores; hence considered as a positive activity of EDCs. <p>In PTR, disaster events are likely to happen during Sabarimala pilgrim season. For containing such events, a detailed 'Disaster Risk Management Plan' is already existing and address all the disaster events as well as the emerging threats likely to happen in future in PTR associated with Sabarimala visitation</p>			

+Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?

6.4 Is visitor management+ appropriate?

Assessment criteria				Reference document(s)	Remarks
Condition	Category*	(Tick ✓)			
Tourism management is entirely adhoc.	Poor		<ul style="list-style-type: none"> • Feedback Register. 	<ul style="list-style-type: none"> • All the tourism programmes including the Community Based Ecotourism Programmes [CBET] are strictly conducted only in the areas designated for tourism in the Buffer zone of PTR. • Guest books kept in each CBET programmes reveals that the visitors are mostly satisfied with the existing programmes. ▪ The SAPP EDC members clean the traditional routes of Sabarimala and remove plastic wastes. About 200 service centres functioning along the traditional routes to Sabarimala with 1200 members involve in cleaning programme during and after the pilgrim season every year. ▪ A dedicated Parking facility with all visitor amenities is being arranged at the fringe of the park. Visitors are taken to the boat landing on busses operated by the park at fixed intervals. ▪ The park is operating shuttle bus service at regular intervals ensuring prompt facility for movement of visitor opting for boating. ▪ Well managed information centres are there. The above activities deliver adequate visitor/pilgrim satisfaction who visit PTR. Tourism is severe in PTR. However various trails and walks cater to such pressure. It is felt that the area is prone to elephant movement. Safety of tourists is a major concern in the park as various nature walks are in areas where likelihood of elephant encounter and gaur encounter are high. 	
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair				
Tourism management plan is good and well monitored.	Good				
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good	✓			

+Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.5 Are local communities supportive of TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Annual Report PTCF& FDA	<ul style="list-style-type: none"> The local communities in PTR are entirely supportive of PTR management. PTR is famous for People's participation in Tiger Reserve management. Many EDCs are functioning for effective protection and management of the Tiger Reserve. As PTR function as a team, many awards were received for the collective performance. A total of 14 National and International awards are so far received by PTR, PTCF and the EDCs functioning in PTR Following participatory programmes are being implemented in PTR for protection purpose: <ul style="list-style-type: none"> Vasanthasena, a women EDC involve in voluntary patrolling in sandal region during day-time. Public participation in massive cleaning programme is usually undertaken during nature camps and outreach activities conducted among the fringe area schools of the Reserve. The SAPP EDC members clean the traditional routes of Sabarimala and remove plastic wastes. About 200 service centers functioning along the traditional routes to Sabarimala with 1200 members involve in cleaning programme during and after the pilgrim season every year. As part of mutual commitments, the EDC members involve in participatory fire management, patrolling in vulnerable areas, monsoon patrolling, etc by all the 78 EDCs in PTR. Improvement of regeneration and reduction in biomass collection is ensured in Sabarimala region and Kokkara region with active participation by EDCs). There is public participation in protection and specifically in joint patrolling in vulnerable areas. A Government Order enabling the local community (Forest Advisory Committee – GO(Rt) 273/11/F&WLD dated 22.6.2011) for taking decisions in mitigating human-wildlife conflict under the leadership of MLA ensures people's participation <p>There is also participation in fire prevention and control, visitor management, Sabarimala and Mangala Devi pilgrimage management and population estimation and monitoring of tiger and elephant. While critical management decisions are taken that has unavoidable tradeoffs with respect to conservation and people's aspiration the management decisions that are based on scientific observations and prudence may harm the interest of the people at least in the short run. In such instances the EDC members act as a connecting link</p>
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good	✓		

+ There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

7. MEE Score Card+

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	50	93.75 %
2.	Planning	07	10	70	65	
3.	Inputs	05	10	50	45	
4.	Process	06	10	60	57.5	
5.	Outputs	04	10	40	35	
6.	Outcomes	05	10	50	47.5	
Total		32		320	300	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential weightages to the 32 Assessment Criteria including 'normalization'.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

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Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category* (Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	<ul style="list-style-type: none"> The National Mission for a Green India, or the Green India Mission (GIM), is one of the eight National Missions under India's National Action Plan on Climate Change GIM which forms part of a revived philosophy of conservation often called Participatory Habitat Management (PHM) is also being implemented at the landscape level (including the territorial divisions) in Kerala. An effective protection and fire protection plan is prepared and implemented to prevent degradation of the area from extensive fire and resultant carbon loss. Issues related to increase in atmospheric carbon dioxide and increasing global climate are discussed in the awareness camps and the people are sensitized for taking remedial actions. There is no extraction activities in the PA which substantially reduce the carbon emission. The NTFP collections in the PA are almost prevented through the successful implementation of Eco development initiatives. The waste disposal mechanism especially plastic recycling, sewage treatment for the hoteliers, resorts and home stays are suitably incorporated in the approved TCP. PTR promotes organic farming in tribal hamlets of PTR. 	
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good		
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good		

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category* (Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	<ul style="list-style-type: none"> An effective protection and fire protection plan is prepared and implemented to prevent degradation of the area from extensive fire and resultant carbon loss. Issues related to increase in atmospheric carbon dioxide and increasing global climate are discussed in the awareness camps and the people are sensitized for taking remedial actions. The carbon emission activities are reduced through ecodevelopment activities especially encouraging the local communities for using fuel efficient choolahs, discouraging firewood collection and using LPG. There is no extraction activities in the PA which substantially reduce the carbon emission. The NTFP collections in the PA are almost prevented through the successful implementation of Eco-development initiatives. The waste disposal mechanism especially plastic recycling, sewage treatment for the hoteliers, resorts and home stays are suitably incorporated in the approved TCP. PTR promotes organic farming in tribal hamlets of PTR. 	
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good		
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

8. Anamalai Tiger Reserve, Tamilnadu

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		1. TCP Core B Chapter 6.3 2. TCP Core B Chapter 8.4 and 8.5.	Anamalai T.R. is located in the southern side of South western Ghat landscape. All the values including ecological, bio-logical, scientific, economic and historical values have been systematically identified, well documented and assessed in TCP 6.3 Parameters and criteria for monitoring & evaluation with success indicators of each value and schedule of evaluation have been well documented in chapter 8.4 and 8.5
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

Value of the Reserve

Value category	
Biological	<ul style="list-style-type: none"> - West coast Tropical ever green forests - Significant population of Tigers, Elephants, LTM and NilgiriTahr. - First time discovery of distinct plant species Musa acuminata (2 varieties) Garciniacowa, Garceniapushpangadanianasix different fish species new from the area, unique amphibians Racophoruspseudomalabaricus, Nasikabatrachussahayadrensis, Kelaart's long clawed Shrews, Salim Ali fruit bat etc., recorded. - Core of the Anamalai Ecological continuum.
Conceptual	<ul style="list-style-type: none"> - Floral diversity – more than 2500 flowering plants, more than 140 species of orchids, -All types of forests and vegetation starting from dry mixed deciduous to Moist mixed deciduous, west coast evergreen, to thorn forest, Bamboo brakes Grass lands etc (Total 11 types) are present here. Occurrence of rare and threatened wild animal species like tigers(20+), Nilgirtharahr(≥600), LTM (≥600), Horn bills, Cochin forest cane turtle, King cobra etc.,
Ecological Process and functions	<ul style="list-style-type: none"> - Catchment for various rivers (Chinnar, Thenar, Nallar, Palar, Aliyar) sustains PAP, Amarvathy and Kadamparai projects crucial for agricultural prosperity of the plains Coimbatore and Tiruppur districts. (Water sanctuary). - The anamalais is source of irrigation for Coimbatore and Tirupur district the Parambikulam.Aliyar Project irrigates an extent of 305925 acres. of cultivation area. - Amaravathy project irrigates an extent of 52337.26 acres. - Carbon sink values and other ecological services of the Anamalai forests is very high.
Scientific	<ul style="list-style-type: none"> - There are unexplored wet evergreen forest (Rain forests) rich in floral and faunal diversity, offers excellent scope for scientific research. Also the rich anthropological diversity (6 Communities- Malasar, Malaimalasar, Kadar, Muduvar, Pulayar, Eravalar) provides scope for research on tribals on social, economic and human genetics angles.
Educational	<ul style="list-style-type: none"> - Rich variety of flora, fauna, tribals, offers scope for nature interpretation, conservation education and environment awareness for the public as well as local people.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Value category	
Recreational	- Offers best opportunities for wildlife viewing, trekking, due to the rich biological diversity and scenic beauty.
Economic	Timber and Non-timber produce value of the Tiger Reserve is immense. Teak plantation 3175 ha. value Rs.1000 crores Supports directly the dependent tribal population around 6000 over 35 settlements distributed throughout the ATR – Direct life support system

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria*				
Condition	Category*	(Tick <input type="checkbox"/>)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor	<input type="checkbox"/>	TCP Core-B Chapter 6.5 extract enclosed	Major threats are fire, weed infestation (Lantana and Eupatorium), Grazing by cows from 35 settlements etc having 700 to 1000 cows. SWOT analysis have separately been carried out and provided in TCP Core B for core and buffer respectively. The SWOT analysis for core and buffer reveals that the number of strengths and opportunities are higher than the number of threats and hence the scope for mitigating the threats is high. Further Security Plan (Chapter 8.8) of TCP Core-B has been drawn up documenting all threats to the tiger reserve based on assessments and offences registered in the Tiger Reserve. There are threats of opportunistic cattle grazing in the fringe of the reserve. There is also grazing pressure in the settlements located within the core area of the Tiger Reserve. Heavy movement of vehicles at check posts at Aliyar, Attakatty and Chinnar Check posts is assessed. Wild Animal Disease outbreak is monitored in all ranges continuously and no cases were reported during the last three years. Periodical vaccination of cattle is carried out in the fringe area to prevent spreading of any communicable disease.
Threats generally identified but not systematically assessed.	Fair	<input type="checkbox"/>	TCP Buffer-B chapter 6.5 extract enclosed. TCP Core-B Chapter 8.8 Extract of	
Most threats systematically identified and assessed.	Good	<input type="checkbox"/>	Offence report enclosed.	
All threats systematically identified and assessed.	Very good	<input checked="" type="checkbox"/>		

**This assessment should be based on number, nature and extent of threats*

1.3 Is the “Core Area” of TR free from human and biotic interference?

Assessment criteria*				
Condition	Category*	(Tick <input type="checkbox"/>)	Reference document(s)	Remarks
The ‘Core Area’ has extensive human and biotic interference.	Poor	<input type="checkbox"/>	Details of tribal settlement with population enclosed. Details of cattle’s maintained in the settlement enclosed.	No. The ‘core’ area is not free from human and biotic interference There are 35 tribal settlements within the Core area of the Tiger Reserve with a population of over 6000. Sum of the settlement people rear cattle for their own use. The tribal allow these cattle to graze within their area. Not much impact is felt by this. People living in the settlement depend mostly on the forest for their livelihood which poses problem to the Tiger Reserve Administration towards meeting their genuine needs. But most of their livelihood needs like water, housing, agriculture, health and education are met
The ‘Core Area’ has some	Fair	<input type="checkbox"/>		

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
human and biotic interference.				by the administration by taking several welfare measures.
The 'Core Area' has little human and biotic interference	Good	✓	Report on fuel usage in elephant camp with photos (P.No.85) TCP core-B.	The entire Northern boundary of the protected area from Pothamadai beat on the north-eastern side to Easalthittu East beat on the north-eastern side runs along Patta land of many villages. Nearly, 13 major villages have the influence on the protected area. This area has a population of over 1 Lakh, 10% of which exerts some pressure on the Tiger Reserve Administration
The 'Core Area' has no human and biotic interference.	Very good		Copy of letter with enclosed	Dogs have been removed from the settlement area in core zone. After re-introduction of the LPG connection to the Elephant camp the pressure for collection of fuel wood were curtailed has been minimized. Facilities provided to the hill tribes of Anamalai Tiger Reserve
			Copy of G.O and References enclosed.	<p>1. Education. A tribal residential school which was started in 1951 is functioning in Topslip with classes from Std. I to VII in which 82 tribal children are studied. They are given free boarding facilities. E-learning facilities have been introduced in the school since 2013.</p> <p>2. Health A primary health centre is opened in the year 1950 provides free medical aid to the local tribals and staff in and around Topslip area. Insurance facility has been provided to the APW. 10 free medical camps have been conducted for the tribals by organizing camp with the help of Rotary club and Private medical institutions.</p> <p>3. Eco-development. 2014-15 Under Western Ghats development programme 1052 solar lanterns were supplied to 17 tribal settlements 2016-17 70 Tribal huts (Pollachi 30 and Tiruppur 40) have been improved at a cost Rs.70 Lakhs in 7 tribal settlement of Tiruppur division under Special Area Development Programme. Drinking water facilities to provided to 7 seven tribal settlement in Tiruppur division at a cost Rs.32 Lakhs from the funds released by the tribal welfare department. Approach roads to 3 tribal settlements have been improved at a cost of Rs.14.54Lakhs in Tiruppur division. A comprehensive schemes for tribal welfare aimed at providing basic facilities to six tribal settlements in Tiruppur division has been proposed at a cost Rs.3Crores. Proposals have also been sent to Project Officer DRDA Tiruppur for providing drinking to 9 tribal settlements in Tiruppur division at the cost Rs.50Lakhs.</p> <p>4. Skill Development. A One day training on "Enhancing the Livelihood Status of Tribal Women on Non-Wood Forest Products (NWFPs)", was conducted on (17.03.2017) jointly by the Forest Department and Departmental of Social Sciences at Anbil Dharmalingam Agricultural College and Research Institute, Trichy. Tribal women belonging to Thirumoorthi, Kurumalai and Mavadappu settlement have been given training on (24.03.2017) by the forest</p>

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
				<p>College and Research Institute, Metupalayamon manufacture of sanitary napkin and they have been supplied with napkin manufacturing instruments at a cost Rs.6.10Lakhs.</p> <p>5.Employment Opportunities</p> <p>i. Regular employment.</p> <p>Tribals are working in regular employment in the following category- Forester-3, Forest Guard-18, Forest Watcher-2, Elephant men-24 and APW-15.</p> <p>Temporary employment on daily wages Tiger and Elephant Tracker-15,APW-100, Fire watcher-4, Eco-sanitary Watcher-19, Anti-depredation Watcher-13, Eco-gudies-7 and temporary cavity-17.</p> <p>Proposals have been submitted to Principal Chief Conservator of Forests (Head of Forest Force), Chennai to absorb the 21 temporary elephant men on regular basis orders issued in G.O Ms No. 64 Environment and Forest (FR -2 C II) Department dt.18.05.2017 Principal Chief Conservator of Forests (Head of Department), Chennai has been addressed for issue of further orders in the matters.</p>

** This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors. The issue of "Unified Control" of the "Core" and "Buffer" zones under the Field Director would also be taken into account.*

1.4 Has the TR complied with the four Statutory*Requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SoP)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR,no compliance of Tripartite MoU and three SOPs met	Poor		Notification copies enclosed	<p>Core zone and Buffer zone of Anamalai Tiger Reserve has already been notified vide G.O.Ms.No.199. E&F (Fr-5) Department dt.13.08.2012.</p> <p>Anamalai Tiger Conservation Foundation, TamilNadu Trust has already been established and registered as a trust with effect from 25.03.2010 as per section 38(X) of Wildlife (Protection) Act 1972.</p> <p>The Governing body of foundation has been recon-situated in G.O.Ms.No. 99 E&F Department dt. 01.09.2015.</p> <p>The Executive committee of the foundation has been reconstituted as per G.O. Ms.No.26 E&F Department dt. 26.02.2016.</p> <p>State level steering committee has already been constituted vide G.O.Ms.NO.10 E&F (FR-V) Department Dt.15.02.2008.but no meeting has been held yet.</p> <p>Tripartite Agree-ment between Field Director, State Government and National Tiger Conservation Authority, New Delhi has been executed and complied for item 1 to 20. In respect of item No. 21 this will be complied once the unified control of the buffer zone is taken over. In respect of item no.21 to 28 and 30 compliance does not arise as no tribal</p>
Two of the four SR,50% Condition of the Tripartite MoU and SOPs complied	Fair		Copy of G.O enclosed	
Three of the four SR, 75% Condition of the Tripartite MoU and SOPs complied	Good		Copy of MoU Executed is enclosed.	
All four SR, 100% condition of	Very good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
the Tripartite MoU and SOPs complied				settlements has come forward for relocation. The 3 SOPs namely i. Straying of Tiger in human dominated landscape. ii. Tiger Mortality and iii. Standard operating procedure for Disposing Tiger / Leopard carcass / Body Parts have been strictly compiled in respect of one incidence of Tiger Death and Tiger straying in the last two years.

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 3 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the Tiger Reserve are under different management	Poor			Government of issued orders in G.O.Ms.No.199 E&F (FR-5) dt.13.08.2012 notifying the core and buffer zone of ATR steps are underway to take over the buffer zone of ATR for which necessary proposal have been submitted to PCCF&CWW Ref.No.2223/2017/D, dt.04.08.2017. The core and buffer is not yet under unified management.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good	✓		
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good			

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Copy of letter enclosed Annexure-11.	Tiger Conservation Plans for the period 2014-15 to 2023-24 for Core, Buffer and Corridor connectivity have been prepared and approved by the National Tiger Conservation Authority, New Delhi as per Lr.No. 1-3/2011-NTCA, dt.02.03.2015.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP	Very good	✓		

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.2 Does the Tiger Reserve Safeguards the Threatened biodiversity values?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		TCP Core-B Chapter 8.1, 8.3 and 8.8 Copy of reports enclosed	<p>A large number of threatened biodiversity values have been explicitly addressed in the TCP. Protection which is the most important part of Tiger Conservation is accorded top priority of Tiger Reserve management and is addressed elaborately in security plan in Chapter 8.8, addressing human wildlife conflicts in chapter 8.1 and fire protection in chapter 8.3 of TCP.</p> <p>The following safeguards have already been taken to offset the threats to the bio-diversity values.</p> <ol style="list-style-type: none"> 1) There is a total ban on hunting of wild animals. 2) Implementation of various schemes aimed at protection and conservation 3) Practices of agriculture in the plains have ensured sustained income to the land holders and wages to the labourers. This has helped in lesser dependence of people in the adjoining area on the Tiger Reserve. 4) Facilities provided to the people living in Core area have greatly helped in persuading the local tribals to join the mainstream of administration. 5) The threats of Man-Animal conflicts were reduced by involving Stake holders. 6) The scientific assessment report of the NCF was available to safeguard the threatened biodiversity values such as fragmentation of shola pockets, Hornbill, LTM, NilgirTahr etc., 7) Three buildings belonging to PWD at Topslip and Sixteen buildings of TNEB at Attakatty have been taken over for departmental use. 8) Proposals have been sent to the Collector, Coimbatore to acquire the 208.76 ha. of Puthuthottam estate to safeguard the threatened species of LTM. (File No.4742/2012/A2). 9) EDCs: participatory protection; livelihood options; capacity building. 10) Removal of exotics: invasive plants like Lantana, Eupatorium, Parthenium is taken up on a planned basis depending on budgetary provision.
TR safeguards a few threatened biodiversity values.	Fair		Buffer zone plan B Chapter 8.12	
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good	✓		

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		TCP Core-B page 182 to 186	<p>The following stake holders are existing.</p> <p>Nature Conservation Foundation, Valparai.</p> <p>WWF, Coimbatore.</p> <p>Tribals living in the core area.</p> <p>Staff of Tiger Reserve and other departments.</p> <p>Local people.</p> <p>Media persons.</p> <p>Stakeholder committee formed for the welfare of tribal school has produced desirable output to create the video conferencing technology to educate various subjects.</p> <p>EDC's are functioning under ATCF micro-plans are prepared</p>
Stakeholders participate in some planning.	Fair		TCP Core-B Chapter 8.1 page 110 and 111	
Stakeholders participate in most planning	Good		Copy minutes enclosed	

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
processes.				
Stakeholders routinely and systematically participate in all planning processes.	Very good	✓		through participatory process. There are 14 EDC formed for the welfare of the tribals residing within T.R. The members of these EDC's have been involved in managing tourism activities, which have given them a livelihood opportunity. District level meetings headed by the District Collector, on inter departmental co-ordination etc., are being conducted on a monthly basis. A small committee has been formed in planning eco-sensitive zone for TR. Meeting of the committee was conducted on 11.01.2013. A Local Advisory Committee has been formed for tourism as per G.O.Ms.No.252 E&F (FR-5) dt.07.11.2012.

**The result of participation must show in the field and not merely reported as a routine exercise.*

2.4 Are habitat management programmes systematically planned, relevant and monitored and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		TCP Core-B chapter 7.2.1, 8.1, 8.3, 8.4 and 8.7.	All the habitats management have been systematically planned, relevant and monitored and contributed effectively to tiger other endangered species conservation in Chapter 7 of TCP.
Limited planning and monitoring programmes are in place for habitat management.	Fair		TCP Corridor Plan Chapter 6 and 7.	Exclusive chapter for unique habitat, fire protection, wildlife monitoring, habitat intervention have been prescribed in the approved TCP. The following important prescriptions have been made in the TCP.
Habitat management programmes are generally planned and monitored.	Good	✓	Latest data enclosed	1. Conserving the valuable Wet evergreen montane shola and grass land eco system. 2. Protection and maintenance of rare, endemic, endangered and wild plant species in their own habitat and removal of exotic species in a phased manner to encourage native grass species.
Habitat management programmes are thoroughly planned and monitored.	Very good			3. Maintaining the valuable riverine habitat, vayals, rocky cliffs, dense riverine eco system. 4. Intensive fire protection measures have been prescribed in Bamboo flowered areas and sowing of bamboo seeds along the streams and nallas has been suggested to provide fodder and soil stability. Annual fire management plan and weed removal plan could not be presented before the committee. 5. To develop vegetation on either side of the riverine patches in Valparai region to fortify the corridors for bigger mammals. 6. Waterholes and Check dams have been constructed at strategic places in the reserve to provide water supply to animals during pinch period and for moisture conservation. 7. Arboreal corridors (crown bridge by convey or belt) have been developed at vital spots for the movement of Lion Tailed Macaque etc., 8. Invasive species are removed from the areas, where the

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
				<p>herbivores population are dense to overcome the shortage of fodder.</p> <p>9. Corridors for dispersal of wild animals, especially threatened (IUCN) species like Tigers, Elephants, Deer, Sambar, and Indian Gaur are well managed by giving adequate importance in maintaining the corridors within the landscape.</p> <p>10. Phase IV monitoring effectively implemented since 2012 to monitor and take remedial action based on the population estimates and trends thereon.</p>

**This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as Lantana, Michania etc. would be examined.*

2.5 Does the Tiger Reserve has an effective protection strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		TCP Core-B chapter 8.8	<ul style="list-style-type: none"> Protection which is the most important component of tiger conservation is accorded top priority of Tiger Reserve management. The issues related to protection are addressed elaborately in Security plan in chapter 8.8 of TCP. A total of 37 Anti-poaching camps are already established with 141 Anti-poaching Watchers in vulnerable areas. A fire prevention and control plan has been prepared and is practiced in the fire prone seasons detailed plan is available in Chapter 8.3 of approved TCP. NOC for holding fire arms has been issued every year and monitored. <p>The following protection measures are undertaken to protect the Tiger and its co-predators and other wild animals.</p> <ol style="list-style-type: none"> Surprise raids and Monsoon patrolling have been organized in vulnerable and inaccessible areas as per the assessment made periodically. Daily observation Register is being maintained in the Anti-poaching camps. Monthly reports on the functioning of the anti-poaching camps are being received from the Rangers and reviewed. Anamalai Tiger Reserve is one of the reserves where MSTRIPES program is implemented in India. As per the National Tiger Conservation Authority, New Delhi guidelines a printed data book is provided for each APW camp. The team while on perambulation records prey animal sightings, carnivore sign, kills, illegal activities and wild animal mortality. Camera traps are setup at vantage points to monitor the movement of Tiger and other animals and also movement of
TR has an adhoc PS and SA.	Fair		Maps of Anti-poaching camp stations and vulnerable routes enclosed Annexure-17.	
TR has a generally relevant PS and SA but is not very effective.	Good		Chapter 8.3 of TCP As an evidence two copies of the recent correspondence received from the District Collector, Tiruppur is enclosed	
TR has a comprehensive and	Very Good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
				<p>the offenders.</p> <p>6. Highway patrolling is done along Pollachi-Valparai and Pollachi –Palakkad Road to monitor the movement of smugglers, Poachers, etc.,</p> <p>7. All the Antipoaching camps are regularly monitored and their day to day activities are obtained and recorded in the Control room through wireless.</p> <p>8. A dog squad is functioning with effect from October 2016 in Tirupur division. One Forest Guard and an Anti-poaching watcher have been trained at the National training centre (Dog) BSF, Academy Tekanpur, Gwalior, Madhya Pradesh from 20.01.2016 to 11.10.2016. The Sniffer dog has been obtained from TRAFFIC India. The dog squad has been very useful in perambulation of vulnerable area.</p>

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

2.6 Has the Tiger Reserve been effective in the mitigation of human-wildlife Conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Copy of the reference is enclosed	<p>During 2015-16 & 2016-17, it is reported that there is no human death. To tackle man-animal conflict situation, the following effective measures have been undertaken :-</p> <p>Staff have been trained in tackling man- animal conflict situation like driving strayed animals safely into the forest areas, using tranquilizing equipments and relocating the problematic animals</p> <p>Tranquilizing equipments, rescue equipments, trapping cage and medicines have been kept readily available for use in emergency situation.</p> <p>A disaster management cum rescue centre is functioning in Valparai (Rottikaddai and Chinnar) to co-ordinate the measure taken for mitigation of human wildlife conflict situations.</p> <p>3) Adequate compensation for affected people is given as early as possible in accordance with the eligibility prescribed by the Government.</p> <p>4) Local people, especially estate labourers, have been asked to follow certain restrictions on the movement of people at odd hours, raising of palatable plants around their premises, etc. In this connection, detailed circular and notices have been issued to the private estates for strict adherence.</p> <p>5)The Police, local administration and local people have been greatly aiding in the measures to control man-animal conflicts.</p> <p>6) Anti-Depredation Squad along with 3Vehicles are stationed at vantage points in Valparai area.</p> <p>7) Around the clock toll free Number 04253-223222 is functioning at Rottikadai of Valparai to enable the Public to convey messages regarding Human-Animal Conflict.</p> <p>8) SMS alert systems have been installed at vantage points to alert the people in Valparai region about the movement of Elephants.</p> <p>9) An early warning light system is fixed in various locations in Valparai.</p> <p>10) As per sanction issued in G.O.Ms.No.197 E&F (FR-5) Department</p>
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-Wildlife	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Assessment criteria*																														
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																										
conflicts.				<p>dt.09.10.2015 Early warning system has been installed six buses of the TNSTC plying in six different routes network to develop an effective elephant information network. This has greatly helped in reducing the human elephant conflict in the region.</p> <p>11) E-Surveillance camera has been installed at chinnar area of Tiruppur division at a cost of Rs.75.83Lakhs during 2014-15 to monitor live movement of Man, Elephant and other animals.</p> <p>12) Due to above mitigation, the no. of conflicts have been reduced.</p> <p>Figures for the last review:</p> <table border="1"> <tr> <td>2012-13</td> <td>113</td> </tr> <tr> <td>2013-14</td> <td>126</td> </tr> <tr> <td>2014-15</td> <td>46</td> </tr> </table> <p>2014-2015– 52 Nos 2015-2016 - 42Nos 2016-2017 - 24Nos</p> <p>13. Compensation given victims in time</p> <table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Year</th> <th>No of Incidence</th> <th>Amount Paid</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2014-15</td> <td>98</td> <td>2802000</td> </tr> <tr> <td>2</td> <td>2015-16</td> <td>42</td> <td>555000</td> </tr> <tr> <td>3</td> <td>2016-17</td> <td>24</td> <td>345000</td> </tr> <tr> <td colspan="2">Total</td> <td>164</td> <td>3702000</td> </tr> </tbody> </table> <p>14. Tiger Reserve administration has also come to the rescue of adjoining Kerala Forest Divisions in tackling in human wildlife conflicts.</p>	2012-13	113	2013-14	126	2014-15	46	Sl. No.	Year	No of Incidence	Amount Paid	1	2014-15	98	2802000	2	2015-16	42	555000	3	2016-17	24	345000	Total		164	3702000
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***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the Tiger Reserve integrated into a wider ecological network / landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network / landscape.	Poor		TCP buffer zone and corridor plan	<p>ATR has tremendous scope of opportunities on the landscape scale as ATR landscape is the largest compact and continuous landscape and integrated into a wider network in the approved 'Tiger Conservation Plan for Adjoining Area'. The TR is surrounded by protected areas like Parambikulam T.R. in the East, Chinara W.L. Sanctuary and Eravikulam Nature.</p> <p>The main aim of formation of ATCF is the management of ATR and Adjoining Landscape.</p> <p>Landscape approach to the TR has been well defined in Chapter 6.2, 6.3 of buffer zone plan and chapter 7 of corridor plan.</p> <p>Major corridors of the TR have been identified and integrated in the corridor plan.</p> <p>TCP for adjoining corridor consists of the corridor in the landscape mitigating threats related to biodiversity conservation act along with</p>
Some limited attempts to integrate the TR into a network / landscape.	Fair		TCP buffer zone Chapter 6.2 and 6.3 and corridor plan Chapter 7.	
TR is generally quite well	Good	✓	Copy of proposal	

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
integrated into a network /landscape.			enclosed	incorporation of bio-diversity conservation strategies in the working plans of territorial forest divisions in the identified landscape. An extent of 208.764 ha. of Private Estate have been identified for the corridor of LTM and proposals have also been forwarded to the Government through District Collector to acquire.
TR is fully integrated into a wider network/ landscape.	Very good			To secure vital corridors for elephants and other bigger mammals about 15048.44 Ha. of forest areas from Kodaikanal Wildlife Sanctuary adjacent to the Tiger Reserve has been included in the Buffer Zone vide notification issued by Government of Tamil Nadu in G.O.Ms. No 199 E& F dt.13.08.2012. Proposals have been submitted to Principal Chief Conservator of Forests (Head of Forest Force), Chennai, for taking over unified control of buffer zone. The elephant corridors identified ATR are- Navamalai Corridor near Monkey falls Punachi Corridor Waterfall Corridor Siluvaimedu Corridor Sethumadai – Nemmara Corridor: Chinnar – 9/6 Checkpost:

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned / implemented for their security? Have the Forest Working Plans and Forest Development /corporation plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around Tiger Reserve? Is any effort being made to plan and use “Smart Green Infrastructure”?**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Staff pattern with vacancy details is enclosed	ATR is administered with two divisions viz Pollachi and Tiruppur divisions and six ranges. At present thereare 16 section and 54 beats in both the divisions. The present staff strength available for protection of the Tiger Reserve is not adequate. There are vacancies in the frontline staff namely Forest Range Officer -2, Forester-33, Forest Guard-44 and Forest Watcher-34. 45% of staff position are vacant in Front line staff. The post of 2 ACFS are also vacant.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			There are following vacancy in administrative wings alsolviz Junior Accountant-6, Assistant-3, Junior Assistant-4, Steno Typist-1, Typist-1, Mahout-1 and Cavady-9. Proposals have been submitted to Principal Chief Conservator of Forests (Head of Forest Force), Chennai to absorb the temporary elephant men into regular employees for the welfare of 17tribals orders received in G.O Ms No. 64 Environment and Forest (FR-2 C II) Depart-mentdt.18.05.2017 As a stop-gap measure to overcome the shortage of workforce, the
Some personnel	Good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
with fair support explicitly allocated towards achievement of specific TR management objectives.				admini-stration with the help of tribal youthshas managed, to engage sufficient number of Anti-Poaching Watchers, Anti-Depredation Squads, Man for controlling tourism, Elephant Mahout and Cavady, etc., They also proved handy in Forest protection, mitigation of Human-Animal Conflict, conducting eco-tourism, etc., The Government has issued order vide G.O.Ms.No.157 E&F (FR-II) dt.29.06.2012 for constitution of StateLevel Forest of Uniformed Services recruitment committee for direct recruit of front line forest staff in the categories of Foresters, Forest Guard, Forest Guard with DrivingLicense and Forest Watcher. In G.O.Ms.No.29E&F(FR-II) Dpt. dt.21.02.2014, at present directly recruited Foresters are undergoing training at the TNFA, Coimbatore and TNFTC, Vaigai Dam. Allotment of candidates are expected, once the training period is over.
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

****This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)***

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		List of buildings isenclosed	All the buildings including staff quarters, office buildings, APCs and related establishments are adequate, maintained periodically and presently used. All the anti-poaching camps are well equipped and well furnished. A number of vehicles procured through the State and Central Funds and also vehicle donated by the WCT, Mumbai have been fully utilized for the purpose of Highway patrolling and to mitigate the Human-Animal Conflict. Equipment such as Wireless sets, Walkie talkies, arms and ammunitions, computers, laptops, camera traps, GPS, Range Finders, Compass etc..are adequate to meet the objectives of ATR. Further, the funds available in the State and Central Schemes have been utilized to procure the equipments for Office and Field to fulfilthe administrative requirement. 2-25 seater majda van is available for tourist.
Somerresources explicitly allocated for TR management but not systematically linked to management objectives.	Fair		List of vehicles enclosed	
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

****These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use / deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.***

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Annexure-24. Copy of G.O. is enclosed Annexure-25.	<p>The details of funds released and utilized under following Centrally Sponsored schemes are enclosed.</p> <ul style="list-style-type: none"> • Project Tiger • Project Elephant • Asian Elephant • IFM <p>It is further stated that the time gap between the date of released funds by NTCA issue of G.O and release of funds through LOC is considerably long. The implementation can be done early, if the Centrally sponsored schemes are sanctioned and received before the end of first quarter of the financial year.</p> <p>In such case Tiger Foundation plays a major role in bridging the gap between the sanctions and actual release, thereby, hastening execution of sanctioned work in the proper season.</p> <p>From 2016-17 all payments for works are claimed through Sub-treasury, Pollachi in accordance with the orders issued in G.O.Ms.No.72 Finance (Letter of Credit)Department dt.29.02.2016 The procedure to be followed for presenting bills in the treasury is very elaborate and lot of time is taken to clear the bills. The fund allocation and release time gap should be minimized.</p>
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

Year	Scheme	Allotment	Achievement	Remarks
2014-15	Project Tiger	402.838	362.554	
	Project Elephant	13.00	10.400	
	Asian Elephant its mitigation measures in Tamil Nadu.	5.59	5.59	
	IFM			
2015-16	Project Tiger	270.87	270.87	
	Project Elephant			
	Asian Elephant its mitigation measures in Tamil Nadu.			
	IFM	1.31	1.31	
2016-17	Project Tiger	384.661	382.332	
	Project Elephant	4.09	4.09	
	Asian Elephant its mitigation measures in Tamil Nadu.			
	IFM			

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Annexure-24. Copy of G.O. is enclosed Annexure-25.	<p>The details of funds released and utilized under following State Sponsored schemes are enclosed below.</p> <ul style="list-style-type: none"> • CAMPA • TBGP • Maintenance of Water Augumentingof Dringing Water supply • Creation of Fodder • Payment of Compensation. • Advanced Training Centres at Attakatty • 'Erecting Solar PowerFence' • WGD • Driving menaceful animals into deep Forest. • Implementation of Environment Scheme (Solar Energiezier) • Special Health camp for Departmental elephants • 13th Finance Commission • Maintains of water holding structures and water supply through carriers to wild animals • SADP. <p>It is further stated that the time gap between the date of issue of G.O. and release of funds through LOC is considerably delayed. The implementation can be done early, if the State Sponsored schemes are sanctioned and received before the end of first quarter of the financial year.</p> <p>In such case Tiger Foundation plays a major role in bridging the gap between the sanctions and actual release, thereby, hastening execution of sanctioned work in the proper season.</p> <p>From 2016-17 all payments for works are claimed through Sub-treasury, Pollachi in accordance with the order issued in G.O.Ms.No.72 Finance (Letter of Credit) Department dt.29.02.2016.</p> <p>The procedure to be followed for presenting bills in the treasury is very elaborate and lot of time is taken to clear the bills.</p>
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on- time and are fully utilized.	Very good			

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks

(Rs.in Lakhs)			
Year	Scheme	Allotment	Achievement
2014-15	State Sponsored Scheme.	259.033	186.076
2015-16		295.25	161.67
2016-17		108.06	108.06

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization**

3.5 What level of resources are provided by NGOs?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		List of NGO's attached below.	The NGOs are involved in various awareness activities concerning conservation and protection of Tiger Reserve and their cooperation in providing resources are adequate. Highlights of the activities of the NGOs are furnished below:
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good	✓		
Sl. No.	Name of the NGO	Activities		
1.	Nature Conservation Foundation, Valparai	The NCF stationed at Valparai have contributed so many research activities in Anamalai Tiger Reserve related to Habitat Fragmentation, Threats and Ecological Restoration, Conservation of LTM, Management issues related to roads, Human-Wildlife Conflict, Invasive species.		
2.	Anamali Environmental Society, Pollachi	No. of awareness programme created among the schools in Pollachi and Trees planted in Pollachi taluk to promote the importance of Green cover and prevention of air pollution.		
3.	Ever Green Society, Madathukulam	This NGO stationed at Udumalpet has created a number of awareness programmes relating to Environment and Biodiversity Conservation, World Environment Day, Wildlife Week Celebration, World Forestry Day, International Tiger Day. In addition to that this NGO has involving major role on preparation of Micro plan in EDC in the Tribal settlements.		
4.	Wildlife Conservation Trust, Mumbai	Wildlife Conservation Trust (WCT), Mumbai has donated 6-vehicles and rescue kits, materials for Anti-poaching camps for effective protection and tackling human wildlife conflicts.		
5.	Environment Conservation Group, Coimbatore	ECG NGOs based at Coimbatore have conducted Nature Awareness camps regularly for student, corporate and public on the importance of wildlife and their natural habitats. They have won various awards including RAAC-AVS Eco Award 2014, Pettagam Awards for Environmental Awareness 2014.		
6.	Udumalpet Environmental Society, Udumalpet	UES NGO stationed at Udumalpet as involved so many activities for the welfare of Tribals residing in Anamalai Tiger Reserve and they have given training to them for preparation of dolls, ornaments, paintings, Towing coirs, etc.,		
7.	Aranya Charities, Udumalpet	Aranya trust, Udumalpet has been involved in all awareness campaigns conducted by the Tiger Reserve. The chairman of the trust is also a member of the Governing Body of ATCF, local advisory committee (Tourism), Honorary Wildlife Warden of Anamalai Tiger Reserves.		
8.	Wild Wing trust, Coimbatore	Wild wing trust has been involved in tribal welfare especially development of tribal school at Topslip.		
9.	WWF	WWF has been involved in creating awareness on implementation of Forest Rights Act -2005. WWF has also donated woolen jersey, first aid box, mosquito nets and other materials to the Anti-poaching watchers. They have donated --- numbers of smart phones to the FRO's, Forester, Forest Guard, Forest Watcher and APW. The smart phone can be used for MSTripes		
	Photographs enclosed.			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

		Programmes. The organization has also conducted a training on the method of usage of the phones to the field staff on 18.08.2017.
10.	Natural History Trust, Ambarambalayam	Natural History Trust, stationed at Ambarampalayam has involved with Anamalai Tiger Reserve to create several awareness camps such as :- 1. Participating in the Census programme 2. Conducting Tiger Day celebration 3. World Forestry Day 4. World Water Day 5. World Environment Day 6. World Elephant Day In Addition to this they have conducted plastic free campaign and also provided dustbins in various places for public use in Tiger Reserve.
11.	Nalam Hospital and Aravind Eye Hospital and Aravind Cardiac Centre, Madurai.	They have conducted medical camp for tribal people and staff in Tiruppur and Pollachi Divisions. 10 number of medical camp have been conducted for the benefit of staff as well as tribals by medical institution.

Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		List enclosed Annexure-26 .	The Chief Conservator of Forests and Field Director is well experienced in Wildlife Management as he has undergone Nine months training in Wildlife Management at the Wildlife Institute of India, Dehradun in 1994-95. The previous District Forest Officer, Tirupur Division Thiru. A. Periasamy, I.F.S., was also a trained Wildlifer keen on wildlife management. An advanced wildlife management training centre has been established Attakatty at a cost of Rs.1/- Crore during 2015-16. In the last two years more than 30 trainings have been imparted to the field staff of TR as well as frontline staff from the other circles. Professional support is being extended by ATCF in conducting trainings to frontline staff in ATR. The TCP for ATR contains identified topics for capacity building of frontline staff in various sections. ATCF regularly provides a variety of orientation / refresher trainings especially on habitat management techniques, wildlife population estimation techniques, use of field equipments etc. for all the staff. The TCP of Core and Buffer of Anamalai Tiger Reserve contains Staff Development Plan and is effectively being implemented. List of Trainings conducted in the last three years is enclosed. Staff Development Plan has been prepared in the TCP Core-B.
Some trained officers and few trained frontline staff, posted in the TR.	Fair		Chapter 8.6 of TCP Core-B.	
All trained officers and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Copy of Certificate enclosed Annexure-27. List enclosed Annexure-28.	The performances of the Deputy Director, Forest Range officers, Section and beat staff officers are linked to the achievement of management objectives. During 2014-15, the TR was awarded the NTCA Award for Excellence for the year 2012-14 under the category Communication Strategy on 20.01.2015 at New Delhi. During 2014-15 and 2016-17 the fire incidents were drastically reduced compared to the previous 3 years due to effective and timely action taken by the Field Staff to prevent fire occurrence. The Fire Disaster Management Centre at Topslip and Attakatty have played a great role in co-ordinating fire protection measures. 441 Lesser known and small animals (Crocodile, Common krait, Common Bronzeback, Deer, Owl, Sand boa, Monitor lizards, Wild boar, Snakes, Peacock, Peahen, Bonnet Macaque, Slender Loris, Common langur etc.) have been rescued in the periphery of Anamalai Tiger Reserve by the trained staff of Anamalai Tiger Reserve. 14 Tribal Eco-Development Committees in tourism area have been formed for the enhancement of their livelihood option since these people were involved in tourism activities since decades. During 2014-15 and 2015-16 the estimation of wildlife population have been carried out with full transparency by involving volunteers like, Doctors, Engineers, Teachers, Students, NGOs, etc., as a volunteers. No details were provided regarding promotion or reward of staff linked to management skill.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor			ATR is known for people's participation in TR management 10 EDC's are functioning for effective protection in the management of the TR. Participation of public is ensured in activities like eco-awareness programme, Wildlife Week Celebration, World Environment Day, World Earth Day, Global Tiger Day, and Elephant Day Celebrations. In addition to this the NGOs, students of schools and colleges are involved in creating awareness programmes time to time. During 2014-15 to 2016-17 the estimation of wildlife population has been carried out by involving all people throughout like, Doctors, Engineers, Teachers, Students, NGOs, etc., as volunteers.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public	Good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Assessment criteria*														
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks										
participation in most of the relevant aspects of TR management.				<p>Fire brigades are formed and stationed at control room with local village people. At the outbreak of fire they act immediately in controlling fire.</p> <p>Swachh Bharat Mission programme of Government of India was implemented in the Tiger Reserve with people participation. As instructed in the Government of India letter No.8-27/2016-WL,dt.21.03.2016 of Ministry of Environment, Forest and Climate Change, New Delhi a Calendar of events for three years from 2016-2019 for implementation of Swachh Bharat Mission in Anamalai Tiger Reserve was drawn up during May 2016 and communicated to the Deputy Directors for implementation of the programme.</p> <p>The cleaning operation was taken up as follows.</p> <table border="1"> <thead> <tr> <th>Date</th> <th>Details of Programs</th> </tr> </thead> <tbody> <tr> <td>14.06.2016</td> <td>Removal of plastic from Aliyar to Attakatti road. Cleaning operation in Topslip area.</td> </tr> <tr> <td>29.06.2016</td> <td>Cleaning operation along 9/6 check post to Chinnar road and Kallapuram road.</td> </tr> <tr> <td>16.10.2016</td> <td>Cleaning operation ElumalaiyanKovil foot path and 9/6 check post to Chinnar check post.</td> </tr> <tr> <td>25.01.2017</td> <td>Cleaning operation in Chinnar.</td> </tr> </tbody> </table>	Date	Details of Programs	14.06.2016	Removal of plastic from Aliyar to Attakatti road. Cleaning operation in Topslip area.	29.06.2016	Cleaning operation along 9/6 check post to Chinnar road and Kallapuram road.	16.10.2016	Cleaning operation ElumalaiyanKovil foot path and 9/6 check post to Chinnar check post.	25.01.2017	Cleaning operation in Chinnar.
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16.10.2016	Cleaning operation ElumalaiyanKovil foot path and 9/6 check post to Chinnar check post.													
25.01.2017	Cleaning operation in Chinnar.													
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good	✓												

**The involvement of NGOs/ NGIs in population estimation may be taken into account.*

4.4 Is there a responsive system for handling complaints and comments+about TR management?

Assessment criteria*																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks												
Ad-hoc approach to handling complaints.	Poor			<p>Grievances and complaints are enquired then and there. The Deputy Directors of the Anamalai Tiger Reserve are entrusted with the job of enquiring into allegation petitions, complaints, etc., Most of the grievances of the staff are settled expeditiously.</p> <p>Complaint registers are maintained systematically showing receipt of the compliancy. At present no such cases are pending.</p> <p>Complaints and Petitions received through various forums like CM Cell, Principal Chief Conservator of Forest, District Collector are enquired and appropriate follow up action taken by concerned officials. Registers are maintained in the office of the Deputy Director and Field Director.</p> <p>Details of petitions received and disposal.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Received</th> <th>disposal</th> </tr> </thead> <tbody> <tr> <td>2014-15</td> <td>33</td> <td>33</td> </tr> <tr> <td>2015-16</td> <td>31</td> <td>31</td> </tr> <tr> <td>2016-17</td> <td>24</td> <td>24</td> </tr> </tbody> </table> <p>A visitor's book is maintained giving scope for visitors to give complaints and comments when required. It is taken note of and responded periodically by the concerned Forest Range Officers.</p>	Year	Received	disposal	2014-15	33	33	2015-16	31	31	2016-17	24	24
Year	Received	disposal														
2014-15	33	33														
2015-16	31	31														
2016-17	24	24														
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair															
Coordinated system logs and responds effectively to most complaints.	Good	✓														
All complaints systematically logged in coordinated system and timely response provided with	Very good															

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
minimal repeat complaints.				

***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

4.5. Does TR management addresses the livelihood issues* of resource dependent communities, especially of women

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor			<p>There are 35 tribal settlement located within the core area of the TR with the population of over 6000 consisting of 1839 families livelihood issues relating to these people are given utmost attention by the Tiger Reserve Administration. Their urgent needs are attended to. Facilities have been provided to improve their life standard.</p> <p>More than 100 able tribal youths have been employed as Anti-poaching watchers in 37 Anti-Poaching Camps functioning in different Ranges. They are being paid daily wages of Rs.6750/- per month in addition to feeding charges. Their wages are to be increased to Rs.10000/-per month as per the recent announcement in the Tamil Nadu legislative Assembly.</p> <p>Old age pension released by Tahsildar, Valparai, Udumalpet and Pollachi is being paid every month through the respective rangers for the tribals.</p> <p>Eco-development Committees for tourism have been constituted in ten tribal settlements for the benefit of livelihood option to the settlements. Since tribals were involved in tourism activities since decades. The tribal have been entrusted with the maintaining of vehicle parking lot at Topslip by collecting fee.</p> <p>In Tiruppur division,Chinnar EDC has been given the responsibility of operating Coracle ride in Kootar.</p> <p>40 Tribal huts have been improved at the cost Rs.40 Lakhs in 4 tribal settlement of Tiruppur division under Special Area Development Programme.</p> <p>Drinking water facilities to provided to 7 seven tribal settlement in Tiruppur division at a cost Rs.32 Lakhs from the funds released by the tribal welfare department.</p> <p>Tribal women belonging to Thirumoorthi, Kurumalai and Mavadappu settlement have been given training on manufacture of sanitary napkin and they have been supplied with napkin manufacturing instruments at a cost Rs.6.10Lakhs.</p> <p>Approach roads to 3 tribal settlements have been improved at a cost of Rs.14.54Lakhs in Tiruppur division.</p> <p>10 free medical camps have been conducted for the tribals by organizing camp with the help of Rotary club and Private medical institutions.</p>
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor			
Plans have been made but no implementation	Fair	✓		During 2012 people Manjampatty settlement offered their willingness for relocation but later withdrew their application. As of now no settlement has come forward for relocation outside the Tiger Reserve, however tribals have been taken into the main stream of administration by creating opportunities for their involvement. There at present are around 35 settlements inside T.R. Tea Estates in a part of inviolate area. Few patches of revenue encroachments are also there.
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

**Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post- relocation success or otherwise.*

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor			<ul style="list-style-type: none"> • A website of ATR with salient features is being launched shortly. The updated website of Anamalai TR is under preparation. On line booking system for accommodation will be introduced after launching of website. • Quarterly newsletter is being published regularly. • A coffee table book titled "Amazing Anamalais" was released on 31.03.2017 by the Hon'ble Minister of Forest, Government of Tamil Nadu. • Some brochures like 'Help conserve Animals' and 'save Tiger save Earth' have been published by Anamalai Tiger Conservation Foundation.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities donot exist.	Poor		Chapter 7.3 Core-B	<ul style="list-style-type: none"> • Tourism is mostly confined to Topslip and Monkey fall areas. • The tourism plan has been prepared based on the guidelines circulated by NTCA and approved by NTCA, New Delhi.(This has been incorporated in the TCP Core-B) • Reception centres are functioning at Topslip and Pollachi to cater to the needs of the tourist. • Drinking water facilities available in the reception centre and Rest houses. • There are 19 rest houses and two dormitories available for the visitors. • There are 4tourist vehicles available for undertaking safari rides within the core area. • Threemore new vehicles are also proposed to be purchased through foundation as per approval given by the Governing Body in the 5thmeeting held on 29.08.2017. • Elephant safari is being provided to the visitors depending upon the weather conditions for about 40 minutes. • Visit to elephant camp at Kozlikamuthi to witness feeding of elephants. • Garbage disposal bins have been provided at the Reception centre and at rest houses. • Feedback forms have been provided at the Reception centre for evaluation and further action. • An Eco-shop is also established in Topslip.
Visitor services and facilities arevery basic.	Fair			
Visitor services and facilities aremonitored from time to time and are fairly effective.	Good			
Visitor services and facilities areconscientiouslymaintained, regularlyupgraded and monitored for visitor satisfaction	Very good	✓		

**Include the existence and quality of visitor and interpretation centres, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self-guided services in the field, visitor feedback on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Details of research report work carried out in thethree years	<ul style="list-style-type: none"> • A number of research / conservation studies have been conducted in this Tiger Reserve by various institutions which have been incorporated in the TCP and is being implemented. • Anamalai Tiger Reserve management with its own manpower and capacity in (Anamalai Tiger Conservation Foundation, Tamil Nadu Trust) is monitoring tigers, co-predators, prey and their habitat regularly and satisfactorily. Professional support (conservation biologist, junior research fellow) is also being extended for data analysis and report
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation routine	Good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
reporting of trends undertaken.				preparation. <ul style="list-style-type: none"> Phase-IV monitoring is effectively being carried out and submitted reports (2 times) to National Tiger Conservation Authority, New Delhi. The reports containing information on tiger, co-predator, prey population, habitat quality with human disturbances with insights of demography, distribution. As part of regular monitoring a 'Daily Monitoring Protocol' is also systematically implemented in the Tiger Reserve. Various research and monitoring topics were provided in Chapter 8.4 of TCP Core-B. M-Stripe is being implemented only in selected sites in the country in which Anamalai Tiger Reserve is one of the Tiger Reserve implementing the programme. Some of the key habitats like Shola-Grass land association in Grass Hills area of Valparai region(31.22 Sq.km) in Anamalai Tiger Reserve has already been declared as National Park area. Similarly Karianshola (5.03 Sq.km) in Topslip area has national park status. The other critical habitats of hill forest and shola forest in Anamalai, Dindigul and Kodaikanal are being well conserved on account of certain endemic species. (Source Research Report WII, 2002). The Nature Conservation Foundation based in Valparai has been carrying out studies on restoration of rain forest area and mitigation of human wildlife conflicts during the past decades. Their reports have been very useful for the Tiger Reserve Administration in the restoration of rain forest area and tackling human wildlife conflicts in Valparai region.
Systematic evaluation comprehensive reporting of trends undertaken and attempts made atcourse corrections as relevant.	Very good	✓		

Theme	Type of Monitoring	Impact
Phase IV Monitoring	Fixing Camera Trap	1. Incident of livestock grazing – Nil 2. Identification of Individual Tiger and Panther
Spatial analysis of Fire	Fire vulnerability areas	Fire hazards minimized due to man power engaged in the vulnerability areas.
Human-Animal Conflict	Frequent meeting and discussion with Stakeholders	The Human-Animal Conflict minimized.
Habitat Improvement	Identification of Water holes and invasive species. Solar powered water holes are there.	To create water body at vantage points and clearing invasive species in selective sites in order to increasing the population of wild animals.
Wildlife Health Plan	Field visit of Forest Veterinary officer	1. Domestic dogs are taken out and vaccinated in order to curtail the canine distemper. 2. Vaccination done for 2876 domestic cattles in the tribal settlement fringe villages in order to curtail the epidemic deceases. 3. Canine Distemper vaccination has been carried out in the year 2014.
Forest Protection	a) M-Stripes	Due to analysis of vulnerability of areas prone for Poaching,

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Theme	Type of Monitoring	Impact
	b) Patrolling c) Anti-Poaching Camps	Ganja cultivation, Sandal wood felling etc., have been totally curtailed.

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		TCP 9.15	Following registers are being maintained for systematic maintenance of assets / infrastructure. Register of Buildings. Register of motor vehicles
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair		Registers are shown to the committee.	Register of Roads Register of wells and tanks Register of check dams Register of stores Register of assets
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			Based on the entries in these registers a detailed maintenance schedule is prepared by the Forest Range officers. Funds for maintenance of these assets is sourced from – Non-plan Tiger Foundation Plan schemes
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good	✓		The vehicles presently available are adequate and are in good conditions. Most of the vehicles are new and maintained periodically as per the provisions in TCP. Equipment such as wireless sets, walkietalkies, arms and ammunitions, computers, laptops, GPS, Range Finders, Compasses, etc are adequate to meet the objectives of Anamalai Tiger Reserve. All the buildings including staff quarters, office buildings, APC's and related establishments are adequate, maintained periodically and presently used. All the anti-poaching camps are well equipped and well furnished. All the receipts obtained through various sources are remitted into the accounts of Anamalai Tiger Conservation Foundation, Tamil Nadu Trust. Funds from the foundation are utilized for TR management which includes habitat improvement and maintenance of infrastructure related to protection of Anamalai Tiger Reserve.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Census report of 2014-15 to 2016-17.	The presence of more than 25 tigers in the TR. It also supports highest density of population. The presence of rare and endangered Lion tail Macaque is also there. All the population of threatened and endangered species is stable in the reserve with effective Anti-poaching operation and habitat protection. The results are based on Phase IV protocols being implemented since 2012. Following are the list of population trends found in few species. Asian Elephant: The population of Asian elephant and their sex ratio has been showing fluctuating trend and depending upon on water and fodder availability in Anamalai Tiger Reserve. The Tiger Reserve is surrounded by forest divisions like Nemmara, Parambikulam Tiger Reserve, Vazhachal, Malayatoor, Eravikulam National Park, Chinnar wildlife Sanctuary, Dindigul division Kodaikanal Wildlife Sanctuary. Hence, there is possibility of migration of elephants from one place to another. Population of leopard and Indian guar is stable.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good	✓		

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

**Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Result of phase IV monitoring Annexure-	Tiger population in ATR is stable. The population varies between 25-30.
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good	✓		
Population of tiger has significantly increased	Very good			

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently on-going Phase-IV analyses.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		TCP(Core-B) Chapter 8.8 Fire occurrence map. Map of the patrol path is enclosed	The biotic interference in the form of firewood removal, grazing, fire, etc. has been considerably reduced by management intervention. Threat caused due to heavy pilgrimage in Thirumoorthis Temple and ElumalaiyanKovil is being addressed now. Threats to the TR being reduced due to various activities implemented by the TR management as follows. Undertaking "MSTriPESPatrolling" by assigning specific identified routes to the daily patrolling parties by the concerned Forest Range officers, which avoids bias. By implementing the protocols of Phase-IV monitoring, including maintenance of daily chowki patrol register protection is very effective. 24 x 7 manned control room is established with a toll free phone number at Rottikadai with rapid response vehicle and wireless connectivity. This has reduce the man animal conflicts considerably. Due to these efforts poaching incidences and fire incidents have dramatically reduced over the last few years. There have been no cases of encroachments.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good	✓		

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4Are the expectation of visitor*generally met or exceeded?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met.	Poor		TCP Core-B Chapter 7.3	<ul style="list-style-type: none"> Mainly 5 to 6 spots have been developed as tourist visiting sites and Most of these sites are at fringes. The elephant camp at Kali Kamuti and the feeding of 23 elephants in the camp is a tourist attraction. All the tourism programmes including the Community Based Ecotourism Programmes (CBET) are strictly conducted only the areas designated for tourism.The Hon'ble Supreme court / NTCA directions/guidelines are strictly adhered and complied in ATR. A comprehensive tourism plan based on the tourism guidelines notified by the Government of India in October 2012 has been prepared as part of the TCP for ATR core zone. Various measures for providing facilities to the tourist have been proposed in the plan. The local advisory committee for ATR has been constituted as per G.O.Ms.No.252 E&F department (FR-5) dt.07.11.2012. This has been reconstituted in G.O. (Ms) No. 117 E &F (FR-5) Dept. dt. 14.10.2016. A sub-committee of this LAC has been constituted during 2013 which is mandated with inspecting the
Expectations of many visitors are met.	Fair			
Expectations of most visitors are met.	Good			
Expectations of all most all visitors are met.	Very good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
				<p>facilities within the tiger reserve and submits report with suggestions for improvement.</p> <ul style="list-style-type: none"> The rest houses have been maintained to the expectation of the visitors. In general expectation of the visitors is met due to measures taken above.

*Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism.

6.5 Are local communities supportive of Tiger Reserve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			<p>The local communities in ATR are entirely supportive of ATR management. ATR is known for people's participation in TR management. There are 10 EDC's formed where Eco development initiatives are undertaken by the TR management. This has secured good will from these communities.</p> <p>There is also participation in fire prevention and control, visitor management.</p> <p>In order to encourage the local people to render continuous support the administration the following welfare measures have been taken up by the administration.</p> <p>1. Education.</p> <ul style="list-style-type: none"> A tribal residential school which was started in 1951 is functioning in Topslip with classes from Std. I to VII in which 82 tribal children are studied. They are given free boarding facilities. E-learning facilities have been introduced in the school since 2013. <p>2. Health</p> <ul style="list-style-type: none"> A primary health centre is opened in the year 1950 provides free medical aid to the local tribals and staff in and around Topslip area. Insurance facility has been provided to the APW. 10 free medical camps have been conducted for the tribals by organizing camp with the help of Rotary club and Private medical institutions. <p>3. Eco-development.</p> <p>2014-15 Under Western Ghats development programme 1052 solar lanterns were supplied to 17 tribal settlements</p> <p>2016-17 70 Tribal huts (Pollachi 30 and Tiruppur 40) have been improved at a cost Rs.70 Lakhs in 7 tribal settlement of Tiruppur division under Special Area Development Programme.</p> <ul style="list-style-type: none"> Drinking water facilities provided to 7 seven tribal settlement in Tiruppur division at a cost Rs.32 Lakhs from the funds
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>released by the tribal welfare department.</p> <ul style="list-style-type: none"> • Approach roads to 3 tribal settlements have been improved in Tiruppur division. • A comprehensive schemes for tribal welfare aimed at providing basic facilities to six tribal settlements in Tiruppur division has been proposed at a cost Rs.3Crores. • Proposals have also been sent to Project Officer DRDA Tiruppur for providing drinking to 9 tribal settlements in Tiruppur division at the cost Rs.50Lakhs. <p>4. Skill Development.</p> <ul style="list-style-type: none"> • A One day training on "Enhancing the Livelihood Status of Tribal Women on Non-Wood Forest Products (NWFPs)", was conducted on (17.03.2017) jointly by the Forest Department and Departmental of Social Sciences at AnbilDharmalingam Agricultural College and Research Institute, Trichy. • Tribal women belonging to Thirumoorthi, Kurumalai and Mavadappu settlement have been given training on (24.03.2017) by the forest College and Research Institute, Metupalayamon manufacture of sanitary napkin and they have been supplied with napkin manufacturing instruments at a cost Rs.6.10Lakhs. <p>5. Employment Opportunites</p> <p>i. Regular employment.</p> <ul style="list-style-type: none"> • Tribals are working in regular employment in the following category- Forester-3, Forest Guard-18, Forest Watcher-2, Elephant men-24 and APW-15. • Temporary employment on daily wages Tiger and Elephant Tracker-15,APW-100, Fire watcher-4, Eco-sanitary Watcher-19, Anti-depredation Watcher-13, Eco-gudies-7 and temporary cavady-17.
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**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE SCORE CARD

FRAME WORK ELEMENT NO.	FRAME WORK ELEMENT NAME	NO OF CRITERIA (a)	MAXIMUM MARK PER QUESTION (b)	TOTAL a x b	MARKS OBTAINED FOR THE ELEMENT	OVERALL MEE SCORE AND PEPRCENTAGE
1	Context	05	10	50	45	89.06%
2	Planning	07	10	70	65	
3	Inputs	05	10	50	45	
4	Process	06	10	60	45	
5	Outputs	04	10	40	37.5	
6	Outcomes	05	10	50	47.5	
Total		32	60	320	285.00	

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Comment / Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		TCP Core-B Chapter 8.9	ATR harbours pristine ever green forests which is acting an important sink for the carbon. The core area of ATR is kept as inviolate area and devoid of any interventions which lead to carbon emission and climatic change. As such there is not much impact on ATR due to climatic change. The area is strictly protected from fire and hence no biomass removal takes place. As it is evident that decreased frequency of wild fires that lead to an increase in the amount of carbon stored in the soil, significantly lower greenhouse gas emissions. Reduction in biomass removal through reduced firewood collection, etc helps in carbon reduction as natural forests under continuous cover management can be permanent carbon sink. No extraction is allowed in the TR that helps for permanent carbon sink.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Comment / Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		TCP Core-B Chapter 8.9 A copy of estimate for providing gas to anti-poaching and elephant camp enclosed Annexure-33 .	Anamalai Tiger Reserve has already taken a few positive steps towards mitigating climate change. The very such steps, it has taken recently is to reduce usage of firewood. Gas connection has been provided in the elephant camp which has not only saved the feeling of 1000 trees per year, but would also help in checking the pollution. Similarly, gas connection has been provided to the Anti-poaching camps. Not only this, Forest Fire Management in Anamalai Tiger Reserve has drastically reduced the manmade fire that has also reduced the influx of carbon in the atmosphere. These practices will be continued to be adapted in future to mitigate the issue. Apart of this, various measures have been taken to remove the invasive species from the landscape just to pave the way to indigenous and endemic species. Strict policing, patrolling and combing operation has further strengthened and improve the ecological and biological values of the Anamalai Tiger Reserve.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good	✓		
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

9. Kalakad Mundanthurai Tiger Reserve, Tamilnadu

1. CONTEXT

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Cate-Gory	(Tick √)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Tiger Conservation Plan, (Pg.No. 9-19) books, booklets and various pamphlets	Nestled in the grandeur mountains of the Southern Western Ghats, lies the KalakadMundanthurai Tiger Reserve encompasses a total area of 1601.542 sq.km with pristine core area of 895 sq.km buffering with Protected area buffer of 236.64 sq.km consisting of part Kanniyakumari WLS on the southern side and part of Nellai WLS in the north and 5 km belt Eco development zone on the eastern side forms the buffer. The hill slopes are steep with rugged and undulating grasslands intercepted with deep gorges and ravines which permit the flow of certain crystal clear, life supporting perennial river Thamiraparani and its 14 tributaries. KMTR was declared by MoEF, Govt. of India on 7.10.1988, as the 1 st TR of Tamilnadu and 17 th of the Country. The values of KMTR are well documented. They are; a)Economic value b)Biological and Ecological values c)Religious values d)Scientific values e)Aesthetic value f)Human values • Economic Value –KMTR is the source of as many as fourteen rivers and is rightly known as the river sanctuary of Tamilnadu. There are eleven dams in and around KMTR catering to the drinking water needs of the three districts namely Tirunelveli, Tuticorin and Kanyakumari. • Biological and Ecological Values: The vegetation varies from thorny shrub jungle to lush evergreen forest. The vegetation type are? a)Tropical wet evergreen forest b) Semi Evergreen Forest c)Tropical Moist Deciduous forest d)Littoral and Swamp Forests e)Tropical Dry Deciduous Forest f)Tropical Thorr Forest. • KMTR also harbours all the five primates of Peninsular India; including the lion Tailed Macaque, a flagship species of NilgiriThar, Asian elephant, Indian Gaur, Tiger and Wild dog etc. The TR forms part of Agasthyarmalai landscape. KMTR with 1500 endemic species and situated within Western Ghats is a super hot spot of Biodiversity. • KMTR serves as an ecological benchmark, excellent opportunity for biological and ecological research. The rich Biodiversity of the Reserve also provides a platform for true eco-tourism. • There is a triangle concept fo values. Water is at the Top of the triangle and two bases are ‘conservation’ and ‘People’ . These three concepts are well connected. Basing on it the values of the TR are prioritized, documented and monitored regularly.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	√		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.2 Are the threats to TR values well documented and assessed?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Tiger Conservation Plan (Pg.No.36,37;170,17) and Research papers.	Values and threats are well documented by the authorities as well as by many NGOs which are working with the authorities. Some of the major threats are interstate Boundary Protection, enclaves, Pilgrimages, Road kill due to plying of vehicle etc.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

1.3 Is the 'Core Area' of TR free from human and biotic interference?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Tiger Conservation plan (Pg.No.341) and Reports from ATREE, Rauf Ali and AJT.Johnsingh.	The notified total area of KalakadMundanthurai Tiger Reserve is 1601.542 sq.km(G.O M.s No. 201 Environment and Forests (FR.5) Department dated 13.08.2012 – Annexure - II) with 895 sq.km of core area and 706.542 sq.km of buffer area (236.6 sq.km of forested buffer and 469.9 sq. km of Eco-development buffer). It is exclusive of around 400 sq.km wet evergreen forests completely free of human habitations are present in KMTR which makes it unique in plant diversity and endemism. The Core area of the Tiger Reserve has minimal human movement by Kanitribals from 05 habitations consisting of 129 families and two Electricity Board colonies and very low movement of people in few estates. Most of the estates which were in operation are now abandoned and the vegetation is replaced by the indigenous vegetation cover. There are no cases of fuel wood removal in the recent past. Grazing incidences are nil as well. Coming to FRA, guidelines for declaring CWLW guidelines has been issued by NTCA. So, far no forest pattas have been issued to these tribal families, whose main livelihood is primitive agriculture of growing Tapioca. No grazing and no MEP collection. Though the KMTR eastern part is surrounded by 55 revenue villages with 46000 households and nearly 20000 population, but more than 90% of grazing pressure has been reduced.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

1.4 Has the TR complied with the four Statutory* requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
None of the four statutory requirements met	Poor		Government orders	The Government of Tamil Nadu in G.O (MS). No.145 E&F (FR-5) department dated 28.12.2007 (Annexure - III) have notified the 895 Sq.km of KalakadMundanthurai Tiger Reserve (Core area) as Critical Tiger habitat in the interest Conservation of Tiger. The Government in G.O (MS) No. 201 Environment and Forests (FR-5) department dated 13.08.2012 (Copy enclosed inAnnexure - II) have notified 706.542 Sq.km as buffer area of KalakadMundanthurai Tiger Reserve.
One of the four statutory requirements met	Fair			
Two/three of	Good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

the four statutory requirements met			The Tiger Conservation Plan has been prepared afresh by Thiru. A. Venkatesh, I.F.S., Chief Conservator of Forests & Field Director and got approved from NTCA, New Delhi for a period of 10 years from 2015-16 to 2024-25 in reference F.No.1-2/2011, NTCA dated 02.03.2015 KalakadMundanthurai Tiger Conservation Foundation, TamilNadu Trust, Tirunelveliwas established on 25.03.2010 and is functioning well. The Tripartite agreement between Field Director, State Government and NTCA has been prepared in the proper form for each year and sent for the years 2014-15, 2015-16 and 2016-17. Honourable Chief Minister of Tamilnadu Chaired the last State Board of Wildlife meeting. But state level steering committee meeting under the Chairmanship of CM was never held. SOP procedure issued by NTCA is scrupulously followed. SOP has been duly followed. No such case of Tigers straying out in human dominated landscape is noticed in the recent past.
All four statutory requirements met	Very good	√	

1.5. Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Cate-Gory	(Tick √)	Reference document(s)	Remarks
Management of Core and Buffer of the TR under different management	Poor			The total extent of KalakadMundanthurai Tiger Reserve is 1601.542 sq.km(G.O M.s No. 201 Environment and Forests (FR.5) Department dated 13.08.2012) with 895 sq.km of core area and 706.542 sq.km of buffer area (236.64 sq.km of forested buffer and 469.902 sq. km of Eco-development buffer). The Core and buffer area of 1364.902 sq.km (part of buffer) is under the unified control of the Field Director. The notified buffer area of 201.36 sq.km of part of Kanniyakumari Wildlife Sanctuary and 35.28 sq.km part of Nellai Wildlife Sanctuary is under the administrative control of the District Forest Officers Kanniyakumari Division and Tirunelveli Division respectively. Orders have been issued for transferring the area to unified control of the Field Director and the same will be effected soon. The process of transfer is going on.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good	√		
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very good			

2. PLANNING

2.1.Status of Tiger Conservation Plan (TCP)?

Assessment criteria				
Condition	Cate-gory	(Tick √)	Reference document(s)	Remarks
No TCP in place	Poor			The Tiger Conservation Plan got approved from NTCA, New Delhi for a period of 10 years from 2015-16 to 2024-25 in reference F.No.1-2/2011, NTCA dated 02.03.2015. (Annexure-IV) and the same is under implementation. So many stake holders meeting was conducted prior to preparation of TCP.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP	Very good	√		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.2 Does the TR safeguard the threatened biodiversity values?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Tiger conservation plan	Yes. Through Anti-poaching camps and beat perambulations day to day wildlife monitoring carried out through M-STriPES initiatives. Movement of Tiger, Panther, Dhole and prey base are monitored in various forest types and habitats and any movement into the new habitats are recorded and deliberated to enhance frequency of monitoring. For example for the past two years movement of LTM is found in fairly lower elevations of Koriyar which may be due to improvement of Forest conditions. Habitat management programmes for species like chital and other herbivores that are very important prey base of tiger are also being undertaken through grassland habitat restoration programmes. Participatory wildlife monitoring with the VFC members is also carried out to enhance the support level of people for wildlife protection and the need of the adequate tiger and other wildlife population for a healthy and water catchment potential of the forests, besides prevention of poaching through intelligence gathering and social fencing. Habitat management schemes such as invasive species removal, coolburning, control burning, monitoring of Eco-system of health through plant animal interaction are done based on the description of the TCP. Habitat management activities are also done through participatory biodiversity.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good	✓		

2.3. Are stakeholders given an opportunity to participate in planning process?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		LAC meeting minutes & Eco development records, Executive Committee meeting, Governing Body meeting, SPIC, DLCC meeting, FLCC meeting, etc.	The list of various stakeholders associated with KMTR are as follows <ol style="list-style-type: none"> 1. Villagers in fringe villages (Members of the Village Forest Committees). 2. Kani Tribals 3. Volunteers, Researchers, Non-Governmental organizations 4. Employees of Electricity Board living in enclosures. 5. Private estate owners 6. Agriculture department 7. Animal husbandry department 8. Fire and safety Department 9. State Transport Corporation Authorities 10. Highways department 11. HR and CE department etc
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.4. Are habitat management programmes systematically planned, relevant, and monitored?

Assessment criteria				
Condition	Cate-gory	(Tick √)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Tiger Conservation Plan, (Pg.No. 54-58, 104-107) Annual Plan of operations of various schemes.	Protection and habitat management are the best forms of management towards wildlife. Efforts are being made for RET species recovery programme under ABR scheme wherein species such as <i>Elaocarpustuberculatus</i> (Rudraksh), <i>Glutatravancorica</i> (Senkurinji), <i>Pamburusmissionis</i> , etc have been raised in nursery and planted. The weeds like <i>Lantana</i> , <i>Parthenium</i> , <i>Opuntia</i> etc., are removed well before flowering in order to eliminate the chances of further spreading and enabling natural growth of indigenous palatable grass and shrubs. Gradual removal of the weed species has leadtheir decline and constant working is necessary for their eradication. It has also resulted in the increase of chital population in the Mundanthurai plateau.The entire eastern stretch of the KalakadMundanthurai Tiger Reserve is rain shadow region especially the plains of Thirukurungudi Range, Manpothai, Kolunthumamalai and Therkkuveeravanallur. Outer slopes of Singampatti RF and Papanasam RF and parts of Mundanthurai Plateau. Many water holding structures like check dams, percolation ponds have been maintained in these areas to ensure availability of water to wildlife during pinch period. The structures are desilted, maintained and repaired periodically. Solar energized borewells have also been installed and functioning successfully to supplement water availability. Habitat usage by wildlife and their movements are monitored through regular perambulation, anti-poaching camps, treks, special party perambulation, intelligence gathering and surprise inspections. Information are also provided by the Village Forest Committee members on wildlife movement outside the Tiger Reserve boundary including conflicts if any. M-STRIPES Patrol module is now being used for regular patrolling at present.
Limited planning and monitoring programmesare in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	√		
Habitat management programmes are thoroughly planned and monitored.	Very good			
				Annual Plan for eradication of weeds. Annual Plan for fire management.

2.5 Does the TR have an effective Protection Strategy (PS*) and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Cate-Gory	(Tick √)	Reference document(s)	Remarks
TR has little or no protection strategy.	Poor		Tiger conservation plan, (Pg.No. 57-58, 108-118 - Vol I & 352-368 - Vol II)	Security plan has been prepared as a part of Tiger Conservation Plan which got approved by Government of India in ref. F. No. 1-2/2011, NTCA dated 02.03.2015 and the same is under implementation. No separate security plan is there. Training to frontline staff to handle weapons is provided. Jungle warfare training was given to the selected staff by the Special Task Force of Tamil Nadu Police. Security audit: The committee has since been constituted by the Government of India for Security audit in all the Tiger Reserves. The security audit is to be taken by the committee. We are fully geared up to undertake security audit so as to effectively review and place additional security measures required. One of the unique protection mechanism in KMTR has been the anti-poaching operations by involving local Kani tribes and local EDC people there are 31 APC.
TR has an adhoc protection strategy.	Fair			
TR has a generally relevant protection strategy but is not very effective.	Good	√		
TR has a comprehensive and very effective protection strategy.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Tiger conservation plan, photos, newspaper cuttings etc.	This Tiger Reserve experiences a minimum of Human – Wildlife Conflicts. Almost the entire eastern periphery and the villages adjoining this area are prone for conflict with wild animals. The peripheral villages mostly practice rain fed agriculture which is the most important source of livelihood. The Human-wildlife conflicts are mainly due to crop damages by wild elephants, wild boars and other herbivores. To reduce this situation, solar power electric fence along certain portions of the eastern boundary of the Tiger Reserve has been erected. Wherever possible Elephant Proof Trenches are being dug to restrict the wild elephants as well as animals such as wild boars inside the forests. Elephants found to stray out of the Reserve due to migration from Kerala during November to February when large crowd of people move to worship Lord Iyyappa temple located within Periyar Tiger Reserve. Compensation for human death, human injury, crop, livestock and property damages caused by wild animals are being paid. The wild animals strayed out of forests are being rescued and released in the wild. The human death due to attack by wild animals did not happen from 2014-2016. Human Injury by wild animals is very meager. The wild boars in Sivasailam area, Kadayam Range of Ambasamudram Division is a great threat to the farmers. All efforts are being taken to tackle this issue. The details of human wildlife conflict in the last three years from 2014-15 to 2016-17 and compensation paid during these years are enclosed. Compensation amount is Rs. 4.0 lakh per death and permanent injury. For damage of Pucca house the compensation is Rs. 95,100/- last year only Rs. 12.0 lakh compensation amount has been disbursed. From 2014-15 to 2017-18, Human death is nil. Human injury in 3 in 2014-15, due to Wild bear and 1 in 2017-18 due to Gour.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

2.7. Is the TR integrated into a wider ecological network/landscape following the principles of the ecosystem approach?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/landscape.	Poor		Tiger conservation plan. (Pg.No. 177-180, 214-218.) BCRLI Project in Agasthiyarmalai Landscape, Agasthiyarmalai Biosphere Reserve programmes	KalakadMundanthurai Tiger Reserve is a part of the Agasthiyarmalai Landscape, which extends from Kanniyakumari to Kumili. The landscape includes both the Protection and Production landscapes in Kanniyakumari, Tirunelveli, Virudhunagar, part of Madurai and Theni districts comprising the Protected Areas, Reserve Forests in the Protection landscape and the fringe villages and non forestlands in the production landscape. Since Agasthiyarmalai Landscape is located in both TamilNadu and Kerala comprising of high biodiversity areas, conservation of the landscape area would go a long way in ensuring genetic dispersal and migration for long-term survival of the meta population of tiger and other wildlife of the landscape wherein the hotspot biodiversity KalakadMundanthurai Tiger Reserve is a core part. The identified Shencottah corridor connects the Agasthiyarmalai– Periyar complex which was once continuous, though, the corridor facilitates the locomotion of lower fauna, movement of larger mammals across the corridor is still unfeasible. Only one corridor plan is there for the entire landscape.
Some limited attempts to integrate the TR into a network/landscape.	Fair			
TR is generally quite well integrated into a network/landscape.	Good			
TR is fully integrated into a wider network/landscape.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3. INPUTS

3.1 Are personnel adequate, well organized, and deployed with access to adequate resources in the Tiger Reserve (TR)?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor			Adequate. Due to reorganisation of beats as per GO (D) no 98 E&F (Forest Spl.B) Deptdt 28.03.2012, the existing 30 beats have been bifurcated into 50 beats with seven ranges and eight section and came into effect from 1 st April 2017. Staff have been allotted to the reorganized beats. 110 anti poaching watchers including 13 super numerary post are allowed for anti poaching camps in KalakadMundanthurai Tiger Reserve, out of which 95 anti poaching watchers are now working. In super numerary post 1 anti poaching watcher retired, 1 anti poaching watcher expired while in service and 8 anti poaching watchers appointed as Forest watchers. Thus 12 posts are vacant. Through Village Forest Committee members participation for protection initiatives, the vacancy positions are managed. The post of beat officer in some of the newly created beats are still vacant.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Building maintenance register and vehicle maintenance register. Staff position and vacancy register.	The core area of KMTR, has 7 Ranges and 50 Beats. The Reserve has 5 checkposts at Papanasam, Lower camp, Manimuthar, Thalaiyanai and Nambikovil wherein entry of pilgrims and eco tourism visitors are checked. Six new watch towers have been constructed at Kodamadi, Muthukuzhivayal, Thiruppaniapuram, Mundanthurai, Kudiraivetti and Manjolai besides 5 earlier constructed watch towers in fire prone areas of Kalakad and Ambasamudram Ranges have been quite helpful in detection and prevention of Forest fire during fire season. Anti-poaching sheds are available in most of the vantage points in vulnerable areas and in interstate boundaries for effective patrolling and vigilant perambulation. Range Offices are equipped with essential equipments like wireless base stations, computers etc. Field equipments like GPS, digital cameras, camera traps, compass etc, walkie-talkies are in ample supply. Necessary maintenance and improvement works are carried out periodically to keep the buildings and equipments in good condition. But existing buildings need immediate renovation. There are nearly 8 vehicles, which are already off road and condemned. They need immediate replacement.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.3. Are financial resources other than those of the State linked to priority actions and are funds, adequate, released timely and utilized?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Resources allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Relevant Annual Plan of Operations, Government Orders, and Utilization Certificates, Performance Audit report.	The following schemes are funded from the Central government 1. Project Tiger 2. Agasthiyarmalai Biosphere Reserve 3. Intensification Forest Management 4. 13 th Finance Commission scheme 5. BCRLIP in Field Learning Center 6. BCRLIP in Agasthiyarmalai Landscape The perusal of Annual Plan of Operations submitted from this Tiger Reserve with reference to the guidelines issued by the Government of India, it reveals that there is a vast difference between the proposal and the sanction. On the administrative approval of APO by the Government of India, the Government of Tamil Nadu issue orders for its sanction and release of funds. The Allotment of funds and expenditure details of all Centrally Sponsored Schemes for the year 2014-15 to 2016-17 are perused.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		Only during 2014-15, though the APO was sent to NTCA on 11.04.14, the many was sanctioned on 13.08.14. In other years, the sanction by NTCA in quick. During 2017-18, Park authorities submitted action plan for 550 lakh, but NTCA sanctioned only 341 lakhs. Their need every year is around 500 lakhs. This excludes funds allotted by Tiger conservation foundation, which is around 75 lakhs.
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Resources allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Relevant Annual Plan of Operations, Government Orders, and Utilization Certificates, Performance Audit	The following schemes are funded from the State government at present 1. Special Area Development Programme 2. CAMPA 3. Driving menaceful animals back into the forest 4. Augmenting drinking water supply (solar energized bore-
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much	Good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

delay and mostly utilized.			report..	wells) to wild animals
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			5. Part II scheme-compensation for damages caused by wild animals Apart from the Centrally Sponsored Schemes, the Annual Plan of Operations of the above State schemes are being approved by Government of Tamil Nadu, funds released and works are executed with the main objective of Forest protection, enhancing water and fodder availability for animals during drought, tackling Human-wildlife conflicts and Forest fires. Besides this, State funding on recurring expenditure is 60/ 40 share and for non recurring expenditure is 50/50 share.

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category	(Tick √)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Manpower as volunteers, Training, awareness programmes, research/study reports, photos and booklets	<ul style="list-style-type: none"> ❖ ARUMBUGAL TRUST, a Tirunelveli based NGO has done a commendable and appreciable work in the World Bank aided Kalakad Mundanthurai Tiger Reserve's eco development scheme (1994 to 2001). Their services are still utilized in Training and awareness programmes given to all VFCs in Kalakad Mundanthurai Tiger Reserve and in the fringe villages of the whole of Agasthiyarmalai Landscape scheme under Biodiversity Conservation and Rural Livelihood Improvement Project funded by the World Bank. ❖ ATREE, another NGO based at Bangalore who are having a field base station at Singampatty are always associating with the Tiger Reserve, especially in Anti-plastic campaign during Aadiammavasai festival season of Sorimuthulyyanar temple every year. They also involve themselves in post cleaning works after the festival is over. This NGO is associated with the department in various conservation projects. ❖ "Vanam", a non-governmental organization based at Theni has been participating Biodiversity Conservation and Rural Livelihood Improvement Project in Agasthiyarmalai Landscape. ❖ NGO's only provide services, no financial help.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	√		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4. PROCESS

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria				
Condition	Cate-gory	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Seen the register for training	Training programmes are provided to staff of all levels on population estimation techniques, wildlife monitoring methodologies and handling of modern equipments including GPS which are useful during Phase I and IV data collection and on camera trapping operations. The Forest Rangers, Foresters, Forest Guards and Watchers have been sent for training on regular basis. The anti-poaching watchers have been taken for cross-field visits to other Tiger Reserves to know about fire protection, eco-tourism regulation, anti-poaching strategies and knowledge sharing with peer group. In house trainings on intensive patrolling of vulnerable areas are being conducted to the frontline staff regularly. The anti-poaching watchers have been sent for weapon trainings through the Special Police Task Force. Besides, the two deputy Directors have received short training in WII on Wildlife management and wildlife population estimation. Both the scientist staff i.e., ecologist and Biologist have been trained in WII. There is an Agasthya learning Centre at Mundanthurai, where regular training is conducted on Tiger Monitoring and man-animal conflict assessment.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and fair number of trained frontline staff, posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Cate-gory	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor			The Field Learning Center established in 2011-12 with the objective to develop and to promote new models of Conservation at the Landscape scale through enhanced capacity and institution building for mainstreaming biodiversity conservation outcomes. Three training modules have been prepared and approved by the Wildlife Institute of India. 63 training events and exposure visits have been conducted so far. The FLC acts as a knowledge hub and a research station for evolving and developing new strategies for successful and sustained implementation of ALS. For capacity building and other training events, the existing expertise of the FLC is utilized. Regular trainings on wildlife monitoring techniques and timely reviews on the beat perambulation are carried out for effective management of the Tiger Reserve. Awards are given by department to both field staff and office staff for successful completion of 20 years an more of meritorious service.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.3 Is there effective public participation in TR management and does it show in making a difference?

Assessment criteria				
Condition	Category	(Tick √)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Eco-Development Records.	<p>The NGOs and fringe villagers help the Tiger Reserve in management through the following factors,</p> <ul style="list-style-type: none"> ➤ Arumbugal Trust – Community mobilization and awareness creation from the year 1995 to 2016. ➤ AvvaiAshramam, Sivasailam – participation in strengthening participatory institutions in the fringe villages ➤ ATREE – undertaking biodiversity conservation research, conducting exposure visits and study tours. ➤ Sarah Tucker College, Tirunelveli – 1995 to 2016 – have been participating in population estimation, study of plant animal interactions including focal trees and research on eco system services of bat species in KMTR , conducting exposure visits to students and researchers, supporting wildlife week celebrations <ol style="list-style-type: none"> 1. The public and volunteers participate enthusiastically during Wildlife population estimation every year. The NGOs/NGIs participated in the Wildlife population exercises are as follows Papansam Arts College, Ambasamudram Arts College, Department of Environmental studies, Alwarkurichi, St. John's College, St. Xavier's College, Sarah Tucker College, SivanthiAthithanar College, Mano College, MDT Hindu College etc., 2. The forest fringe dwellers volunteer in rescue operations of strayed/stranded wild animals, information on trespassers, information about poaching etc. 3. The VFC members also take part in fire fighting operation apart from informing the forest department staff in case of fire. 4. There being a total decrease in forest dependency VFCs now are major protectors who share intelligence to prevent illegal activities, etc. 5. Efforts have been made to involve various stakeholders including Government departments in TR management as to seek their support as well as for mainstreaming biodiversity conservation.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management	Very good	√		

4.4 Is there a responsive system for handling complaints and comments about TR management?

Assessment criteria				
Condition	Cate-gory	(Tick √)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Petition Register.	<p>Immediate response after receiving the petitions and RTIs. Responses are done through TR webpage and email too.</p> <p>Immediate response is shown on receiving the petitions and RTI's. Registers are maintained to keep the records of petitions and application on RTI.</p> <p>Visitors note books are kept in the important Guest</p>
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and	Good	√		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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responds effectively to most complaints.				houses where guest record their views and suggestions which are complied upon wherever possible. Contact numbers of higher authorities are being prominently displayed at tourist places. Register of petitions received and Register of petitions under Right to Information Act are maintained. The DD, long for complaints, holds grievance day every month. The F.D. conducts grievance day once in 3 months.
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

4.5. Does TR management address the livelihood issues of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Eco-Development Records.	<p>Sustainable Alternative Livelihood System: The Eco development programme has resulted in the active involvement of people based on Participatory Learning & Action methods. Micro credits were given to individuals as well as to Sub Village Forest Committees for starting micro enterprises as sustainable alternate livelihood options thereby reducing the dependency on forests. An innovative approach of forming Micro Village Forest Committees have been introduced in which alternative livelihood financial assistance is provided to the MVFC members consisting of 5 peer group likeminded people. The concept of formation of micro VFCs is to reach poor and meager. Furthermore, the eco development programmes are being extended to the entire Agasthiyarmalai Landscape through the Biodiversity Conservation and Rural Livelihood Improvement Project in Agasthiyarmalai Landscape funded by the World Bank from 2014-15 to 2017-18. In the project fringe villages which are adjacent to the Protected areas/ Tiger Reserves/ Forest Divisions of Kanniyakumari, Tirunelveli, Virudhunagar and Madurai Districts are being targeted and financial assistance are being given to the forest dependents to reduce dependency on forests and to improve their livelihood status.</p> <p>Empowerment of Women This project has led to tremendous improvement in the living standards of women and has empowered the women in many ways. Women are the active participants in the VFC activities and they head many VFC/EDC. Under energy composition of microplans, micro-credit has been arranged to purchase gas chullahs, and gas. For implementation of micro plan, funds are received from State Planning commission and state Tribal department.</p>
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the core areas?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Relocation plan, Tiger Conservation Plan	A meeting was conducted by the Field Director along with the Deputy Directors and Revenue Divisional Officers with the Kanis and other forest Dwellers and the latest package offer was announced to the public. Many of the Kanitribals refused to accept the package and still negotiations are going on. The Scheduled tribes and other traditional forest dwellers (Recognition of forest rights) Act 2006 has been enacted. As per this Act and the rules made thereunder, all committees have been formed. The Forest right committee is receiving the claims from the tribal and the other dwellers. At present 129 claims have been received by Forest rights committee. The claims were verified by the GramaSaba and Sub-divisional Level Committee which forwards the claims to the District level committee for approval. At
Plans have been made but no implementation	Fair			
Plans have been made and	Good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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some implementation is in progress.				present the claims are with the District level Committee for approval. Through sustained motivation, all efforts are being made for voluntary relocation of the tribals who are yet to come forward for the relocation. At present the tribals are participating in Forest protection and they are engaged as anti-poaching watchers as well as protection staff. The park authorities feel that, relocation is not a major issue here. The tribal scan leave symbiotically with forest.
Plans have been made and are being actively implemented.	Very good			

5. OUTPUT

5.1 Is adequate information on TR management publicity available?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Official websites and various other websites, Brochures and News letters	Adequate information on the Tiger Reserve is available in the Tamil Nadu Forest department official website (www.forests.tn.nic.in) and the official website of KalakadMundanthurai Tiger Conservation Foundation and Field learning center is www.kmtrflc.org and other websites (projecttiger.nic.in , www.wikipedia.org/wiki/Kalakkad_Mundanthurai_Tiger_Reserve , www.kidsfortigers.org , timesofindia.indiatimes.com , www.bangaloretrips.info/mundanthurai_Tirunelveli). <i>Eco tourism activities and visitor information available in website www.kmtrecotourism.org</i>
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			The following books & brochures have been printed and published <ol style="list-style-type: none"> 1. Local voices of people for conservation in KalakadMundanthurai Tiger Reserve (2014) 2. KalakadMundanthurai Tiger Reserve Souvenir (2014) 3. A Florilegium of Research Studies in KalakadMundanthurai Tiger Reserve (2014) 4. Proceedings of the Consultative Workshop on Participatory Biodiversity in KalakadMundanthurai Tiger Reserve: Lessons learnt and the way forward. (2014) 5. Pamphlet on Birds of KalakadMundanthurai Tiger Reserve (2016) 6. Pamphlet on Endemic plants of KalakadMundanthurai Tiger Reserve (2016) 7. Pamphlet on BCRLIP in Agasthiyarmalai Landscape (2016) 8. Abundance of Large Carnivore and its Prey Species after Removal of Cattle Grazing in Mundanthurai Plateau of Kalakad-Mundanthurai Tiger Reserve, Tamil Nadu, India – research paper published in Journal of Biodiversity & Endangered Species Volume 5, Issue – 1 (2017) 9. Participatory Biodiversity Conservation – A successful model – Poster presentation in the 19th Commonwealth Conference, Forest Research Institute, Dehradun (2017). 10. Poster presentation on “Participatory Biodiversity Conservation- KalakadMundanthurai Tiger Reserve in Agasthiyarmalai Biosphere Reserve” presented in Conference at Bali, Indonesia-2016
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria				
Condition	Cate-gory	(Tick √)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Field conditions and some blogs and twitters video in YouTube, Visitors Book etc.	<p>An Interpretation center is available at Papanasam, which has been improved as to provide more information about the TR to students and other visitors. Trekking, visit to Medicinal plant conservation area (MPCA) at Mundanthurai, experiencing voluminous flow of Tamiraparani and its tributaries of KMTR/River Sanctuary. Visitors are encouraged for trekking and wildlife watch in the Plateau in the permitted routes. It has been planned to expose the students to diversity of butterflies of the Reserve. A museum at Thalayanai near Kalakad at the foothill is open to visitors. Many school and college students visit this museum and enrich their knowledge about the wildlife and their importance. Steps have been taken to improve the eco-tourism facility in the permitted areas through providing appropriate and adequate visitor services and facilities. KalakadMundanthurai Tiger Reserve has got a Website: www.kmtrflc.org. Details of Biodiversity significance of KMTR, successful Eco Development initiatives undertaken to reduce forest dependency through livelihood improvement etc.,are provided. Further, there is a Eco Tourism website for information and online booking of rooms and eco tourism packages has been done. Feedback facility is available. Major feedback is enquiring about accommodation and the visitors express happiness about their visit to the reserve. Eco Tourism website id is: www.kmtrecotourism.com. Safari facilities are not available in KalakadMundanthurai Tiger Reserve and no vehicles are provided to the visitors by the Department. Guided services are allowed only to visiting places where jeepable road networks are available and trekking is allowed only with eco-guides.</p> <p>Rest houses and dormitories are available at Mundanthurai, KalakadThalayanai, Kuthiraivetti, with potable drinking water and good accommodation. Some of these Rest Houses are provided with catering facilities. The exiting level will be strengthened and maintained.</p> <p>Sufficient care is taken for maintenance of sanitation in tourism spots. Polythene bags and liquor bottles are strictly prohibited in the sanctuary area. Periodically Garbage is removed with the help of the volunteers and Vikramasingapuram municipality.</p> <p>Many visitors leave the Tiger Reserve with a satisfied feeling. It is reflected in the visitors notebook maintained at important tourist places such as Mundanthurai, Kalakad, Thalaiyanai, and Kuthiraivetti. Two canteen are maintained by tribals.</p>
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	√		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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5.3 Are research/monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Research reports submitted by various Researchers and institutions	<p>Research: KalakadMundanthurai Tiger Reserveharbours a rich array of floral and faunal diversity with high level of endemism. Its rich biodiversity and the splendid landscape has attracted the attention of many Researchers in the past years. In-house research studiesare carried out by the KalakadMundanthurai Tiger Conservation Foundation and Field Learning Center. Brief note on the in-house research studies conducted are as follows</p> <p>1. Tiger Monitoring: Phase IV Tiger monitoring started in KalakadMundanthurai Tiger Reserve since 2012 and has been carried out every year. The intensive monitoring of source population of Tigers is being carried out through camera traps and the movements of Tigers are monitored. This, along with data collected by patrolling groups, has been found to be a very useful tool in tracking animal presence/movement and taking decisions accordingly. Small carnivore also studied extensively. Eleven species of small carnivores including small cats (Felidae) were found. Totally 3510 trap nights yielded 187 notionally independent photographs of eleven species like small cats (27 including Jungle cat, Leopard cat Rusty spotted cat), Small Indian civet (46 notionally independent photographs) common Palm Civet (01), Brown Palm Civet (76), Stripe-necked mongoose (10), Brown mongoose (09) and Indian Grey Mongoose (08). Smooth coated otter were not camera trapped but it was sighted opportunistically. There were good study done on the road kill, and faunal diversity too. Overall a well research on wildlife and biodiversity in this TR is very good. Internally, they are now doing research an honeybees and an plants, which attract more animals.</p>
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good	✓		

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Tiger Conservation Plan and other plans prepared and submitted already.	<p>There are adequate funds for the effective management of infrastructure/assets in all centrally sponsored and State sponsored schemes.The system of maintenance depends on the kind of resource and requirements of repairs and maintenance. Establishment of KalakadMundanthurai Tiger Conservation Foundation (KMTCF) has been quite helpful in providing funds for maintaining the infrastructures/ assets in addition to the plan and non-plan schemes.</p> <p>Systematicalinventory is made. Based on this inventory all the assets are maintained on a schedule. In the recent past many buildings are renovated and repairs carried out. Artificial water holding structures are maintained to put it back into use. All the office equipment, wireless sets, solar instruments, fences are being maintained systematically. Top of it the boundary wall which</p>
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds	Good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

are inadequate.				was constructed long back and damaged in many places was strengthened and now it is excellently preventing crop raids by the wildlife, especially wild boar, in many places.
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			Infrastructure related documents maintained are Store Register, Rest House Register, Arms and Ammunition Register, Building Register, and Register of vehicles are maintained. However TR authorities require some more funds on maintenance.

6. OUTCOMES

6.1. Are populations of threatened species declining, stable or increasing?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Population of Key threatened/ endangered species are declining	Poor		WII reports, Phase IV Tiger monitoring reports and census reports along with various Research papers presented by the Researchers.	More number of natural regeneration of <i>Cullenia excelsa</i> saplings indicates increasing population of Lion tailed macaque. Similarly, more Tiger, Indian Gaur, Nilgiri Langur and Great Indian Hornbill are observed in lower reaches; compared to previous sightings which may indicate increase and dispersal of these species. When it comes to Tiger, the intensive monitoring of source populations of tigers through camera trapping has revealed that there is a constant increasing trend in the population of tigers. Estimation of population in 2014 2015 2016 Tiger 6 6 10
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good	✓		

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing declining trend	Poor		Tiger conservation plan (Pg.No. 101 - 107) and Tiger monitoring	Wildlife Institute of India has declared that as per the Estimated Tiger Population report for the Country level assessment of Tigers, Co-predators and their prey, 2014 Tiger population is in increasing trend in South India particularly in Tamil Nadu. There is increasing trend in the Tiger Population during the year. Phase IV Tiger monitoring is being carried out every year since 2012. The result of phase-IV monitoring has not yet been published.
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.3 Have the threats to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Tiger conservation plan (Pg.No 200 - 213) and other plans.	Details showing the reduction in the offences in KalakadMundanthurai Tiger Reserve are presented before the committee. Threats like poaching are mostly reduced. Grazing highly minimized. Intelligence gathering from VFCs, conservationist and other stake holders enabled protection of KMTR from major wildlife offences Road kill has come down by 50%.
Some threats to the TR have abated, others continue their presence.	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation.	Very good			

S.N	Threats	Actions to reduce the threats	Effectiveness of the actions to minimize the threats
1.	Fire	<ul style="list-style-type: none"> • Fire watch towers • Engaging fire watchers • Fire prevention brigade in the villages 	<ul style="list-style-type: none"> • Quick response in fire put off operations • Active participation of local people in fire fighting
2.	Natural calamities	<ul style="list-style-type: none"> • Disaster management plan prepared to deal with natural calamities. 	<ul style="list-style-type: none"> • Contact numbers of various agencies are kept for urgent contacts • Trainings provided to VFC members, Anti-poaching staff and forest Officials.
3.	Protection issues	Intelligence gathering	Intelligence gathering from VFCs, conservationist and other stake holders enabled protection of KMTR from major wildlife offences.
4.	Protection issues	Effective perambulation and booking of offences for violation of Acts and Rules	Better appreciation by Conservationist, Stake holders and Village Forest Committee Members.
5.	Invasive exotic weed	Invasive species removal through participatory biodiversity conservation	Habitat restoration.
6.	Pilgrim pressures	<ul style="list-style-type: none"> • Restriction of vehicular traffic in Mundanthurai Plateau during SorimuthuAyyanarKovil festival for 03 days during AadiAmmavasai. • Encouraging gas usage for cooking during SorimuthuAyyanar festival. • Protection of water resources on the Western side of bridge above Karaiyar near SorimuthuAyyanarKovilby regulating movement of people. • Round the clock positioning of staff and monitoring movement of pilgrims 	Due to plying of only Government vehicles to the temple through the Tiger Reserve resulted in 50% reduction of road kills compared to earlier years. This has led to total prevention of fire during the festival. Drastic reduction of water pollution during SorimuthuAyyanar temple festival resulting in availability of drinking water to more than 5 Lakhs of pilgrims. Prevented habitat damage and disturbance to wildlife through unauthorised entry of people.
7.	Eco Tourism	Prevention of plastics, liquor bottles and garbage dumping through multi tier checking at	Habitat conservation in hygiene conditions.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

S.N	Threats	Actions to reduce the threats	Effectiveness of the actions to minimize the threats
		vantage location	
8.	Forest dependency	Awareness creation and community mobilisation	Enhanced level of awareness about the Tiger Reserve, ecological services (water) and role of wildlife, linkage between the livelihood of the people and KalakadMundanthurai Tiger Reserve leading to community mobilisation, support and participation towards KMTR protection.
9.	Forest dependency	Micro credit for forest dependents	Total stoppage of removal of fuel wood, unauthorised tree felling, poaching and encroachment which leads to enhanced participatory biodiversity conservation.
10.	Forest dependency	Periodic interactions with the community (VFC)	Dynamic functioning of Village Forest Committee, a grass root level organisations shouldering the responsibility of conservation.
11.	Forest dependency	Enabling dynamic functioning of Village Forest Committees	Livelihood Improvements, community mobilisation, reduction of forest dependency and enhanced level of participation in conservation.
12.	Forest dependency	Enhanced trust on the forest department, community feeling ownership of the forest and intelligence sharing.	One to One, face to face and common platform interactions with the fringe community.

6.4. Is visitor management appropriate?

Assessment criteria				
Condition	Cate-gory	(Tick √)	Reference document(s)	Remarks
Tourism management is entirely adhoc	Poor		Visitors note books	The comprehensive normative guidelines of the National Tiger Conservation Authority is strictly adhered to while determining the carrying capacity for tourism in KalakadMundanthurai Tiger Reserve which forms part of Tiger Conservation Plan. The tourism area in KMTR has been categorized into different zones and carrying capacity for each zone is calculated accordingly. The three ecotourism packages have been developed. The no. of visitors have increased from 77,064 in 2012-13 to 2,18,260 in 2016-17.
Tourism management and monitoring programmes are described in plan but poorly implemented	Fair			
Tourism management plan is good and well monitored	Good	√		
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists	Very good			

6.5 Are local communities supportive of TR management?

Assessment criteria				
Condition	Cate-gory	(Tick √)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Eco-development records.	<ol style="list-style-type: none"> The people from the Kanitribals and the communities have been engaged as Forest Guards, Forest Watchers, Anti-poaching watchers and Eco Development watchers in terms of protection and up keeping of Eco sanitation. Each VFC has a fire brigade with around five members who have been provided with a fire fighting kit. The members help the Tiger
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good	√		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>Reserve staff during fire occurrences</p> <p>3. The fringe dwellers help in rescue operations of stranded wild animals through the anti-depredation squad.</p> <p>4. The local villagers are participating in Shramadhan operations like fire-line clearing, exotic weed removal, habitat hygiene works etc.</p> <p>5. The local NGOs such as Resent NGO, Arrungel and Koddangi Trust are actively involved.</p>
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7. MEE SCORE CARD

FRAME WORK ELEMENT NO.	FRAME WORK ELEMENT NAME	NO OF CRITERIA (a)	MAXIMUM MARK PER QUESTION (b)	TOTAL a x b	MARKS OBTAINED FOR THE ELEMENT	OVERALL MEE SCORE AND PEPRCENTAGE
1	Context	05	10	50	40	83.59%
2	Planning	07	10	70	62.5	
3	Inputs	05	10	50	37.5	
4	Process	06	10	60	47.5	
5	Outputs	04	10	40	35	
6	Outcomes	05	10	50	45	
Total		32	60	320	267.5	

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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ADDITIONAL CRITERIA ON CLIMATE CHANGE

1. IS THE TIGER RESERVE BEING CONSCIOUSLY MANAGED TO ADOPT TO CLIMATE CHANGE?

Condition	Cate-gory	(Tick ✓)	Explanation	Next steps
There have been no efforts to consider adaptation to climate change in management	Poor		Awareness creation and community mobilisation, trainings and workshops, meetings conducted to sensitize the people, volunteers and Officials to take effective measures for prevention of Global warming and other climate change impacts. Village Forest Committee members have been planting herbs, shrubs and trees in homestead areas and farm lands. Protection of existing greens and soils as Carbon sinks emphasized in the meetings	Protection of existing natural forests and tree growths, planting of indigenous species outside Tiger Reserve and nursery raising and supply of seedlings to volunteers. The Tamnaparni river flowing through the reserve is a perennial river and is a serving as a life time for three districts.
Some initial thought has taken place about likely impact of climate change, but this has yet to translated in to management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predict climate change but this have yet to be translated in to active management.	Good			
Detailed plans have been drawn up about how to adapt management to predict climate change, and these are already being implemented.	Very good			

Awareness is being created to the staff and the researchers towards conscious management to enable adoption to climate change and a good beginning has been made

2. IS THE TIGER RESERVE BEING CONSCIOUSLY MANAGED TO PREVENT CARBON LOSS AND TO ENCOURAGE FURTHER CARBON CAPTURE?

Condition	Cate-gory	(Tick ✓)	Explanation	Next steps
Carbon storage and CO2 capture have not been considered in management of the TR.	Poor		Due to effective protection and soil conservation measures existing resources protected very effectively and carbon loss prevented.	To trap additional carbon trees have been raised in homestead areas and farm lands. This will be upscaled in the coming years.
Carbon storage and CO2 capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR but no conscious measures to increase CO2 capture.	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase CO2 capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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10. Mudumalai Tiger Reserve, Udhagamandalam, Tamil Nadu

1. CONTEXT

1.1 Are the values of the Tiger Reserve well documented, assessed and monitored?

Assessment criteria				
Condition	Category	(Tick) ✓	Reference documents(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Draft TCP (Core) para No: 1.1.2, 1.1.3, 1.3 and 11.4 as well as documents and reports from field authority: Information from discussion and field visit.	Mudumalai Tiger Reserve is part of the larger Western Ghats landscape of the Bandipur-Nagarhole-Mudumalai-Satyamangalam Tiger Reserve (TRs) and Wynad WLS. With an adequate prey base and connectivity, it has optimum ecological conditions for a healthy population of breeding tigers. It is a part of the globally renowned UNESCO World Heritage Site (Western Ghats) and Biosphere Reserve (Nilgiris) and has a relatively restricted interface with land under human use. It is also home to the single largest Asian Elephant population in the world. The vegetation types, as per Champions Seth, 1968 classification are: Southern Tropical dry thorn forest, Southern Tropical Dry Deciduous forest, Southern Tropical moist deciduous forest, Southern Tropical Moist evergreen forest, Moist Bamboo Brakes. The Ecological/ Biological vales of Mudumalai Tiger Reserve (MTR henceforth) have been well identified and laid out as per the TCP. A list of values, under themes- Local, Hydrological, Geographical, Nature education & Interpretation, Historical , National and Global etc. Provided to MEE Team by the Field Authority to the MEE Team.
Values generally identified but not systematically documented, assessed and monitored.	Fair			
Most values systematically documented, assessed and monitored.	Good			
All values systematically identified, assessed and monitored	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.2 All the threats to Tiger Reserve values well documented and assessed?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
Threats not systematically documented or assessed.	Poor		Draft TCP (Core) para No: 6.5 and 7.2.2.1, Where, a Security Plan has been drawn up documenting all threats to the tiger reserve based on assessments and offences registered in the tiger reserve during past three years.	<p>In the "Security Plan"(TCP) threats to the TR values are well documented which is based on the SWOT analysis.</p> <p>offence reports and investigation carried out in the last three years was also made available.</p> <p>Spread of Exotic Invasive needs like Lantana and eupatorium.</p> <p>There are threats of opportunistic cattle grazing in the fringe of the reserve especially in Masinagudi area. Regular monitoring is ensured at the vulnerable border in Masinagudi area. The GPS based patrolling is also being implemented on a daily basis.</p> <p>Disease outbreak is monitored at Forest Veterinary Dispensary. The captive elephants have also not bred in captivity which is a cause of worry and the same need to be investigated especially with housing conditions related to physiological stress.</p> <p>Mushrooming of ecologically incompatible private sectors around MTR.</p> <p>Human induced forest fires and its adverse impact on habitats. 37 fire incidents were reported during last 3 years.</p> <p>There are about 200 private jeeps plying as tourist vehicles and most of them are plying illegally under the guise of promoting tourism in the buffer area. These activities have to be curbed. The impact within the core area is strictly monitored by the way of deploying high way patrol with two jeeps.</p> <p>Extensive Tamil Nadu Electricity Board infrastructure including high tension cables settlements and power generation units.</p> <p>Encroachment of forest lands especially on the Western Boundary (Gudalur Forest Division).</p>
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.3 Is the 'Core Area' of Tiger Reserve free from human and biotic interference?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Draft TCP (Core) Chapter 4&7. Chapter-2 (Buffer) Documents and Reports from Field Director.	The reserve has biotic pressure to some extent due to existence of adjoining villages bordering Nilgiris North division, Gudalur division and 7 revenue settlements within the core area. However, the settlements within the core are getting relocated shortly through voluntary relocation program being implemented through District level committee. Due to intervention by TR the State Government had supplied LPG connections to the tribal settlements in the core area, and the villages in the fringe area which reduce dependence on firewood. The Buffer area though notified is yet to be brought under the unified command of the F.D.
The 'Core Area' has some human and biotic interference.	Fair			
The core area has little human and biotic interference	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

1.4 Has the Tiger Reserve been complied with the four statutory requirements?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Relevant Notification copies, reports and documents were made available to the committee.	Legal delineation and notification of Core and Buffer areas has already been done. During 2007, Govt. of Tamilnadu notified 321 sq.km as core and critical Tiger Habitat. Subsequently, during 2012 notified another 365.16 sq.km as buffer. Tiger Conservation Foundation was constituted on 25 th of March, 2010 Tiger Conservation Plans for Core, Buffer and Corridor area has approved by NTCA. The TCP for next plan period 2017-2020 is being prepared. A State level Steering Committee has been constituted under the Chairmanship of the Chief Minister on 15-02-2008. Similarly, the state Board of Wildlife has also been formed under the Chairmanship of the Chief Minister on 03.03.2017 The board had recently met during May 2017. There was no straying incident of tiger. The other two SOP's relevant to tiger mortality and destruction of tiger / tiger parts has been complied by TR management to some extent.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director.

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor	✓	Observed from the relevant documents given by field Authorities to MEE Team and discussion with them.	The core area of Mudumalai Tiger Reserve only is under the management of Field Director. Whereas the G.O.Ms. No. 200, Environment and Forest Department dated 13.08.2012 is still under the management of Nilgiris North Division of Coimbatore Circle. The buffer area is yet to be transferred to Mudumalai Tiger Reserve.
Management of Core is under Field Director of TR but Buffer is under partial control.	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR.	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR.	Very good			

2. MEE - PLANNING

2.1 Status of Tiger Conservation Plan (TCP)?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
No TCP in place	Poor		Draft TCP was made available to the committee.	The current TCP has expired in 2017 and the new draft TCP is currently under preparation; as per the suggestion of NTCA, such as indicative plan for corridors. The TCP has been prepared for a period of 5 years from 2012-13 to 2016-17. The TCP has not yet been approved. Fire vulnerability map, drainage map, distribution and management of exotic weeds (Lantana) etc. by involving Indian Institute of Science, Bengaluru, Biologist Dr. Siva Ganesh and Dr. Ramakrishnan, Department of Biology, Ooty.
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
Tiger Reserve has a comprehensive and relevant TCP duly approved by NTCA	Very good			

2.2 Does the TR safeguards the threatened biodiversity values?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
TR does not safeguard the threatened biodiversity values	Poor		TCP(Core) para no:7.2.2.1 Smart patrolling Suvadhu analysis for the period from March 2016 to May 2017 was made available to the committee. Vulture research was made	Protection activities:- Anti-poaching operation through 21 camps ; Smart patrolling (observations on illicit activities, mortalities, phenology of vegetation, abundance status of animals) ; Highway patrolling (prevent road kills, disturbance to wildlife, littering); gathering intelligence; have been elaborated under theme plan for protection in TCP with security plan.
TR safeguards a few threatened biodiversity values	Fair			
TR safeguards a large number of threatened biodiversity values	Good	✓		
The TR safeguards all biodiversity values	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

			available to the committee.	Central control room manned by 5 personnel on 24x7 basis is functioning at Theppakeder. Help line number to receive messages radio and mobile connecting provided. A Rapid Response Unit with vehicle is also stationed. Vulture monitoring squad: recording observations of vulture nests, breeding, feeding etc; spreading awareness regarding diclofenac. Security Audit and mock drill are being conducted to the protection staff. EDCs: participatory protection; livelihood options; capacity building were very good.
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2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		District Collectors monthly tour program was made available to the committee.	Frequent meetings are conducted with stakeholders on various issues. Gram Sabha meetings; meetings with local tribal communities. Frequent workshops are being conducted for APW's, Local community has been encouraged to take part in promoting tourism and a restaurant and eco-cottages are currently being fully manned and run by the local tribal society in Theppakadu. District level meetings headed by the District Collector, on inter departmental coordination etc., are being conducted fortnightly. Regulation of traffic at night hours along highways passing through the reserve has been ensured as per notification issued by the District Administration.
Stakeholder participate in some planning.	Fair			
Stakeholder participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in planning processes.	Very good			

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Draft TCP documents and Reports from Field Authorities.	Habitat Management plans have been dealt in Zone planning and Theme plans in chapter-7 of TCP. Management strategy has been given under zone plans for high rainfall areas, low rainfall areas, relocation and vulture conservation Theme plans for protection, tiger monitoring and wildlife health monitoring have also been dealt in. Removal of exotic weeds, especially <i>Lantana</i> , <i>Opuntia</i> , <i>Eupatorium</i> etc. for creating pasture land for prey
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

planned and monitored.				species and elephants has been initiated, although since more than 60% of the park is infested with alien invasive species such as Lantana, , it is a mammoth task at hand. A systematic monitoring and post-eradication measures to curb the growth of Parthenium needs to be undertaken in a scientific manner. water management there are about 153 check dams, 148 small ponds, 10 major percolation ponds and 6 solar energized bore wells are available apart of rivers, streams as natural sources.
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2.5 Does the TR has an effective Protection Strategy (PS) and Security Plan and Security Audit (SA) in Place?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
TR has little or no protection strategy	Poor		TCP (Core) para no:7.2.2.1 Security map is enclosed was made available to the committee.	MTR is naturally protected in the North because of the presence of inter-state Protected Areas such as Bandipur TR and Wayanad WLS. The southern boundary is also contiguous with Nilgiris South Territorial Division and a unified control will help in a better protection strategy. Protection Strategy (PS) is well planned through anti-poaching camps /APW's, by smart patrolling system on specified routes and based on the intelligence gathered. There are 21 Anti poaching camps within the core area. One of the unique protection mechanism in MTR is by anti-poaching operation involving the local tribes. There is a need to augment the staff strength involved in anti-poaching activities, A special Tiger squad having 17 APWS, specially trained by STF has been trained and kept with the R.O , Theppakadu. Since National Highway cuts across the Reserve two highway patrol teams carryout patrolling day & night. Poaching incidents and fire incidents have drastically reduced over the last 3 years. NOC for holding fire arms has been issued every year and monitored. 50 to 60 private persons have so far been issue with NOC.
TR has an adhoc protection strategy	Fair			
TR has a generally relevant protection strategy but is not very effective.	Good			
TR has a comprehensive and very effective protection strategy.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
Human-wildlife conflicts (HEC) are significant but poorly addressed.	Poor		Photographs of elephant proof trenches constructed and maintained in the last three years was made available. A statement of compensation paid in last three years was also made available.	Elephant proof trenches have been dug in vulnerable border areas during last three years. Anti-depredation team have been formed with 20 nos of APW's for driving crop raiding elephants and invasion of snakes in human habitations. This squad also helps in preventing various human wildlife conflicts. Compensation for wildlife mortality and other damages caused are paid immediately. (Within 3 months) 3 human death cases were reported. Loss of life and injury caused by Elephants in the last 10 years in buffer area has been analyzed. 7 people were killed and 6 injured during the period. Elephant Proof Trenches (EPT) has been done over all 40 km. of the periphery to avoid man-animal conflict.
TR has been able to mitigate few human – wildlife conflicts.	Fair			
TR has been able to mitigate many human – wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

2.7 Is the TR integrated into a wider ecological network/landscape following the Principles of the ecosystem approach?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
TR not integrated into a wider network / landscape.	Poor		TCP(Buffer) para No:1.3 TCP (Buffer) para no:7.2.1.2	Landscape approach in the tract of Mudumalai tiger reserve has been well defined in TCP and also implemented in many ways. For example the inter-state coordination for regulation of the traffic along National Highway 212 and the overall protection accorded to the landscape due to the presence of important PAs such as Bandipur TR, Wyanad WLS, Sathyamangalam TR and Mukurthy National Park makes it an excellent habitat for long term conservation of large mammals in the landscape. Major corridors such as Moyar valley corridors and Mudumalai – Mukurthi – Silent valley corridor have been identified and indicative corridor plan has been prepared. It is necessary to notify eco-sensitive zone quickly.
Some limited attempts to integrated the TR into a network / landscape.	Fair			
TR generally quite well integrated into a network / landscape.	Good	✓		
TR is fully integrated into a wider network / landscape	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3. INPUTS

3.1 Are personnel adequate, well organized and deployed with access to adequate? Resources in the Tiger Reserve (TR) ?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Table of existing staff strength was made available to the committee.	The Evaluation team noted with concern the large number of vacancies at the forest frontline level. Basically there is 43% vacancy at F.G. level. The front line staffs are also in higher age group. It is proposed that 10 new beats are to be added with the existing 18 beats by bifurcation. Similarly, the existing 8 sections have been proposed to be reorganized to 10 sections for better management. There is a Forest Veterinary Dispensary located at Thekappadu and managed by a VAS, posted to Field Director.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allotted towards achievement of specific TR management objectives.	Very good			

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Inventory for each category of resource was made available to the committee.	Material infrastructure found to be well maintained and adequate. An inventory on availability of following resources was made available. 1. Buildings 2. Vehicles 3. Camera traps (120 nos) 4. Fire arms 5. Wireless equipments 6. Tranquilizing guns (2 nos.) Required registers are being maintained and monitored for effective utility as also keeping these resources in fit condition. Building maintenance funds and other maintenance funds are not adequate.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated, towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.3 Are financial resources other than those of the state linked to priority actions and are Funds adequate released timely and utilized?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized,	Poor		A statement showing the periodicity of sanction and release by Central / State Governments on financial assistance in various schemes for last three years was made available to the committee.	Generally financial resources are adequate and fully utilized. In general when sanctions by the NTCA are delayed Tiger Foundation plays a major role in bridging the gap between the sanctions and actual release. Project Elephant funding stopped from 2015-16 onwards. Fund release and utilization position is satisfactory, but release against sanctioned amount is less.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

3.4 Are financial resources from the state linked to priority action and funds adequate? Timely released and utilized for the management of Tiger Reserve?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		A statement showing the periodicity of sanction and release by the State Government on financial assistance in various schemes for last three years were made available to the committee.	Generally financial resources are adequate and fully utilized as far as the following State sponsored schemes are concerned. 1. 13 th Finance Commission 2. Fodder Resources 3. Augmentation of Water to Wildlife 4. Asian Elephant Depredation. 5. Elephant Proof trench
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very god			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.5 What level of resources is provided by NGOs?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Evidence documents along with photographs of involvement of NGOs were made available to the committee.	<p>NGO's are being involved in various activities. Resources/ services /supports provided by these NGOs include:</p> <p>1)The major equipments donated by the NGO named WCT, Mumbai are vehicles (6 jeeps uniforms / kits to Anti poaching camps/ one Rapid response unit ;</p> <p>2) Capacity building programs (about 520 beneficiaries) for livelihood options run by NGO named Aide at action.</p> <p>3) Free health checkup for forest subordinates (1camp involving 300 beneficiaries) & strengthening health centre under taken by the NGO named WWF.</p> <p>4) Cleaning of major roads from litter thrown by the visitors is carried out by NGO named NWEA. Ooty</p> <p>5) Livelihood options to the tribal communities through Moyal EDC by manufacturing lantana furniture are supported by the NGO named Shola trust, Gudalur from 2012.</p>
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good	✓		

4. PROCESS

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Draft TCP para 8.4 and 8.5 list of training programmes provided by the Field Authority.	<p>An Advanced Wildlife Management Training Centre was established during 2015-16 wherein various trainings are being conducted to front line staff and Anti poaching Watchers of this tiger reserve.</p> <p>An Asst. Conservator of Forests is in charge of this centre and organizing trainings with the guidance of Field Director / Deputy Director.</p>
' Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained staff is posted in the TR.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.2 Is the TR staff management performance linked to achievement of management Objectives?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Draft and other documents were made available.	There is no direct linkage between staff management performance and their promotion. Protection is strengthened through various strategies to achieve the objective and the staff has been well motivated through rewards for their outstanding performance in the APW's camp.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management and does it show in making a difference?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
Little or no public participation in TR management.	Poor		Photographs of the activity and relevant documents were made available to the committee.	Public participation is ensured through following input mechanisms. Volunteers (Students) have been used in population estimation operation / phase-IV tiger monitoring conducted by TR management. Local Advisory Committee has been formed for monitoring eco-tourism activities as per NTCA guidelines.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

4.4 Is there a responsive system for handling complaints and comments about TR management?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		A statement register showing the suggestion, action taken was made available to the committee.	Suggestion registers are being maintained at the Reception Center, Theppakadu. Special monitoring / supervision by Field Director and Deputy Director including spot inspections are in place. Further in view of introduction of online booking facilities complaints received are redressed almost immediately to improve the tourism facility. In many occasions appreciations have also been received.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically lodged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.5 Does TR management addresses the livelihood issues of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
No livelihood issues are addressed by TR management.	Poor			<p>Following are initiatives taken by the TR management.</p> <p>Women are extensively participating in the various activities in TR such as weed clearance , fire line clearing , running eco shops, EDC/SHG, vocational trainings, and other employments and other activities.</p> <p>Banyan restaurant is being run by local tribal community to upgrade their livelihood status in Theppakadu.</p> <p>In a view to improve hygiene, a washing machine has been put in place which is utilized for washing rest house upkeep clothes, bed sheets, etc by two persons from local community due to which their livelihood has improved.</p>
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/Critical Tiger Habitat (CTH)?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
No planning and no implementation	Poor		The committee visited the relocation site and seen the houses were constructed.	The relocation site already has been prepared including the construction of housing and road by the civil administration the villagers are also cultivating this season in the relocation site; but the people insisted that they should be given 'Patta' of the cultivated land before relocation.
Plans have been made but no implementation	Fair	✓		
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented / No human habitation in the CTH	Very good			

5. OUTPUT

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
Little or no information on TR management publicly available,	Poor		Copy of recent News Letter and were made available to the committee.	Websites have been launched for Mudumalai Tiger Reserve and as well as Tiger conservation Foundation. (www.mudumalaitigerreserve.com)
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		Brochures are available at reception center for visitors. Information on other aspects of MTR such as biosphere reserve and World heritage site needs to be highlighted.
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
Visitor services and facilities do not exist.	Poor		List of rest houses and bedding facilities were made available. Committee also visited few facilities.	Following facilities are available for the visitors which are appropriate. 1) An innovative and interactive interpretation center is in place at Theppakadu elephant camp. Audio – Visual facilities and manned by skilled staff (Eco guides) for explaining the exhibits is in place. 3) There are 29 suits room and 15 dormitories available for the visitors. Drinking water and toilet facilities are available in the reception centre and Rest houses 4) There are 6 nos. of mini buses, 1no. Bolero camper and 1 no. Of Gypsy available for undertaking safari rides within the core area. 5) Elephant safari is being provided to the visitors depending upon the weather conditions for about 45 minutes. 6) Visit to elephant camp at Theppakadu to witness feeding of elephants. 7) Garbage disposal bins have been provided at the Reception center and at rest houses. 8) Eco-toilets and rest room facilities have been provided near Reception center. 9) Wheel chairs have been provided for physically impaired persons. 10) Women reservation policy was not earlier available. 11) Tourism covers 68 sq.km i.e. within 20% limit. 12) 6 eco guides are recruited from Tribal people of the villages / hamlets inside the core area.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor's satisfaction.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.3 Are research/monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		TCP (Core) para no:8 & 10.4. Documents and Reports made available to the committee.	MTR is the 1 st tiger reserve in the country to fully implement all the protocols of Phase-IV monitoring right from the year 2012. Due to this implementation the TR is unique in maintaining the data base of all tigers photographed through camera traps from the year 2012. Mudumalai TR is one of the well studied protected areas in India, Several research organizations and Academic institutions like Bombay Natural History Society (BNHS) Indian Institute of Science (IISc) & Wildlife Institute of India (WII) have carried out research in T.R. The TCP has taken into account all the research findings which were evaluated and incorporated accordingly in TCP Interim research report on "Molecular approach to analyse the habitat usage by elephants and tigers in MTR and its adjoining areas" by the wildlife Biology wing of Govt. Arts college, Ooty IISc Bangalore has a research station at Madhumalai.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good			
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course correction as relevant.	Very good	✓		

5.4 Is there Systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Extract of schedule of operation as found in draft TCP. TCP (core) para 13.4.	Following registers are being maintained for systematic maintenance of assets / infrastructure. 8) Register of Buildings. 9) Register of motor vehicles 10) Register of Roads 11) Register of wells and tanks 12) Register of check dams 13) Register of stores 14) Register of assets Funds for maintenance of these assets is sourced from – 4) Non-plan 5) Tiger Foundation 6) Plan schemes
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6. OUTCOMES

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Phase-IV monitoring report and scientific references were made available to the committee.	All the population of threatened and endangered species is either increasing or stable in the reserve with effective anti-poaching operation and habitat protection only wild dog population is declining. The results are based on Phase IV protocols being implemented since 2012. Following are the list of population trends found in few species. Vulture population – The total sighting of vulture recorded in MTR is 281 (Dr. Ramkrishnan, 2016) Asian Elephants- The population of Asian elephants and these sex ration has been showing increasing trend in the reserve. The elephant density was estimated 2.1 sq.km using line transect in the year 1995, the present density of elephants is 4.54 sq.km (Phase Iv monitoring, 2016) Leopard The population of leopard also was showing the increasing trend. The density / 100 sq.km was 17.4 with 31 individual were captured (WII, report 2010). The current density is 27.7/ 100 sq.km with 89 individuals was observed (Phase IV monitoring report, 2016). Gaur The population density is 5.27/sq.km (Phase IV report, 2016). The gaur biomass is 2371.5 Kg/Sq Km (Phase Iv After monsoon 2016)
Some threatened/ endangered species populations declining, some are increasing, and most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened / endangered species either increasing or stable.	Very good			

6.2 Is the population of the tigers showing a declining, stable or increasing trend?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
Population of tiger is showing a declining trend	Poor		Results of Phase-IV monitoring report was made available to the committee.	The Tiger population in Mudumalai Tiger Reserve has been showing increasing trend since 2000. It is also evident from the results of Phase IV tiger monitoring conducted in the year 2016. The density of Tiger is 8.88/100 sq.km in 2016-17, compared with 2014 estimation of 8.04/100 sq.km (Jhala etal 2014)
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place.	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good	✓		
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.3 Have the threats to the TR being reduced/minimized? Or is there an increase?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		TCP(Core) para no:7.2.2.1 Discussion with project staff and field visit of the committee.	Threats to the TR being reduced due to various activities implemented by the TR management as follows. 1. Undertaking "Smart Patrolling" 2. By implementing the protocols of Phase-IV monitoring. 3. Rapid Response vehicle and wireless connectivity. 4. Cattle grazing reduced. 5. Water scarcity due to failure of monsoon was effectively managed without much problem. 6. Due to regulation of Vehicular traffic and speed barriers road kills has been reduced. Note: Spread of exotic weeds like Lantana, eupatorium, opuntia and parthenium etc. are in increasing trend and a cause of concern in the park for the long term.
Some threats to the TR abated, others continue their presence.	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed.	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation.	Very good			

6.4 Is visitor management appropriate?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
Tourism management is entirely adhoc	Poor		TCP (Core) chapter-11 Copy of Govt. order constituting LAC (Local Advisory Committee)	Visitor management is found appropriate. Guidelines issued by NTCA on tourism have been strictly adhered to. LAC has been constituted and which is mandated with inspecting the facilities in the TR and submit report with suggestions for improvement. The rest houses have well maintained.
Tourism management and monitoring programmes are described in pla but poorly implemented	Fair			
Tourism management plan is good and well monitored	Good	✓		
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.5 Are the local communities supportive of TR management?

Assessment criteria				
Condition	Category	(Tick)	Reference documents(s)	Remarks
Local communities are hostile.	Poor		Photographs of the activities are were made available to the committee. Discussion was held with EDC members during field visit.	All local communities, especially tribal communities, are supportive of TR management in protection. There are 18 EDC's formed in the fringe villages (except one), where, Eco development initiatives undertaken by the TR management has secured good will from these communities.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

7. MEE Score Card

Frame work element Number	Frame work element Name	Number of criteria (a)	Maximum mark per question (b)	Total (a x b)	Marks obtained for the element	Overall MEE score and %
1	Context	05	10	50	35	75.78 %
2	Planning	07	10	70	55	
3	Inputs	05	10	50	40	
4	Process	06	10	60	40	
5	Outputs	04	10	40	35	
6	Outcome	05	10	50	37.5	
	Total	31		320	242.5	

'Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 31 Assessment Criteria including 'normalization'.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		Studies to assess the Impact of Climate change on the PA were suggested in the previous MEE reports. The study needs urgent attention especially in the context of the spread of invasive alien species and whether this is due to the change in microclimatic conditions that has resulted in such a dire situation.	<ul style="list-style-type: none"> It is advisable to study the impact of climate change on TR and take appropriate steps to address this issue
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		Previous MEE reports have suggested that studies may be taken to assess the overall carbon storage in the PA.	<ul style="list-style-type: none"> It is advisable to study the impact of climate change on TR and take appropriate steps to address this issue Lantana removal, mulching and not burning, fire preventions, use of LPG, are some measures being taken for addressing climate issues
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair	✓		
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

11. Satyamangalam Tiger Reserve, Tamilnadu

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Management Plan of Sathyamangalam Wildlife Sanctuary.	TCP for Satyamangalam T.R. is prepared from 2018-19 to 2022-23. The TCP has been submitted to PCCF (WL), but not yet got the approval of NTCA. Following values of Sathyamangalam Tiger Reserve have been identified, categorized and documented as follows; a) Landscape Value b) Ecological & Biodiversity Value c) Interface & Social Value d) Religious and Cultural Value.
Values generally identified but not systematically assessed and monitored.	Fair		Tiger Conservation Plan Chapter Para 1.3	
Most values systematically identified, assessed and monitored.	Good	✓	Landscape Map	
All values systematically identified, assessed and monitored.	Very good		WTI Study Report 2010; Scat Analysis & 2013 Syn Elephant Census 2017 Report on Elephant Corridors; WTI	

A. Landscape value;

- i. Sathyamangalam Tiger Reserve is located in the strategic confluence region of Western and Eastern Ghats and is a part of bigger tiger landscape and also a part of Nilgiri Biosphere Reserve. Value of this landscape is well documented in more than 45 research articles for study of biodiversity related to Moyar Valley, Nilgiri-Eastern Ghats landscape, Sathyamangalam by WWF, WTI, NCF & many individual researchers.
- ii. It is clear that, this area holds a significant population of tiger, and it is also contiguous to other Tiger conservation landscapes like BRT, Bandipur, Mudumalai and Nagarhole. It has a substantial and diverse prey base. About 60 nos. of tigers, 800 elephants (Rated as endangered by IUCN) and 111 leopard (Vulnerable) and 4 species of vulture are found in the reserve.
- iii. This Tiger Reserve area has the single largest continuous landscape existing in Tamil Nadu and has largest R.F called Guthiyalathur RF with an area of 78,730 ha. It comprises of 9% of the total forest area.
- iv. It has the following important Elephant corridor/ connecting paths identified in the landscape.
 - a. Chamarajnagar – Talamalai via Punjur
 - b. Chamarajnagar – Talamalai via Muddahalli
 - c. Moyar valley Eastern Ghats between Tengumarhada&Kallampalayam.
 - d. Sujjalkuttai and Bannari
 - e. Kallampalayam and Uppupallam
 - f. Moyar and Avarahalla

B. Ecological & Biodiversity value;

- i. The Tiger reserve is known for rich biodiversity. 13% of Indian mammal diversity is found in Sathyamangalam. About 40 species of larger mammals, over 225 species of birds, 30 species of reptiles, 85 species of butterflies, 15 species of amphibians, and 10 species of fishes are recorded in the region. *For the same rich biodiversity, the area is part of India's 1st heritage "Nilgiri Biosphere Reserve" which was declared as early as, during Sep 1986 for its rich biodiversity and conservation value.*
- ii. At present, based on the camera trap records, this region is being abode for about 56 individual tigers (2015-16).
- iii. The region is also a part of Nilgiri-Eastern Ghats Elephant Reserve and is an abode to about 700 to 800 Elephants as per **Synchronised Elephant Census** conducted during 2017.
- iv. The region has 5 forest types which include Riparian Forests along Moyar River, the lifeline and it is the region for high biodiversity and endemism. The Tiger Reserve is a store house of floral genetic diversity.
- v. Provides water security to erode district of Tamilnadu and Chamrajnagar district of Karnataka. The reserve is a part of watershed of river Moyar and river Bhawani which drains into lower Bhawani dam.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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- vi. The region is known for unique habitat for Black buck, Four Horned Antelope, Ruddy Mongoose, to name a few. Orange Mahseer fish, , four species of Vulture population is found in Moyar River valley viz Indian Long billed, Oriental White backed and Red headed Vulture.

C. Interface & Social value;

- i. STR is a unique Tiger Reserve where people co-exist with Tigers. There are 9 tribal settlements and 18 revenue (tribal) villages inside the Tiger Reserve which has about 1705 families put together. They are basically forest dependent tribals.

D. Religious & Cultural value;

- i. Bigger temples which have got right of way into the temples inside R.F do cause disturbance periodically to the wildlife because of heavy rush of pilgrims. We were told that they have developed a religious corridor where the people are allowed to visit only for two days in a week to there temples.
- ii. The tribal communities of Sholagas, Oorlais and Irulaswho, co-exist with the forests surrounding their habitations in an integrated manner in terms of their social customs and cultures. They have their local festivities, tribal dances, while food habits are almost same. Staple food is ragi.

1.2 Are the threats to T.R values well documented and assessed?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Management Plan of Sathyamangalam Wildlife Sanctuary.	<p>Yes, all threats of the Tiger Reserve are identified and well documented along with data and current status. The threats in the landscape/T.R, is dealt individually in detail in the Tiger Conservation Plan (3.4) and in Security Plan Chapter 7.2.</p> <p>Same has been dealt in para 7.5, of Indicative Plan of STR too.</p> <p>There has been a study on "Human Dimensions of Forest Degradation in the Sathyamangalam Landscape" by Asian Nature Conservation Foundation(ANCF), Centre for Advanced Spatial and Environmental research (CASER) in co-ordination with District Forest Officer, Sathyamangalam, which has an assessment of forest disturbances in the study and from the same, the threats have been documented and assessed. The same will be included in TCP too.</p> <p><u>The threats identified and enlisted in above reference documents are given as below:</u></p> <p>i) Threat from invasive species ii) Water security iii) Religious threat iv) Protection threat</p>
Threats generally identified but not systematically assessed.	Fair		Para 7.5, Indicative Plan for Sathyamangalam Tiger Reserve.	
Most threats systematically identified and assessed.	Good		Human Dimensions of Forest Degradation in the Sathyamangalam Landscape.	
All threats systematically identified and assessed.	Very good	✓	Tiger Conservation Plan (Chapter 3.4 & Chapter 7.2 , Security Plan.	

***This assessment should be based on number, nature and extent of threats**

- Wildlife poaching(,prey poaching)
- Habitat degradation due to invasive alien species.
- Anthropogenic pressure(fire wood, grazing and other resources)
- Human wildlife conflict
- Linear intrusions
- Religious tourism and solid waste
- Forest fire
- Back water cultivation in Bhavanisagar dam back water spread area
- Human activities in enclosures

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.3 Is the 'Core Area' of T.R free from human and biotic interference?

Assessment criteria*

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		G.O Ms.No.41, E&F, FR 5 Dept dated 15.03.2013 declaration of Tiger Reserve. TCP Chapter(5.3)	<p>All the tribal settlements have been legally excluded from the Tiger Reserve while notifying the reserve.</p> <p>However, out of total 79433 ha of core area, presence of 7 tribal settlements (191ha) and 11 revenue villages (12638 ha), inside the core area as separate enclave comes out to be 0.16% which makes minimum human and biotic interference to the management in the current scenario.</p> <p>Fuel wood collection has reduced drastically due to supply of LPG connection from STR through different projects to the enclave and fringe villages.</p> <p>Grazing is one issue which has been predominant in certain pockets in the T.R which is now highly reduced because of sale & replacement of old cattle by high yielding variety cows supplied by Govt along with seed supply for fodder with subsidized sprinkler irrigation facility.</p> <p>Individual Rights have been settled for 90% of the inhabitants and hence no scope for further encroachment.</p> <p>There are very less incidences of man induced fire and other anthropogenic disturbances to forests here. The ethnic tribes of the region are Irulas, Sholagars, Ooralis and Kurumbas and their livelihood was mostly depends on forest resources, especially NTFF.</p>
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence of human settlements / villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction / livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

1.4 Has the TR complied with the four statutory* requirements (SR) along with Tripartite MoU and three Standard Operation Procedures (SOP)?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four statutory requirements met	Poor		<p>1. GO. (Ms) No. 41, Env.and Forests (FR V) Dept. dt. 15-03-2013.</p> <p>2. GO (Ms.) No. 182, Env. and Forests (FR 5) Dept. dt. 11-11-2013.</p> <p>3. Tripartite G.O (Ms.) No. 182, Env. and Forests (FR 5) Dept. dt. 11-11-2013.</p>	<p>Yes, the T.R has complied with all 4 Statutory Requirements.</p> <p>1.Core and Buffer areas of Tiger reserve has been properly delineated and legally notified vide Govt Order. (Ms) No. 41, Environment of Forests (FR V) Dept. dt. 15-03-2013. The area of core area is 79349.331 Ha. and buffer area is 61491.21 Ha. for declaration of Eco-sensitive zone, already the proposal has been sent to PCF(WL).</p> <p>2. Sathyamangalam Tiger Reserve Foundation was formed as per Govt. Order (Ms.) No. 182, Environment and Forests (FR 5) Dept. dt. 11-11-2013.</p> <p>3. The indicative plan for Sathyamangalam Tiger Reserve has been sent to NTCA and comments have been received vide Ref. No.</p>
One of the four statutory requirements met	Fair			
Two/three of the four statutory requirements met	Good	✓		
All four statutory requirements met	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
				F. No. 1-23/2013-NTCA, dated 20-11.2013. Based on this, revised Tiger Conservation Plan as per suggestion by CWLW has been prepared and submitted to Chief Wildlife Warden. 4.For Constitution of State Level Steering Committee, revised proposal has been sent by CCF vide C.No.7296/2017/D dated 25.09.2017 and same has been sent to Government vide Principal Chief Conservator of Forests and Chief Wildlife Warden Ref. No.WL5/18259/2013 and order from Government is awaited. SoP has been followed for all Tiger Deaths and Tripartite MoU has been complied with.

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister**

1.5: Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		G.O. (MS) No. 41.Env & Forests (FRV) Deptt. Dated 15.03.2013.	Core and Buffer areas of Tiger Reserve has been properly delineated and legally notified vide Govt. order started abide. Area of core-793.49 sq.km Area of Buffer – 614.91 sq.km. The entire Satyamangalam sanctuary was declared as a Tiger Reserve excluding 9 tribal settlement and critical tiger habitat 15.03.2013. A good thing is that both core and buffer area is under the unified control of CCF&FD.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good	✓		
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very good			

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Indicative Plan approval Ref. No. F. No. 1-23/2013-NTCA, dt. 20.11.2013 Tiger Conservation Plan soft copy & submission covering letter.	Based on remarks by CWLW, Tiger Conservation Plan for STR has been prepared and re-submitted to Chief Wildlife Warden, Chennai vide CCF & Field Director Reference C.No. D/2342/2014 dated 19.01.2018 The "Indicative Plan" for Sathyamangalam Tiger Reserve has been sent to NTCA, which has been received back with comments vide Ref. No. F. No. 1-23/2013-NTCA, dtd. 20-11.2013. And, Management plan for Sathyamangalam
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				WLS (Same area as of T.R) exists up to 2020 along with approved Indicative Plan for the T.R). Individual views of stake holders taken into account while preparing TCP.
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2.2 Does the TR safeguards the threatened biodiversity values?

Condition	Category	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		1. Plan Schemes proposed for conservation activities in the reserve.	The Ecological and Biodiversity values are listed in Statement of Significance in para 1.3 of TCP. Yes, the threatened bio diversity values are definitely well safeguarded and all conservation activities and project works are aimed at safeguarding the same.
TR safeguards a few threatened biodiversity values.	Fair		1. Indicative Plan for Sathyamangalam Tiger Reserve	The strategies & planning to tackle these issues are also listed in the Plan and are as follows; TO REDUCE RESOURCE DEPENDENCY;
TR safeguards a large number of threatened biodiversity values.	Good		2. Annexure containing various studies conducted in Sathyaman-galam enclosed.	1. Though legally, settlements are not part of STR, still the 9 + 18 tribal settlements present inside STR as enclaves are brought inside the network of 102 Village Forest Committees and 11 newly constituted Project Tiger EDC's to reduce the resource dependency. Individual and group loans are given to enhance the socio economic conditions of the tribals and to provide them alternate employment. Line departments have been pulled into the community development activities of the villages and resource mobilization.
TR safeguards all threatened biodiversity values.	Very good	✓	3. TCP Chapter 5.3, 5.5, 8.2, 9.4	TO STRENGTHEN PROTECTION 2. Anti-poaching network has been strengthened by engaging 150 APW's from enclave and fringe villages and making them stay in 15 A.P camps at strategic locations along with providing ration, uniform, and other staying facilities. Regular monitoring, check post control, closing of forest roads, intelligence collection is done, establishment of WICCU ; Wildlife Intelligence and Crime Control Unit has helped in detection of offences, has kept an eye on previous offenders and has developed excellent intelligence network. Regular fire watchers, eco watchers are also engaged from fringe villages. Awareness training have been conducted to Temple Priests on 12.05.2014 to comply with tiger reserve standards, no plastics and regulations. INVASIVE ALIEN SPECIES & MONITORING OF ENDANGERED SPECIES; During current year, 150 ha of invasive alien species are being removed. Removal is being done based on the prior study

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Condition	Category	(Tick ✓)	Reference document(s)	Remarks
				<p>on status of lantana invasion in upper hills. Separate study is being conducted to know the “status and distribution of critical, endangered and data deficient taxa” in Sathyamangalam Tiger Reserve by SACON.</p> <p>3. Vulture conservation and population monitoring is one of the priority activities in the T.R with periodical studies and research. Arulagam Trust is co-ordinating the activity with the Dept.</p> <p>INCREASING TIGER POPULATION IN HUMAN DOMINATED LANDSCAPE</p> <p>4. Currently, Tiger population is stable as per the reports by WWF, India who are doing the Phase IV monitoring currently and there is corridor connectivity in the contiguous landscape. No bottlenecks noted. Hence, there will be no conflicts as foreseen in next few years.</p> <p>5. Road kills on NH 209 have drastically come down due to series of measures adopted. Barricades, speed breakers and rumble strips combination have worked out well along the animal crossings and the accidents on these spots after laying down barricades have been nil. Proceedings have been issued through District Collector for restricting 14 wheeler trucks during night hours on NH209. 2 wheeler movements have been restricted by the Forest Dept during night hours to avoid disturbance to wildlife during crossing.</p> <p>6. Biannual vaccination is carried out to the cattle of all fringe villages twice in a year during March & September which is co-ordinated by STR at range level. On an avg, about 40000 cattle are vaccinated against FMD and other epidemics.</p> <p>WATER & HOSTILE WEATHER</p> <p>7. Since the TR faces hostile weather for almost 5-6 months, water management planned accordingly.</p> <p>A separate study on “Developing Water Management Strategy and Action Plan” was done by Care Earth and accordingly no. of check dams, Percolation ponds, desilting have been concentrated.</p>

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Photographs and JFMC meeting documents enclosed.	Even before and from the time of constitution of T.R, there have been <u>regular interactions</u> , meetings with many stake holder groups for creating sensitization about STR like; i.Tribal settlement villagers & youth, ii.Transport Sector people, iii.Temple Priests in STR iv. All APW's and other daily wage youth from forest fringe villages v. All VFC/EDC/ESD's in T.R.vi. Women, especially tribal women vii. All NGO's, media, farmers group, etc A total of 12EDC's and 101VFC's are functioning in fringe villages. These JFMC villages welfare has always been cause for the department. These people regularly attend the meetings with Dept, District Administration and line departments in the name of JFMC meetings and their grievances are attended to. These JFMC's have been part of all the forest department activities and planning invariably.
	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

2.4 Are habitat management programmes systematically planned, relevant & monitored & contribute effectively to Tiger & other endangered species conservation?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		1. Plan Schemes proposed for T.R 2. Management Plan of Sathyamangalam Wildlife Sanctuary	<i>Works related to water Augmentation, Removal of invasive Species, Creation of Fodder Resources, Fire Management, Development of Water Management Strategies, and Biodiversity studies, Protection of riverine habitats have been carried out based on Indicative plan and proposed TCP.</i> Major components of conservation works proposal as well as execution of works have been under; a. Forest Protection b. Habitat Management (water, fodder, fire, etc) c. Eco Development (in all VFC/EDC/ESD villages) d. HRD (skill up-gradation, recruitment, conflict management, awareness, etc) MONITORING Monitoring of all habitat management programmes is done by officers at all level, through GIS
Limited planning and monitoring programmes are in place for habitat management.	Fair		3. Indicative Plan for Sathyamangalam Tiger Reserve soft copy enclosed.	
Habitat management programmes are generally planned and monitored.	Good		4. Tiger Conservation Plan , Zone plan Chapter(7.2.1.1)	
Habitat management programmes are thoroughly planned and monitored.	Very Good	✓	5. Invasive Spp and water management plan. 6. Photographs	

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>database, by NGO's, VFC's, regular review meetings, feed-back by surrounding villagers, staff, etc.</p> <p>Monitoring of utility of programmes to wildlife is done through camera traps, monitoring survey and during regular patrol.</p>
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This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place?

2.5 Does the TR has an effective protection strategy (PS)* and Security Plan and Security Audit (SA) in place?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no protection strategy.	Poor		TCP Chapter 7.2.2.1 Security Plan & Chapter 10 Protection strategy related Mapping Patrol Maps Protection Amenities details Photographs	<p>All Protection activities are planned based on the Strategic Approach listed in Sathyamangalam Management Plan (Page 124) and TCP Chapter 7.2.2.1 & Chapter 10.</p> <p>It is planned broadly with following approach;</p> <ol style="list-style-type: none"> Strengthening of existing 25 Anti-Poaching Camps and new camps formation. Strengthening of check posts, High way patrol Strengthening communication network, Fire Management Planned field patrolling and Surveillance Intelligence gathering, Interstate co-ordination Capacity building for staff Co-ordination with line agencies/departments for better protection <p>Other than this, there is an internal intelligence collection and protection aid forum set up by the Field Director called WICCU; Wildlife Intelligence & Crime Control Unit helping in offence detection intelligence and punishment.</p> <p>There is also Forest Protection & Vigilance Squad functioning here under the control of CCF, Vigilance.</p> <p>Vehicles planned and proposed for all 11 ranges have been provided which strengthens mobility for protection. Weapons are present for all beats and additional for FRO's and DFO.</p> <p>Increased APW strength up to 150 planned for protection has been sanctioned by the Govt, who are placed at vulnerable locations, a substitute power in the current staff crisis scenario. A poaching map showing location of poaching and animal</p>
TR has an adhoc protection strategy.	Fair			
TR has a generally relevant protection strategy but is not very effective.	Good	✓		
TR has a comprehensive and very effective protection strategy.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				poached for last five years has been done and accordingly, they have relocated the anti-poaching camps.
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This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities.

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Condition	Category	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		1) Compensation G.O 2. Conflict Mapping 3)TCP (Chapter 5.4) 4.Compensation details and data	The major conflict in the TR region is that of Human-Elephant conflict and high conflict areas are Bhavanisagar followed by Talawady and Kadambur. Human Elephant Conflict has been discussed in Tiger Conservation Plan along with strategies & approach. The mitigation measures followed are as follows; a. 150 kms of EPT formed on priority since past 10 years. b. Anti-depredation Squad formed in Bhavanisagar Range and Talawady range with local villagers and volunteers with wages and fuel for vehicle. c. Trained staff for driving strayed animals back. d. Regular Awareness programmes to villagers, farmers, school students. e. Tranquilizing equipment, rescue equipments, trapping cage and medicines have been procured for emergency. f. Adequate compensation for affected people given as early as possible in accordance with the eligibility prescribed by the Government. For the year 2016-17, an amount of 70.00 lakhs has been paid as compensation to crop damage, human injury, death, live-stock damage, etc. All claims disposed off by 3 months in good co-ordination with revenue and agri dept. g. Trip Alarm System & Elephant Early Warning Systems have been installed at Bhavanisagar and Talavadi Range Area. h. Waterholes desilting, water trough repair, planting of fodder seedlings, etc have been done effectively. i. Compensation amount for death and permanent injury is Rs. 4.0 lakhs and for crop damage it is Rs.25,000 / Acre. There are 8 to 12 deaths during last 5 years. All these measures have helped in mitigation of conflict.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		1. Management Plan of Sathyamangalam Wildlife Sanctuary 2. Indicative Plan for Sathyamangalam Tiger Reserve. 3. Landscape Map Enclosed.	The Sathyamangalam TR is the largest wildlife sanctuary in the state. It is a part of bigger tiger landscape and is also a part of Nilgiri Biosphere Reserve and Nilgiri-Eastern Ghat Elephant Reserve. It is well established fact that, this area holds a significant population of tiger, and it is in contiguous to other Tiger Reserves in the adjoining areas like BRT, Bandipur, Mudumalai, Nagarhole, etc The significance of such strategic location is; a. This Tiger Reserve is highly critical to accommodate the spill over population from BRT Tiger Reserve, on the Northern side of the core area. A length of 43 kms is shared along the core area of BRT Tiger Reserve. b. The core area shares 14kms along the boundary with the Bandipur T.R on the Western side. c. On the Southern side, the core area shares its boundary with Nilgiri North division (Buffer area of MTR) for a distance of 40 kms. Buffer boundary with the Erode and Cauvery WLS on East & North; 32 kms & 24 kms This Tiger Reserve is acting as a bridge between two major landscapes i.e. Western Ghats and Eastern Ghats ensures diversified prey base and a vast area for tigers for genetic exchange and long time survival. The Major portion i.e. 1,12,707.84 Ha of Area in the Tiger Reserve falls within Nilgiri Biosphere Reserve. The T.R is also a part of Nilgiri-Eastern Ghats Elephant Reserve region. It is home to about 800-1000 elephants and consists of 7 important elephant corridors which are preserved even to this day but for few cutting roads in some.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good	✓		

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned / implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Copy of Vacancy position enclosed.	<p>With the formation of STR, Govt has created an additional new Hasanur division, 4 new ranges & supporting establishment for STR, which is adequate for the management of T.R along with 150 APW's sanctioned.</p> <p>But, about 40-60% vacant exists in the cadre of forest guards and forest watchers; mostly frontline staff. Out of 106 sanctioned strength of F.G, 66 are vacant. Similarly out of 76 sanctioned posts of forest watchers, 54 are vacant.</p> <p>To overcome the vacancy crisis, following measures have been taken in STR which has been a relief to certain extent.</p> <p>1. There has been an interim recruitment for filling up 25% of the vacancy of Forest Reserve Watchers, which has been done to fill-up vacancies.</p> <p>There has also been recruitment of 13 Forest Guards which has added strength to the staffing pattern and age group.</p> <p>Out of 80 new recruit FRO's 2 have been posted to STR.</p> <p>The State Government has announced to fill up the all vacancies in the Frontline staff by constituting the Uniform Recruitment Board. 150APW's who have been engaged under Project Tiger has been a great strength to protection.</p>
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair		Tribal Reserve Watcher Recruitment New Forester batch posting	
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓	TCP Chapter 8.5 HRD Plan	
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range , Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		All Annexures enclosed.	<p>Yes, Resources have been adequate, well organized and managed.</p> <p>1. All 11 Ranges including special ranges have Vehicles and office infrastructure. Few foresters also have been allotted motor cycles. Vehicle position is sufficient.</p> <p>2. Quarters are available for most of the existing field staff and are maintained annually. Quarters and family hostel are being added every year for newly formed beats.</p> <p>3. There is Infrastructure for newly created ranges, Hasanur Division office and</p>
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>Residence.</p> <p>4. One mobile veterinary unit, headed by a veterinary officer exclusively for TR is there. Rescue equipments are also there.</p> <p>5. Arms and ammunitions GPS, etc are present at beat and camp level and few foresters and all range officers too have weapon in their custody. DFO's too have a weapon for protection. Ammunitions for all the weapons are sufficient.</p>
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Assessment: These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State, linked to priority actions and are funds adequate, released timely and utilized?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Target and achievement details for the year 2015-16, 2016-17 and as on date progress on 2017-18 enclosed.	Yes. All the CSS funds of Rs.684.00 lakhs during the year 2016-17 and Rs.455.35 lakhs till date during 2017-18 under schemes like Niligiri Biosphere Reserve Management, Project Tiger, Project Elephant were properly utilized for protection, habitat management, wildlife monitoring and infrastructure improvement on priority. There has been no surrender of any funds received, though 2 nd instalment release has been a problem under Project Tiger due to administrative delay. They require further assistance from NTCA on lantana eradication.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds and their mitigation.

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		State funds. Target and achievement details for the year 2015-16, 2016-17 and 2017-18 till date enclosed.	Yes. Other than CSS, few state schemes sanctioned are also completely utilized for priority actions viz Creation of Fodder Resources, Augmentation of Water Resources, Eco development funds under TBGP, Asian elephant Depredation and Mitigation Measures, SADP and other schemes. The total funds of Rs.244.20 lakhs
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally	Good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
funds released with not much delay and mostly utilized.				during the year 2016-17)and Rs.278.00 lakhs received from State Government in current year are used on priority basis in the management of T.R. There has been no surrender of any funds any year. The TR receive funds from State Govt. on (a) Special Area Development Programme (b) Nilgiri Biosphere Reserve Programme and Tribal sub plan.
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓		

Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with funds and their mitigation.

3.5 What level of resources are provided by NGOs?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Publications and Reports of NGOs related to their works in TRs Photographs & presentation of their activities by different NGOs.	The following NGOs are actively involved in various activities of Tiger Reserve management. 1. WWF, India (Tiger Population estimation and community development and awareness) 2. WTI (Elephant Corridor conservation and restoration along landscape) 3. OSAI (Community Awareness) 4. Arulagam (Vulture Conservation) 5. Keystone (Awareness and Eco Development) 6. Nature Geo Society (Awareness, School education) 7. NGARDS (Community Development and micro credit guidance) Apart from the above activities, WTI has given bag packs, torches, Jackets to APW's WWF have provided 4 Patrol bikes to Foresters, 3 Bolero Camper vehicles for water supply to camps and water troughs, Winter jackets to APW's, APC utility materials to camps, torches and bags to APW's etc. Apart from these core activities, all these NGO's have been regularly associated with skill development and capacity building activities of staff, VFC's, students awareness, etc as explained by them through presentations to the MEE team.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		List of all Trainings enclosed as annexure. HRD plan given in TCP	All the 3 IFS officers in T.R have been trained in IGNFA, Dehradun with a separate Wild life Management Module co-ordinated by W.I.I, Chandrabani but not a full time course by WII. Other than that, all the trainings conducted by NTCA have been regularly attended by DFO, s and Field Director. The Forest Range Officers and Foresters are trained at Tamil Nadu Forest Academy with a course on wildlife management. Two FRO;s have been trained in Wildlife management short module course conducted by WII in the eyar 2015-16. Forest Guards and Forest Watchers have also been trained at Forest Training College, Vaigai Dam on various basic aspects of wildlife management. STF also trains them periodically in Weapon Training and Jungle Combat modules. Also, they are trained by STF, WCCB, WTI, WWF, OSAI and other NGO's on various field ecology and management aspects. All the staff in the divisions would have got trained at least once in these modules at respective academies or by the NGO's.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories.

4.2 Is TR staff management performance linked to achievement of management objectives?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor			Management performance of most staff is directly linked to achievement of relevant management objectives. Capacity building and training programme are regularly conducted for all field staff and it has an effect on understanding the management objectives of the T.R. Regular review meetings, field inspections, weekly diaries, fortnightly diaries are there to monitor the performances. If there is a shortfall found, same is being corrected through different approaches. If there is no improvement, then initiation of disciplinary proceedings is done which has a bearing on their promotions. This year Rs. 75000/- has been given as reward to different categories of staff.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.3 Is there effective public participation in TR management and does it show in making a difference?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Reports, Press Clips, photos, videos, etc.,	Participation of public is ensured in most of the P.A management and conservation activities. Public are involved, briefed in prior of any new initiatives, regulations in the T.R. They are part of PRA planning in EDC/ VFC activities, various trainings, interactions, eco-awareness programmes, etc. They are also part of labour, work force, beneficiaries, management groups under JFMC's in the T.R. Even before declaration of T.R, this area was a Sanctuary with more than 100 EDC/VFC's has made its name at National Level for its activities through VFC, EDC and Federation of VFC's and their NTFP. Honorary Wildlife wardens are chosen from Naturalists . Other experts are also associated in TR management. Prof. Kandaswamy, a honorary wildlife warden, every year conducts Nature education for school students. Every month, there is VFC meeting at range level where-in there is sensitization of STR initiatives and issues for few minutes. * There has been meetings & interactions with Temple Priests inside STR on 12.05.2013 in which priests agreed for regulations by which temple entry in core was limited to only 2 days a week with entry fee for vehicles. * There have also been sensitization meeting of all forest fringe village representatives along with VFC presidents and members every 6 months at the level of DFO and Field Director. Women from 15 settlement and revenue village have volunteered to use LPG and more than 1000 connections have been provided on subsidy basis from T.R which has drawn them away from fuel wood. Apart from these interactions, Public, as volunteers have been part of Tiger and Prey Base Estimation exercise in the T.R, various awareness activities, etc
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>Village Volunteers have been part of Elephant Anti Depredation Squad, Fire management team, etc</p> <p>During 2017, two programmes have seen launched in the T.R; Vannapoornieco tourism safari and nature education programme by involving local communities at range level & Pulikutties (Children of Tiger) evening tuitions for tribal students by utilizing learned youth of same village.</p>
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4.4 Is there a responsive system for handling complaints and comments about TR management?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Petition register kept in DFO office and Range Office, copy enclosed.	<p>Village level Grievances and complaints are enquired periodically during public interactions, VFC/EDC meetings.</p> <p>Petitions received from public regarding issues related to park management are entered in office registers, confidentially and discretely enquired by Assistant Conservator of Forests, Forest Protection Squad and WICCU team.</p> <p>Grievances in the form of petitions and personal requests too are attended to immediately.</p> <p>Also, there is an online grievance addressal system which is enabled now through STR website; www.str.tn.org Suggestion registers and visitor feedback registers are also maintained at forest Rest Houses and range offices which will be reviewed by DFO in monthly meetings and action will be taken on it.</p>
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good	✓		

4.5 Does TR management addresses the livelihood issues of resource dependent communities, especially of women?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor			<p>Sathyamangalam Tiger Reserve is known for JFMC activity through VFCs.</p> <p>There are a total of 102 VFC's and newly formed 12 EDC's in the division. Seed money of Rs.5 lakh was given to all EDCs for loans to income generation activities and micro credit which is available even now in the account and is being utilized for eco development and revolving fund loans.</p> <p>From TAP I, II VFC revolving fund, an amount of 1,15,20000.00 has been</p>
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
dependent communities especially of women are addressed effectively by TR managers.				disbursed to 192 SHG's of women through VFC's in Sathyamangalam for income generation and agriculture allied activities. They have been trained by TRIFED, Avinashilingam Trust, SUDAR for various income generation. LPG has been major focus with women group. More than 500 LPG connections have been given post T.R declaration. Women labour force are also target group of many conservation activities like fire-line, de-silting, lantana removal, eco watchers, etc. With lady foresters entry into the STR, there are also thoughts on engaging lady APW's, which will be 1 st of its kind in T.R.

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the core areas/ Critical Tiger Habitat (CTH)?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor			No. As all the 9 tribal settlement has been excluded in the tiger Reserve notification the relocation from core zone/ CTH will not arise. In case, if the management demands relocation, Conferring rights under act is pre-requisite for relocation process for which, all 9 tribal settlements in T.R, survey demarcation has been completed and individual rights has been issued under FRA. According to DFO, Hasanur, only 18 families of an interior village, have expressed their willingness for voluntary relocation.
Plans have been made but no implementation	Fair	✓		
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented	Very good			

Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any.

5. Output

5.1 Is adequate information on TR management publicly available?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Meeting during formation of STR	Yes.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair		Interactions with stakeholders.	There have always been pamphlets, stickers, posters, banners printed and distributed for STR. Annual calenders are also published. Regular news paper articles on issues, meetings are in print and in visual media.
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓	Press releases Brouchers, Pamplets, coffee table books, Website, etc.,	Media always has focus on STR and keep covering lot of positive news and happenings in STR. STR website is also developed (www.str_tn.org) for better publicity. All the important activities of management are regularly updated and made known to public. There is also STR feeder site for social media which is a link to the website.
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			Currently, due to Vannapoorni ecotourism, the website is most visited online page among T.R's.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.2 Are visitor services and facilities appropriate and adequate?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		List of FRH and other places of accommodation enclosed.	<p>Yes, STR is just 4 year old T.R and from Nov 2017, weekend eco-tourism and nature education programme has been started which is a huge success.</p> <p>Visitor strength for the weekend safari programme is more than 3000 in 2 months on weekends in only 7 routes.</p> <p>Though existing 9 forest rest houses are utilized for officers on inspection by various departments, and also for visitors.</p> <p>Further infrastructure and visitor facilities are yet to be developed as per the requirement and plan of eco tourism if the rest house bookings are made available all days to public through online booking system.</p> <p>Few FRH's carry heritage tag with them for being very old rest houses constructed during British period.</p> <p>If there is increase in number of visitors, they are lead to few good certified resorts in Hasanur and Germalam which are linked for vacation flow of tourists. A separate Eco Tourism Proposal including holistic plan for developing the tourism in STR is under preparation.</p> <p>All ranges have view points, watch towers, routes to showcase the landscape and biodiversity richness including wild animals.</p> <p>There is also a basic interpretation centre at Hasanur and is being improved upon by Key stone foundation.</p> <p>During current year, one indoor interpretation centre is developed in Tiger model in hasanur through Project Tiger sanction and one museum is being developed in hasanur by SADP sanction.</p> <p>Theme parks are being developed in Bannari and Karachikorai.</p> <p>There are 3 eco shops functioning in Hasanur, Karachikorai and Bannari run by STR through EDC's involving local people. Since it is a new TR ecotourism facilities are under process of development.</p>
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

*Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self-guided services in the field, visitor feedback on the quality of wilderness experience.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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5.3 Are research / monitoring related trends systematically evaluated and routinely reported and used to improve management?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		List of Research Papers Books etc., enclosed. As annexure.	Research, education and awareness is always encouraged in this protected area. STR has always been hub of lot of studies, research activities and experiments. The very reason behind rediscovery of Tigers has been study by WTI & CCMB and even now Phase IV monitoring of Tiger population is being done in partnership with WWF, India. There have been 24 ongoing Research Programmes and studies currently through various scientists, research scholars and organisations and institutions. They are an (i)Python (ii)Elephant DNA (iii) Studies of Fungi. Also ISRO is doing a study on carbon sequestration. Apart from Tiger Monitoring, Department is also undertaking study on important Shola-evergreen landscape, grasses of landscape, Blackbucks, Striped hyena, Orange finned Mahseer, Vulture, Studies by officers, various organizations and individual researchers on different topics like those mentioned in annexure has been documented very well and they are definitely used for improving the management of the T.R. Lot of published materials are there. The results will definitely be utilized and is part of the Tiger Conservation Plan and the conservation programmes.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

*Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc.

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure / assets?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		List of Buildings, Vehicles, etc enclosed as annexure. Building maintenance fund	Every year, an amount of 20-30 lakhs is received for building maintenance apart from about 10.00 lakhs under Project Tiger. Current year too, there is a total of 45 lakhs for maintenance of assets.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the	Good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

basis for maintenance schedule but funds are inadequate.			details enclosed	Vehicles maintenance funds are sufficient as per park authorities.
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threatened/ endangered species especially tiger populations declining.	Poor		WTI Tiger Population monitoring report of 2010 and further Camera trapping figures. Phase IV monitoring report for density estimation of Prey species. Vulture monitoring study along Moyar for nesting.	A study on "Status and Distribution of Endangered and Threatened Taxa" is being conducted by SACON in which no decline is shown in any endangered flora, which indicates a stable trend . The region is known for the unique habitat for endangered Black buck, Four Horned Antelope, Ruddy Mongoose, White Backed Vultures, etc which shows increasing trend as per wildlife census conducted by the Department and Vulture report by NGO Arulagam. Tiger, leopard and elephant population are increasing. Prey population are also increasing.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good	✓		

This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Soft Copy of WTI study is enclosed. Phase IV camera trapping trend. TCP Chapter9	There is definitely an increase in the Tiger Population. The timeline goes as below. 2005; Evidences of return of Tigers 2006; Direct Sightings 2010; WTI & CCMB: Preliminary population estimation of Tigers through Genetic Analysis of Scat; 18 Tigers Confirmed. 2012-13; Confirmed 17 individuals. 2014; Tiger Population Estimation; 54 Tigers confirmed. 2016; Core; 55 individuals & buffer 05. Hence, the Tiger Population is stable and has a gradual increasing trend which will be confirmed after phase iv monitoring in 2018.
Population of tiger is stable	Fair			
Population of tiger is showing an increasing trend	Good			
Population of tiger has significantly increased	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced	Poor			<p>All the threats are being regulated and minimized. With EDC and VFC's activities, micro credit, LPG, IGA assistance, forest dependency of people is reduced.</p> <p>Invasive spp like Prosopis, Lantana, etc. removed under various schemes have reduced the exotic cover.</p> <p>Public entry into T.R temples highly regulated. All Temple priests too sensitized through training.</p> <p>All forest roads closed and no disturbance. 2 wheeler entry and 14 wheeler Taurus truck entry regulated during night hours on NH 209. Road kill minimised. Grazing pressure is highly reduced</p> <p>Only 2 tiger poaching cases due to external false luring and accidental trap of tiger. A.P. Camps and engaging 150 APW's have reduced no. of offences and there has been no poaching incidences of mega fauna. Through engagement of fire watchers, fire threat have been minimized. Hence, all the threats attended to is minimized or reduced.</p>
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are rigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

6.5 Are the expectations of visitors* generally met or exceeded?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Expectations of visitors generally not met	Poor		Visitors note on the eco tourism	<p>Currently, Visitors expectation is met wrt to stay and exceeded with overwhelming response wrt visit to P.A since no such options were available so far.</p> <p>With the beginning of Vannapoorni nature education and safari programme for students and general public, there is an overwhelming response.</p> <p>More than 3400 visitors have visited T.R in 2 months of weekend safaris and all have given a positive satisfactory note on the chance of public to visit the forest and wildlife.</p> <p>There are very few visitors who book the FRH facilities due to availability of certified dormitories and resorts and hence their expectations are met with respect to visit and stay.</p> <p>A separate Eco Tourism Infrastructure Development Proposal has been submitted to Govt which may be sanctioned.</p>
Expectations of many visitors are met	Fair			
Expectations of most visitors are met	Good	✓		
Expectations of all most all visitors are met	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.5 Are local communities supportive of TR management?

Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			<p>During the process of formation of T.R, few villagers inside the tiger reserve had apprehensions that they will be relocated after the formation of tiger reserve and so there were lot of opposition.</p> <p>After many interactions, meetings, JFMC activities in the previous years, and continued efforts to sensitize all village representatives from different forest fringe villages and tribal settlements about formation of tiger reserve, the orientation of the people has changed.</p> <p>NGO's and elected representatives and few village headmen have also played a major role in such change.</p> <p>Entry point activities of EDC like improving drinking water facilities, maintenance of roads, conferring of FRA individual rights in all settlements, education admission loans, individual micro credit, SHG's loans, evening tuitions to tribal children, infrastructure development and maintenance, recruitments, job fair have all improved the relations with people and people are supportive of the T.R management with hopes of socio economic developments in their villages. Community monitoring improves the habitat.</p> <p>Suggestions and requests are over flowing for which department is planned to react positively.</p>
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

*There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

MEE Score Card

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	5	10	50	37.5	
2.	Planning	7	10	70	57.5	
3.	Inputs	5	10	50	40	
4.	Process	6	10	60	47.5	79.68%
5.	Outputs	4	10	40	30	
6.	Outcomes	5	10	50	42.5	
	Total			320	255	

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

**1. Additional Criteria on Climate Change:
Is the TR being consciously managed to adapt to climate change?**

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		Note from TCP attached below.	<p>1. Sathyamangalam Tiger Reserve acts as a massive carbon sink aiding carbon sequestration and climate mitigation. As per the FSI report the volume of standing biomass in Tamil Nadu forest is roughly 123 million cu. m spread over 22,877 sq. km. An estimated 5377 tons of biomass, is thus available in the forests of Tamil Nadu per sq. km. Applying the same yardstick, the carbon stock of STR is roughly estimated as 7.5 million tones (equivalent to 3.7 million tons of carbon).</p> <p>2. Sathyamangalam Tiger Reserve provides variety of eco-system services. The recent study of Eco-system services by Indian Institute of Forest Management in 6 Tiger Reserves concluded that the value of flow benefits ranges from Rs. 50,000 to Rs. 1,90,000 per ha per year. Considering a mean value Rs. 1,20,000 per ha/year and applying to the area of Sathyamangalam Tiger Reserve, the annual value of flow benefits from Sathyamangalam Tiger Reserve works out to be Rs. 1,680 crores.</p>
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good	✓		
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change:

Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		<p>Four important points have been considered with respect to carbon loss and to encourage further carbon capture.</p> <p>1.No deforestation 2.Afforestation 3.Increasing growth rate of existing forests. 4.Urban forestry. * There has been no green felling in the TR region and this avoids carbon loss. * Afforestation has been carried out under various schemes like Raising Fodder resources, NAP, Massive Tree Planting, etc and this will definitely encourage further carbon capture. * Habitat management measures like removal of invasive alien species will lead to native species regeneration and increase growth rate of existing species, which in-turn will encourage carbon capture.</p>	<p>1. During last year, there has been planting of more than 45000 saplings under MTP, NAP & raising fodder saplings scheme as gap planting and in areas where there was removal of invasive alien species. All these activities will increase carbon capture and will be continued in current year too. Also, there has been urban & private planting activities carried out in fringe village lands, which also add on. The quantification of such salient features will be included in TCP.</p>
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good	✓		
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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CLUSTER

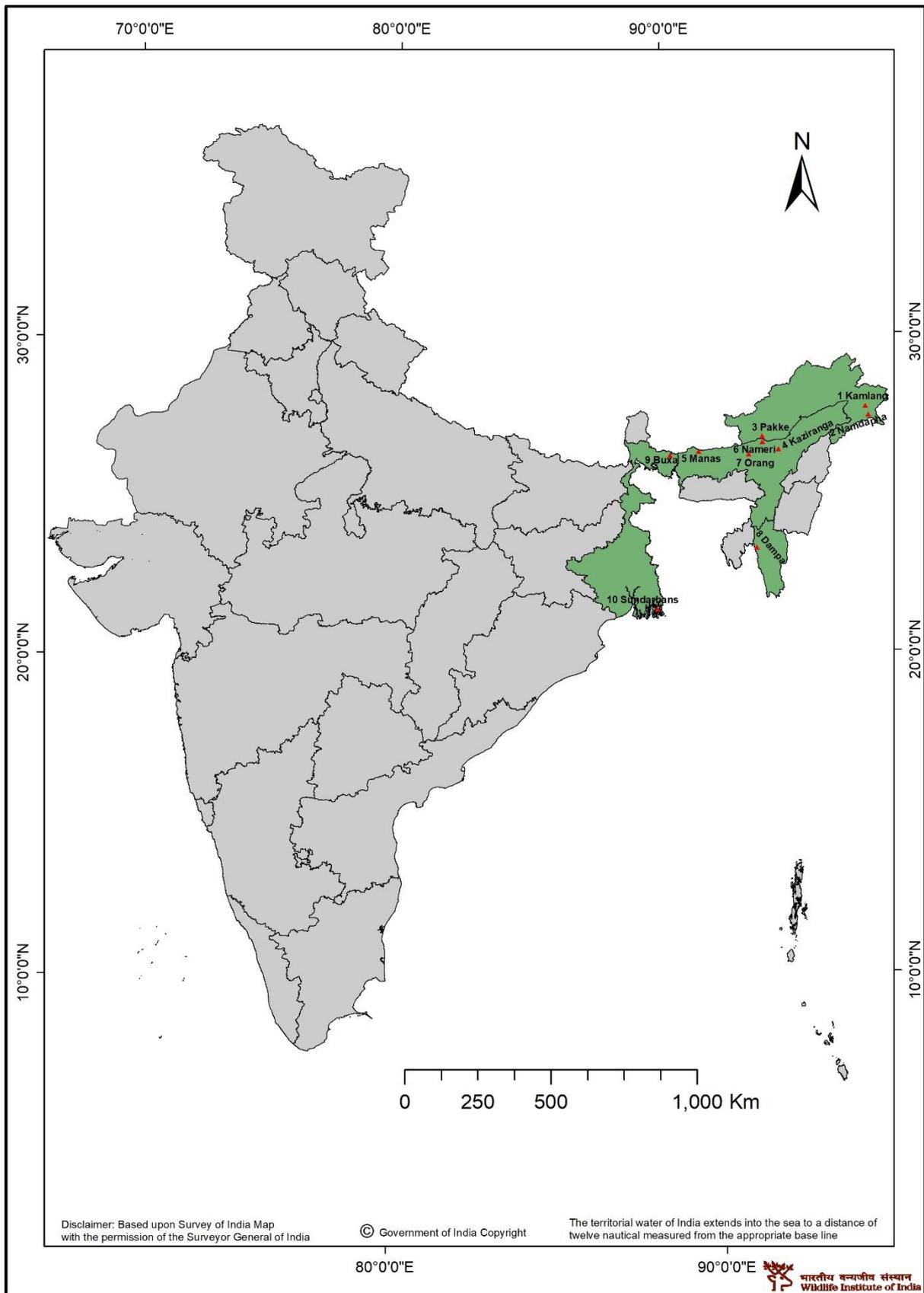
FIVE

List of Tiger Reserves included in Cluster Five

1. Kamlang Tiger Reserve, Arunachal Pradesh	750
2. Namdapha Tiger Reserve, Arunachal Pradesh	772
3. Pakke Tiger Reserve, Arunachal Pradesh	790
4. Kaziranga Tiger Reserve, Assam	811
5. Manas Tiger Reserve, Assam	844
6. Nameri Tiger Reserve, Assam	866
7. Orang Tiger Reserve, Assam	885
8. Dampa Tiger Reserve, Mizoram	905
9. Buxa Tiger Reserve, West Bengal	923
10. Sundarbans Tiger Reserve, West Bengal	970

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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1. Kamlang Tiger Reserve, Arunachal Pradesh

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Indicative TCP from 2017-18 to 2026-27. Para 1.3. Statement of Significance:	<p>The following is concluded from the statement of significance recorded in indicative TCP. Kamlang Tiger Reserve in combination with Namdapha Tiger Reserve in its south and adjoining reserve forests of Arunachal Pradesh constitutes a large landscape for the conservation of tiger, co-predators, ungulates, endemic primates and many species of charismatic birds like hornbills and white-winged wood ducks.</p> <p>The Tiger Reserve is a rich natural forest with diverse floral and faunal species. It is a habitat of many rare and endangered mammals, birds, fish, amphibians and reptiles.</p> <p>Although there is no detailed survey, but it is a general perception based on indirect signs that there is movement of tigers, common leopards, and clouded leopards in the area. The area is said to be having many species of small cats and other small mammals. The area is also believed to have very good population of hoollock gibbons.</p> <p>The Tiger Reserve is an inviolate area, as there is no permanent human settlement inside it. However, repeated attempt to encroach the area vacated by old settlers in the vicinity of Glow lake is a matter of concern.</p> <p>The reserve is catchment area of Kamlang, Lang and Lati rivers, which are tributaries of mighty Lohit river.</p> <p>The tiger reserve has wide altitudinal gradient, ranging from 500 m to 4,500 m, having vegetation from tropical wet semi-evergreen and evergreen vegetation to the alpine forests.</p> <p>In addition to the unexplored forest of enchanting beauty and dense evergreen vegetation of more than 150 important timber tree species and thickly grown undergrowth of various plant species with many valuable medicinal plants and many perennial natural water bodies make the area an ideal abode for different aquatic and avifaunal species. Overall the area has great wildlife, natural and bequest value.</p> <p>These values are not systematically assessed and monitored.</p>
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Para 3.4 Assessment of Threats of Indicative TCP from 2017-18 to 2026-27.	<p>The tiger reserve is surrounded by forests all around. It has Namdapha tiger reserve in the south, unclassified state forest in the east and Kamlang reserved forest in the north and west. There are steep gradients and dense forests in and around the Tiger Reserve. Threat to the Tiger Reserve emanates from the human settlements at Wakro and several other villages in southern and south western fringes of the Tiger Reserve. Carrying of firearms and hunting of small games is a common practice among the tribal communities of Arunachal Pradesh. Main threat to wildlife exists in the form of poaching by unscrupulous people who engage in this illegal activity with country made firearms, bows, arrows, snares, nets and traditional traps. The destruction of habitat is although not prevalent much inside the protected area, but extraction of cane along the border of Kamlang R.F. under Namsai Forest Division is threat to the protection of wildlife in long term. It is these set of people, who pose threat to the prey-base of the tiger and co-predators. There is need for creating sustained awareness campaign to dissuade the tribal groups from hunting wildlife.</p> <p>Grazing by domestic animals like cow, goat, and sheep do not take place inside the TR as the villages are located far away from the TR. The nearest village, namely Towam, is about 3 Km from the boundary. However, there are 'Mithuns' which graze even inside the TR and may be a potential threat of disease to wild herbivores, although there have been no report of outbreak of FMD and other cattle diseases within or around the sanctuary in the recent years.</p> <p>As there are no jeep able roads inside Tiger Reserve, walking is the only option for the forest staff to move inside for surveillance of the Park. MEE team also could not visit many areas inside core of the Tiger Reserve. The only visit the team could undertake was the walking from Sina Brai to Champai nala. No sign of wild animals was noticed during the walk, which gives an indication that the ungulate density is low. Several herds of domestic Mithun belonging to the persons of Wakro and Towam is found to be moving inside the reserve. The Lisu hunters residing in Namdapha and fairly active there also</p>
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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				<p>cross over to Kamlang and inflict damage to wild animals. Since more than 95% area of the TR is not accessible through road and bridges and consequently there is no presence of staff in these areas, hunters go un-checked and TR management remains unaware.</p> <p>Illegal fishing at Glow lake is also threat for TR management.</p> <p>Thus the threats have not been correctly identified but not systematically assessed.</p>
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***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference* ?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Discussion with DFO and verification of Google map.	<p>Presently there is no human settlement in the core area. The families at Wakro and Towam indulge in illegal activities in the Tiger reserve. Further villages located on the south-western boundary namely Kamja, Kare, Tilai manki and Tihun also pose threat to the Reserve. Communities residing in these villages migrated from Glow lake area. They revisit occasionally their old settlements at Tihun and Kalai on some occasions and also for inspecting their mithuns, which were left by them inside the forests permanently.</p> <p>In fact, prior to 1989 at the time of notifying the sanctuary only Tihun and Kalai settlements was in existence. Subsequently the families were shifted to the above mentioned villages on south western fringe of the sanctuary. These families and some more families are claiming rights in those old settlements in the vicinity of Glow lake. Every now and then the families occupy the old settlements and TR management evicts them. The latest Google map shows that the settlements are once again occupied.</p>
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.4 Has the TR complied with the four Statutory Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Discussion of DFO	The management has entered into the tripartite agreement with state government and NTCA. The Steering Committee meeting has not taken place as yet. The legal delineation of core has taken place. The establishment of Tiger Foundation has not taken place. There has not been any occasion to apply any SOP during TR management.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		Verification of records and discussion with DFO Kamlang	Yes Core and buffer are carved out from the same sanctuary area. Both the areas were already in the control of DFO WL Kamlang and they continue to be in his control even after tiger reserve notification.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Discussion with DFO	Indicative TCP is in place. The sanctuary is notified as TR recently and preparation of TCP is in progress.
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Indicative TCP Discussion with DFO Field Visit by MEE team	TR is part of large landscape but there are illegal activities of illicit hunting and poaching and illegal wildlife trade taking place in the tiger reserve. All parts of Tiger Reserve are not covered by road network. As a result staff of the reserve is unable to keep surveillance everywhere. Thus the biodiversity conservation is not fully guaranteed.
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor	✓	Discussion with DFO	TR management has to gear up and constitute EDCs and also utilize the services of NGOs for the better involvements of these groups and solicit their help in conservation. As of now stakeholders are not taken on board and thus they have no participation.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Discussion with DFO and verification of records.	TR management has been taking up habitat management works like weed eradication, burning of grassland, fodder plantation etc in very limited patches. Road network is very poor and staff takes up patrolling on foot in hardly 5% areas of the TR. 10 hectare of fodder plantation have been grown each in 2014-15 and 2015-16. No fodder plantation is done in 2016-17. These fodder plantations were done after evicting the encroachers from the areas under cultivation. The management is also in the process of checking illegal opium cultivation in TR. Even after eviction, some of them have recently made attempts to re-encroach forest land and grow opium.
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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2.5 Does the TR has an effective Protection Strategy (PS)+ and Security Plan and Security Audit(SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Chapter 10 para 10.3 to 10.5 of indicative TCP	<p>As TR is newly notified, the security plan is not yet in place also no security audit has been done so far.</p> <p>Indicative TCP provides the following protection strategies;</p> <p>The terrain of the core area of Kamlang TR is very challenging for the movement of patrolling teams due to inaccessibility for rugged terrain. Kamlang TR authority has proposed anti-poaching camps in strategic locations of core and buffer areas. In order to overcome the challenges of protection, the following strategies are proposed:</p> <p>(1) There are only two existing anti-poaching camps at present in the Kamlang TR. Nine anti-poaching camps are proposed in different strategic locations inside the tiger reserve.</p> <p>(2) A patrolling network is proposed to be created as per the requirement of security assessment inside the tiger reserve to carryout regular patrolling for wildlife protection activities.</p> <p>(3) The importance of physical connectivity as well as the communication between the anti-poaching camps cannot be overemphasized. For any successful anti-poaching operation, the key inputs are intelligence, ways and means for secure communication and the ability to move quickly to the place of action.</p> <p>(4) Wireless stations and wireless handset network are proposed to be established to develop a better communication network between anti-poaching camps and headquarter.</p> <p>(5) Forest fire is not a problem in Kamlang TR as a major proportion of the forest type is Tropical Evergreen and Semi-evergreen. The highest temperature goes up to 36° C in summer. However, accumulated dry combustible leaf litter is present during winter. This may cause some fire incidences especially in March-April in the foothills and grasslands due to NTFP collectors who use fires.</p> <p>(6) Members of local NGO and Self-Help Groups (SHGs) are proposed to be engaged on payment of 50% of the fines imposed and/or on payment of honorarium for reporting any illegal activities.</p> <p>(7) Informers are also proposed to be engaged from among the local people to collect intelligence information to carryout anti-poaching operations.</p> <p>The most important component which is missing the proposal in Indicative TCP is to lay out some fresh roads for easy accessibility of proposed anti-poaching camps and other forest areas to keep surveillance in all corners of the TR. In addition some bridle path to be established for patrolling on foot.</p>
TR has an adhoc PS and SA.	Fair	✓		
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

**This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Verification of records.	There is hardly any conflict case between human and wild animals recorded in and around the TR. However, during the year 2012-13 and 2014-15, wild elephants during migration have damaged crops, house properties etc in villages namely Kathan and Manti. A compensation of nearly Rs 5000 also paid to them.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Verification of records	The TR has huge geographical advantage and is very well integrated in wider ecological network. The landscape starting from Huqwang wildlife sanctuary of Myanmar, Namdapha TR of Changlang district and RFs of Namsai forest division, USF of Anjaw district are in east and south east. Similarly Mehao WLS of lower Dibang district and Dibang WLS of upper Dibang district as well as RFs of Lohit forest division are in west of TR. The management prescriptions of PAs and RFs are required to be integrated in the TCP under preparation. This TCP should also take into account the larger connectivity and device clear mechanisms for coordination and cooperation. All PAs and territorial divisions have to coordinate to evolve strategies to put down the illicit poaching of wild animals and preventing wildlife trade by organized gang.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize land use around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Verification of records	Presently TR has only one Range located at the division headquarter at Wakro. The management has proposed to establish two more ranges at Hawaii and Thumba. Because of poor road connectivity, all corners of the TR are not kept under surveillance. Unless some more roads and bridle paths are formed the illicit poaching of wild animals cannot be checked. Consequently even strength of the staff will have to be increased. Presently 55% of existing staff strength are kept vacant, which may also be detrimental for checking illicit activities. The table showing the vacancies is shown in the table below this Para.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

**This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)*

Division Office:

Sl. No.	Designation	Strength	Present Position	Remarks
1.	D.F.O	1	1	1
2.	H.A	1	1	-
3	UDC	2	1	1 vacant
4	LDC	2	1	1 vacant
5	Store keeper	1	-	1 vacant
6	Driver	2	-	2 vacant
7	Peon	2	-	2 vacant
8	Chowkidar	1	1	-
9	Dak runner	1	1	-
Total		13	6	7

Range Staff:

Sl. No.	Designation	Strength	Present Position	Remarks
1.	R.F.O	1	1	-
2.	Dy. FR	2	-	2 vacant
3.	Forester	8	2	6 vacant
4.	Forest Guard	10	8	2 vacant
5	Game watcher	10	2	8 vacant
6.	Handy man	1	1	-
Total		32	14	18

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor	✓	Verification of records	Presently only two out of six vehicles are in good conditions. The management feels that the remaining four requires replacement. They also feel that seven more APC camps are required to be built. Further these camps are also required to be connected with roads so that the patrolling is more efficient carried out. If all vacant posts are filled up we require more accommodation facilities. Also there should be a Forest Rest House at Wakro. NTCA has provided funds for the construction of the guest house. More GPS, Camera traps etc should be provided for taking up monitoring. . Since it is newly notified TR, it is hoped that proper budget would be provided to enable the management to make up the above short fall.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

**These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Verification of records	The details of centrally sponsored funds are mentioned in the table below this Para. Now the Sanctuary is notified as TR, more funds will be provided under CSS (PT).
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

**Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

Year	Name of Scheme	Fund received (Lakhs)	Expenditure
2013-14	CSS	1.325	1.325
	TFC	185.08	185.08
	CAMPA	20.687	15.83
	Total	207.092	202.235
2014-15	CSS (IDWLH)	26.32	26.32
	CSS (PE)	4.33	4.33
	TFC	45.7	45.7
	CAMPA	37.485	31.365
	Total	113.835	107.715
2015-16	CSS (IDWLH)	38.071	38.071
	TFC	Nil	Nil
	CAMPA	77.025	85.822 (expenditure is inclusive of previous balance)
	Total	115.096	38.071
2016-17	CSS/IFM	42.909	42.908
	TFC	158	158
	CAMPA	0.05	0.05
	Total	200.959	200.958

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Verification of records	The details of state linked funds are mentioned in the table below this Para.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

Year	Name of Scheme	Fund received (Lakhs)	Expenditure
2013-14	State Plan (Plan)	3.807	3.807
	State Plan (Non-Plan)	55.44	55.436
	Total	59.247	59.243
2014-15	State Plan (Plan)	10.402	10.402
	State Plan (Non-Plan)	56.5	56.495
	Total	66.902	66.897

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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2015-16	Plan	25.808	25.808
	Non- Plan	67.683	67.683
	Total	93.491	93.491
2016-17	Non- Plan	111.779	109.77
	Plan	15.74	15.74
	Total	127.519	125.51

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Verification of records	In 2006-07, USA based NGO called Inner Asia Conservation, had provided 3 buildings and one Bolero camper. There is no other instance of NGO assistance provided to TR.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Discussion with DFO	No official working in TR has received certificate course or diploma course under Wildlife management. However the following workshops on subjects relating to wildlife management have been conducted and RFO and two Forest Guards have participated. <ol style="list-style-type: none"> 1. Training on elephant census at Deomali 2. Wildlife crime related training at Bhalukpong organized by NTCA, Regional Office, Guwahati
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

***Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Discussion with DFO	Main objective of TR management is to protect and conserve the forests and Wildlife. Staff design strategies for protection and implement the same. They also implement habitat improvement works, check smuggling of canes, prevent cultivation of opium etc. The performance of the staff is linked to management objectives of TR. Of course there is lot of limitation, especially when 95% area of the TR is not accessible in vehicle.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair	✓		
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Discussion with DFO	The TR management celebrates, wildlife week, environment day etc. to increase public participation in wildlife conservation. Public participation has still to come up a long way so that it can make some difference.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGLs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Discussion with DFO	There is no complaint box / register. Villagers put up their grievances to the management in writing as well as orally. The communities are constantly pressurizing the management to allow them to resettle in three villages namely Tihun, Kalai and Halai inside the TR. These settlements were earlier vacated by them. Management has to deal with these grievances in a diplomatic way.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	✓		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.5 Does TR management address the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Discussion with DFO	TR management has provided solar devices, LPG, CGI sheets, poultry, assisted in growing fruit plantation etc. for the welfare of the communities residing in the fringe villages. The services provided by the management are shown in the table below the Para. Thus management deals with livelihood issues in a very small way.
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

Details of activities for supporting local livelihoods:-

Sl	Activities	beneficiaries
1	Distribution of CGI Sheets 14 piece per family	27 families
2	Distribution of solar lamp	35 families
3	Distribution of LPS sets	30 families
4	Poultry farm 20 kgs per family	20 families
5	Fodder plantation 1 ha per family	5 families
6	Fruit plan plantation 1 ha per family	5 families
7	Fuel wood plantation 1 ha per family	5 families

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Discussion with the DFO	No village relocation is planned. The communities who lived in the past in Tihun, Hallai and Kalai villages in the vicinity of Glow lake are staking claim to go back to the area. Management has to deal with them in a diplomatic manner so that the families are not re-settled in the above mentioned villages.
Plans have been made but no implementation	Fair	✓		
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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5. Output

5.1 *Is adequate information on TR management publicly available?*

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Discussion with DFO	The public can access information through RTI as well as the website of the forest department. The TR has so far not prepared any publicity material. They have been advised to publish some pamphlet, brochures and posters and bring information regarding TR, so that it can educate and inform public.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair	✓		
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 *Are visitor services and facilities appropriate and adequate?*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Discussion with DFO	Visitors are provided guides to track along the specified tourism trail. Visitor's register is maintained in the range office where people write their comments and suggestions. Management does not maintain any other facilities for tourists
Visitor services and facilities are very basic.	Fair	✓		
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

5.3 *Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Discussion with DFO	Biologist has been posted and has joined recently. He is being sent to WII for training in tiger monitoring. It is expected that some research and monitoring works will be carried out in the TR on a regular basis.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Discussion with DFO	Maintenance of infrastructure does not have any schedule. As per the requirement, the funds are allocated for carrying out maintenance of infrastructures and assets..
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor	✓	Discussion with DFO	No research, Census, monitoring or evaluation has been done. MEE team did not find any animal sign during the walk in the Tiger Reserve. Ungulate density appears to be low.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Discussion with DFO	So far no methods were employed to estimate tiger number. The management does not have even Camera traps to install in the Tiger Reserve. Thus it is not possible to understand the population trend of tiger. How can there be tigers when ungulate density is low? Also, any such effort will need to go beyond the small part currently accessible to the management and cover the hitherto un-surveyed regions of the TR.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair	✓		
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

***This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor	✓	Discussion with DFO,	Most of the threats are continuing. There appears to be illegal hunting of wild animals. No staff is located within 95% area of the TR, which can be easily accessed by poachers.
Some threats to the TR have abated, others continue their presence	Fair		Google pictures of the habitat of TR	
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		Indicative TCP	As of now the tourist management is adhoc but as per the indicative TCP chapter 11, the management has proper plan for tourism with infrastructure, interpretation center etc.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair	✓		
Tourism management plan is good and well monitored.	Good			
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

***Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Discussion with DFO	The TR is surrounded by mishimi community. Most of them are supportive of the management.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	32.5	53.1%
2.	Planning	07	10	70	37.5	
3.	Inputs	05	10	50	27.5	
4.	Process	06	10	60	30	
5.	Outputs	04	10	40	20	
6.	Outcomes	05	10	50	22.5	
Total		32		320	170	

**Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	✓	There is illicit removal of cane from the forests of the TR. Encroachment of the area followed by cultivation of opium are needed to be checked so that Carbon sequestration is reduced.	TCP is under preparation and the concern of climate change must be addressed.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓	There is hardly any presence of staff inside TR.	Infrastructure should be created so that protection is intensified.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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2. Namdapha Tiger Reserve, Arunachal Pradesh

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Tiger Conservation Plan 2013-14-2023-24 Page 13 to 16: Statement of Significance	<p>Several rivers, rivulets and small streams originate in the vast catchment of the landscape. The topographical and geological variations in the TR have ecological and aesthetic values and are listed in the TCP as follows:</p> <p>a) Recreational Value: The TR has potential for nature camping, mountaineering, rafting and adventure tours. Habitat attributes like waterfalls, lakes and ponds harbouring variety of resident and migratory birds and animals add to the attraction. The forests are magical with towering Dipterocarps, and other species. The varied altitudinal range leads to experience from snow covered peaks, alpine flowers, high altitude lakes, wet subtropical forests, etc.</p> <p>b) Scientific value: The TR has scope for scientific studies in disciplines like geology, paleontology, botany, zoology, etc. It has also scope for studying taxonomy of rare and endangered plants, animal species, which includes fishes, herpetofauna, birds and others. Management is also engaged in research on regeneration of plant species, rhizome formation of flowering bamboos and availability of animals in grasslands.</p> <p>c) Educational Value: The TR is rich in biodiversity, and provides ample scope for learners to understand ecosystem functioning.</p> <p>d) Ethological value: The temples inside and in the fringe areas of the TR have immense mythological value for local people. Bulbulia hot-spring is regarded as a holy place and people believe that the water has divine blessing to immunity to withstand diseases. Hollow stones situated on the uphill side of the 11th mile are a holy place for Tibetan Buddhists for offering to God during festivals.</p> <p>e) Historical value: The old stone pillar on the 11th mile is worshiped by Tibetan settlers. The stone idols found in the debris of land-slipped hills are placed at the Parvateshwar temple near the same spot at 11th Mile.</p> <p>f) Economic value: The forest resources like timber and NTFP such as bamboo, cane, honey, medicinal plants etc, though not permitted to be extracted, have high</p>
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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				<p>economic value.</p> <p>g) The TR also provides a number of intangible ecosystem value</p> <p>h) The TR is the catchment of river Noa Dihing and tributaries.</p> <p>The values are identified yet the monitoring is limited in a very small portion as a large portion (more than 90%) of the TR is inaccessible .</p>
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1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Tiger Conservation Plan 2013-14-2023-24 Page 51 & 167-168	Poaching in the TR by communities residing in and around the TR such as Cakma, Lisu, Mishmi tribes, and hunting of large predators like tiger, leopard and musk deer by poachers from Myanmar are the biggest threat. Ever increasing Lisu settlements inside the TR who convert forest into agriculture land, orchards, who also depend on the forest for fuel and timber needs results in degradation of habitat. The list provided in Annexure 9 (ag. 167-68) shows that the Lisu settlements have been expanding annually. There used to be 65 households in 2004-05 which had grown to 157 households in 2012. Livestock grazing by cattle in grasslands is an issue and TR management has to toil for that. Threats are identified and assessed, but the important one of poaching remains un-assessed so far. It is clear that poaching is happening, but the extent is unclear.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Visit and discussion with Asst FD.	The settlements at Vijaynagar, Gandhigram, bordering Myanmar have to access the markets at Miao only through the Miao-Vijaynagar Road ('MV Road'). The groups take 6-8 days to walk the treacherous route and bring considerable disturbance in the TR. Moreover there are lisu settlements along MV road at 38 th , 52 nd , 56 th , 60 th , 67 th , 70 th and 77 th mile on MV road inside core area of Tiger Reserve. There are 157 families in all these settlements with estimated population of 704. These figures are based on Forest Department census conducted in January February 2012. As presence of Forest officials is not beyond 25 th mile, these settlements are expanding on a regular basis. The core area has ever expanding human and biotic interference.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Discussion with Asst FD and perusal of records.	The management has entered into the tripartite agreement with State Government and NTCA. The Steering Committee meeting has not taken place as yet. The legal delineation of core has taken place, however the delineation of Buffer in the eastern (Vijaynagar) and southern (Nampong area) are in process and yet to be finalized. Also, 177 sq km, RF area is additionally added to Namdapha TR. which is indicated at Appendix 3, Pg 158 of TCP. It is construed to be added to the core of the TR. The TR has Tiger Foundation. There has not been any occasion to apply any SOP to the TR
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		Discussion with Asst FD.	No, the Buffers are under the control of Territorial Division.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair	✓		
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		TCP 2013-14 to 2022-23	The TR has comprehensive TCP approved by NTCA vide f no 1-6/2010-NTCA dated 15 th December 2015.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Interaction with the staff in the field in 17 th mile & 25 th mile.	There is no presence of forest staff in more than 90% area of TR. As explained the patrolling by staff is only limited to areas up to 17 th mile and at the most on foot up to 25 th mile. The TR between 25 th mile and 79 th mile on MV road remains unguarded. The TR area on the right bank of river Nua Dihing also remains inaccessible during rains. Long felt need of a bridge on this river at 17 th mile has yet not become a reality. Finding animal sign while moving on foot in TR is also rare. TR management is unable to safeguard all threatened Biodiversity values.
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Verification of record and discussion with management.	NGOs like NCF, Aaranyak have provided inputs during the preparation of TCP. Further the involvement of local communities is limited in planning process. Communities from fringe villages are also not provided any role in planning.
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Page 56 of TCP.	Maintenance and de silting of some natural water bodies near 65 mile stone, improvement of grass through controlled burning at Farm Base, removal of weeds along the road and open spaces have been carried out in the past. Further TCP suggests to plant up some fruit yielding species, controlled burning of grasslands to promote fodder growth, weed eradication to protect rare and endangered flora and improvement of natural water bodies and saltlick. During the field visit it has been observed that the Mikania spp has covered the floor of the forest as well as the middle story. It is suggested to take up such areas for removal of Mikania and regeneration of palatable forage. It is also suggested to clear ground flora on bridle paths to facilitate aggressive patrolling inside forests.
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit(SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor	✓	TCP and security plan.	Miao range of the TR has APCs located at M'pen (10 th mile), Deban (17 th mile), Lama camp, Happy valley, Haldibari, Hornbill, Watch towers at Bogapahar, Kathan view at 19 th mile. Some of these camps are being operational only when the staff can cross the Dihing river. It is suggested to have a permanent suspension bridge at Deban (17 th mile) to cross the Noa Dihing river. So that they forest staff are available at these camps. The remaining two ranges located at 25 th mile and Farm Base has no other anti poaching camps. Even the range headquarter will have to be accessed on foot from 17 th mile Deban. The absence of any anti poaching camp between 25 th Mile and 79 th mile is biggest threat for security of forests and Wildlife.
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

			<p>There are Lisu settlements along MV road at 38th, 52nd, 56th, 60th, 67th, 70th and 77th mile on MV road inside core area of Tiger Reserve. There are 157 families in all these settlements with estimated population of 704. These figures are based on Forest Department census conducted in January-February 2012. Number of families and the population is found to have been constantly going up. Forest staffs are available only up to 25th mile. Lisu hunters must be having the field day. Unless the construction of MV road is complete the illegal hunting, poaching and wildlife trade will continue unabated. It is learnt that agency of State Government has continued works on this road for last four years and still it is motor-able up to 17th mile.</p> <p>As the TR has a common boundary with Huqwang Valley wildlife sanctuary of Myanmar for more than 100 km, the management cannot be effective until the two management work in close coordination. In fact the poachers from across the international border pose bigger threat to the Carnivores of Namdapha TR.</p> <p>The strategy of TR in protecting the forests and wildlife is deplorable.</p> <p>The security plan of the TR is available at part A chapter 1 of the TCP (pages 559 to 597)</p> <p>Security audit has not been carried out.</p>
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Discussion with Asst FD and verification of records	There are very few instances of human wildlife conflict observed in this area. In the past some stray cases of damage to the crop and properties were reported. When elephant herds have passed during migration such incidences are bound to occur. Payments of compensation have been made to the affected families.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Natural habitat corridors are described in the pages 307 to 309 of the TCP.	TR is a part of vey big ecological network connecting Huqwang valet Wild Life Sanctuary in Myanmar in the east, Kamlang TR of north. Besides the TR is conne cted with Namsai Forest divison, Nampong Forest division and many USF. Page 76 and 78 of TCP indicate that the TCP has vision to manage this large landscape for optimal number of tigers, co predators and prey. As the TR has a common boundary with Huqwang Valley wildlife sanctuary of Myanmar for more than 100 km, the management cannot be effective until the two management work in close coordination. In fact the poachers from across the international border pose bigger threat to the Carnivores of Namdapha TR. This requires a constant interaction and exchange of intelligence between Huqwang and Namdapha Managements and Namdapha and Kamlang TR within the same state. Chief wildlife warden may work out the details so that a mechanism is brought in place for the management of the respective PAs to proceed in this plan. The system between Huqwang Valley and Namdapha can be developed on the line of TrAMCA, established in Manas TR and Royal Manas across Bhutan.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

**Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?*

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Discussion with Asst FD and perusal of records.	There are 4 posts of RFOs, 8 posts of Foresters and 24 posts of Forest Guards. Out of these sanctioned posts 1 post of Forester and 6 posts of Forest Guards are vacant. There are no women in the frontline staff. TR management face difficulties when women culprits are to be apprehended.. It is suggested to have more women staff to fill
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			<p>up the sanctioned posts. In addition 40 personnel of STPF(special tiger protection force), 12 ex servicemen, 24 camp helpers and 30 local work force who assist front line staff in protection of forests and wildlife. Also elephants are used for patrolling and services of 5 mahouts are also helpful in protection works.</p> <p>Since surveillance is required in every corner of the TR it should be the endeavor of the management to open the inaccessible areas for aggressive patrolling by staff. Consequently the management would require more front line personnel especially RFO, Forest Guards and Foresters. However since all areas are not open for patrolling, the present strength is sufficient to cover the same.</p> <p>Protection strategy has fallen apart. This is corroborated by the fact that only three cases of Sambhar poaching is registered in the TR during last three years. Further these cases have not been followed and have been lost sight off.</p>
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Discussion with Asst FD, perusal of records and field visit of the team.	<p>The 157 km (115 km within TR) MV road which has not been completed for last 4 years is very much required to augment the protection work in TR. The construction is entrusted to the RWD (Rural Work Department) of state Government and must be completed early. The families in important settlements in Vijaynagar and Gandhigram on Myanmar border move on this road on foot to access market at Miao. Presence of the staff is only available up to 40 km from Miao side. Infrastructure should be created at other locations also at least along this road for forest staff to camp and patrol the remaining forest.</p> <p>It is observed that very small stretches are required to be upgraded to make the whole road operational. If RWD is delaying endlessly, Forest Department must put their foot down and take up minimum repair of bad patches to make the whole road motor-able. Construction of all weather motor-able roads is also required from Deban to Farm Base via</p>
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair	✓		
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				<p>Hornbill.</p> <p>Equipments such as GPS, range finders, vehicles etc. are adequate at present.</p> <p>Camera traps, binoculars, night vision binoculars, spotting scope are not adequate in number.</p> <p>It is suggested to construct a hanging bridge across Noa Dihing river at 17th mile (Deban) camp, which will enable staff to access the area on the right bank of the river.</p> <p>Boats are not adequate in number to carryout regular movement and crossing rivers at different points in time..</p> <p>Wireless system is needed to be strengthened .</p>
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****These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.***

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Discussion with Asst FD and perusal of records.	The fund received from NTCA is shown in the table below this Para.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		The management has been asking for funds for civil works like construction of bridges, formation of roads, maintenance of bridle paths etc. The allocation of funds are inadequate and does not take care of these requirements..
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			The situation is worse by delaying sanction and release. Payment to daily wages frontline staff are delayed regularly by more than nine months.
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			Since the first release of the allocated central fund is delayed, the release of the second installment of the fund is never made.

****Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.***

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

a) *The details of funds released by Central Govt. and their utilization for the last three years.*

Year	Scheme	Total Sanction	Sanction date	Total Release	Utilised	Date of Receipt of funds
2014-15	CSS-PT-Central Share	231.610	-	231.610	231.610	
	CSS- PT State Share	13.554	-	13.554	13.554	24-3-2015
	CSS-PE	3.55		3.55	3.55	
	CAMPA-Project	15.20		15.20	9.60	
2015-16	CSS-PT-Central Share	208.642	-	208.642	208.642	
	CSS- PT State Share	26.39	-	26.39	26.39	17-3-2017
	CSS-PE	0.60		0.60	0.60	
	CAMPA-Project	59.74		59.74	22.63856	
2016-17	CSS-PT-Central Share	259.375	-	259.375	259.375	
	CSS- PT State Share	22.58	-	22.58	22.58	17-3-2017
	CSS-PE	2.26		2.26	2.26	
	CAMPA-Project	NIL		NIL	57.30948	
Total		843.501		843.501	858.10904	

3.4 *Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor	✓	Perusal of records.	10% state share is provided by the state government to match the state share of NTCA funding. State should also support some other activities like civil works required for necessary infrastructure for up grading the level of patrolling.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor	✓	Perusal of records and discussion with Asst FD.	No NGO support is available in the Tiger Reserve.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Discussion with Asst FD	One Range Officer has done three months certificate course from WII. During 2016-17 three members of staff were sent to Similipal Tiger Reserve for training in MSTRIPE. However, the said smart patrolling is yet to be adopted in TR.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		MEE team's field visit and discussion with Asst FD.	The staffs are deployed at accessible locations for safeguarding the TR, which is one of the most important management objectives. They also engage themselves in habitat management works, monitoring and research works etc.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Visit of MEE team at Laxmi Bazar, Kokilabari and discussion with Asst FD.	In management conducts education and awareness campaign for communities residing in fringe villages. Meetings are organized for this purpose. NGO named Aaranyak was involved in tiger estimation which is conducted by TR annually. Some members of the local communities are also engaged in guiding persons interested in moving on tourism trail in TR. Sometimes local persons provide intelligence to the management to deal with wildlife crime etc. Locals are also involved in forest protection on daily wages works.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGLs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Discussion with Asst FD	There is no complaint register in the TR management. As not many complaints from the public are received, the management has not felt the necessity of keeping a complaint box/ complaint register.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	✓		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

4.5 Does TR management address the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Discussion with Asst FD and perusal of records.	More than 150 staffs including women are engaged by the management for various works in achieving the objectives. However women are required for frontline positions so that they can deal with women offenders. Park management also involve in helping the communities for management and marketing of cash crops like cardamom, ginger, turmeric etc.
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

**The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Page 85 to 89 of TCP	There are lisu settlements at 38 th , 52 nd , 56 th , 60 th , 67 th , 70 th and 77 th mile on MV road inside core area of Tiger Reserve. There are 157 families in all these settlements with estimated population of 704. These figures are based on Forest Department census conducted in January February 2012. As presence of Forest officials is not beyond 25 th mile, these settlements are expanding on a regular basis. Several negotiations with them in the past to relocate them outside the TR has not produced any result. On the contrary the Lishu leaders have been demanding for de-notifying areas around 80 miles between Burma nala (Karwai hka) and Tilo Hka. However TR management is in no mood to concede the demand, as it will amount to de-notifying a large part of TR. The relocation plan mentioned in TCP proposed a timeline but the same is difficult to adhere in view of hard line approach by lisu leaders.. Though the area estimated under lisu encroachment is recorded as 30.05 sq km but the entire damages due to cultivation and habitation spread over several pockets has to be taken into account and another survey is necessary to find the present status. Even negotiation with lisu leaders so far has not produced any tangible result..
Plans have been made but no implementation	Fair	✓		
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Discussion and verification of documents.	Namdapha TR has exclusive website (www.namdaphanationalpark.in) and any other information can be obtained through RTI. Website needs to be updated regularly.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Pages 132 to 133 of TCP.	There are tourist facilities for boarding and lodging at 17 th mile camp. The dormitory and huts are available there. The tourists are allowed to track along the designated trail with the guide provided by the TR management. Museum and Zoo are located at Miao.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Verification of documents	Research permission has been granted to ZSI for documentation of fauna of the TR. This research is temporarily stopped but may continue later. Research officer of the management has done researches namely "Short field study on Agar (Aquilaria malaccensis)" and "Asiatic wild dog estimation in NTR". Some other research such as Tiger and prey estimation was conducted by Aaranyak. NCF has conducted research on hornbill and seed dispersal and regeneration, research on White bellied heron is also being conducted by ZSI. Some feedback from the research are used in management such as tiger motoring and producing materials for awareness generation etc.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Discussion with Asst FD	Maintenance of infrastructure does not have any schedule. As per the requirement the funds are allocated for carrying out maintenance works in adhoc manner.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor	✓	Discussion with Asst FD, NGOs and perusal of records provided by them.	Camera traps in successive years have captured many threatened species but their relative abundance is not analyzed and concluded annually. The expansion of lisu settlements in core area of TR and absence of adequate animal signs during field visit are the indication of declining trend of threatened species.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor	✓	Discussion with Asst FD, NGOs and perusal of records provided by them.	The camera traps for the years 2014-15, 2015-16 and 2016-17 indicates the presence of 3, 1 and 0 tigers respectively. It is advised to increase the coverage area for camera trapping. The tiger population is declining. The reasons are known but presently it is found to be difficult to reverse them.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor	✓	Discussion with Asst FD.	Threats in the TR are from the encroachments by different lishu settlements as discussed in para 1.2 above. Management has come up with relocation plan and is negotiating with the leaders of lishu community, so that the families are relocated outside. Management is also making efforts to reach out to Huqwang valley Wild Life Sanctuary across the border, so that the poaching for wildlife trade is kept in check. Since lishu settlements are expanding with passage of time the threats are increasing.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		Discussion with Asst FD.	In the present setup, the management has been managing tourism quite nicely. With the construction of the bridge (across Noa Dihing at 17 th mile) and formation of roads in tourism area, the tourism sector will receive a boost. With the improvement in tourism infrastructure the local economy will improve.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good	✓		
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

***Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Discussion with Asst FD.	.the local communities such as chakma, tangsa, singpho and misimis are supportive of the management. However lishus who have encroached TR land in the core, are resisting the proposal of relocation and are not so supportive.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	30	53.9%
2.	Planning	07	10	70	42.5	
3.	Inputs	05	10	50	20	
4.	Process	06	10	60	32.5	
5.	Outputs	04	10	40	25	
6.	Outcomes	05	10	50	22.5	
Total		32		320	172.5	

*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	✓	. There is illicit removal of cane from the forests of the TR. Encroachment of the area followed by cultivation of agricultural crops, cardamom, ginger, turmeric etc by lisu tribes is needed to be checked so that Carbon sequestration is reduced	TCP does not address the concern of climate change. It may be brought in the revision
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓	There is hardly any presence of staff inside TR.	Infrastructure should be created so that protection is intensified
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3. Pakke (Arunachal Pradesh) Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Tiger Conservation Plan, Pakke Tiger Reserve 2013 – 2023 Chapter 1, 1.2 Statement of significance and Chapter2, 2.2. Hydrology & Water Sources	Pakke Tiger Reserve occupies about 20% of the total geographical area of the East Kameng District, Arunachal Pradesh. It is extremely bio-diverse and is bound by the Kameng River in the West, Pakke River in the East and Nameri TR in the south. The altitude ranges from 100 m along its southern boundary to 2040 m. Pakke Tiger Reserve has 103 mammal species including 6 endangered namely Hog deer, Asian elephant, Tiger, Fishing cat, Wild dog and Chinese pangolin. It has many birds and amphibians including white winged wood duck. This protected area is among the largest continuous block of tropical forests in the country and is extremely important in maintaining contiguity within the North-East Indian forests and has a vital role in maintenance of water and climatic regime of the region. PTR has many water sources, which drain into the Pakke river and the Kameng river. The Protected area has several perennial rivers and streams like Khari, Lalung, Upper Dekorai, Doigurung, Nameri, Diji, Denai and Mithun nala on the Southern part and Deling, Dera, Paori, Tasum-so in the Northern part which drains either into Pakke, Nameri or Kameng rivers. In the South-Eastern part of the park there are Suka nala, Majo nala, Huda nala, Firing nala, Lung bung nala, Bre-putung nala, Duko nala and many other unnamed nalas which form the Pakke river system. There are many small nalas, which have water only during the monsoon, and little or no water for the rest of the year. Some of these along the Southern boundary are Juli nala, Dhuna nala, Tenga nala, Mahout ulta nala, and Taritaka nala and several other streams that drain into the Pakke river. The North-Eastern part of the park has several streams which originate in the reserve and drain into the Papu river. The North-Western part of the park has numerous water sources which originate in the hills and form a part of the Kameng river system. Apart from these, there are several water bodies within the reserve, which are extensively used by wildlife like the Khari lake (approx. 1.2 ha) that is located 10 km away from Khari beat and is known to have several species of waterfowl including the Endangered White-winged wood duck. Most values are identified and monitored.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		TCP Chapter 3, 3.4 Assessments of Threats.	Following are the main threats in the TR; The Northern boundaries are porous and many people enter the park to hunt wild animals for meat. The assessment of prey densities is restricted to the Southern part of the park. A lower density is expected in the Northern park in the higher elevation sub-tropical forests, and possibly due to undetected hunting pressures. An eminently possible threat is increase in poaching and illegal logging due to the increasing presence of insurgent groups from Assam.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		NA	There is no human settlement within the core. However, the northern boundaries are porous and people enter the park to hunt wild meat also insurgent groups of Assam pose threat in poaching and illegal logging.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		1. a. Core – Memo No. CWL/D/21(11)/06-07/3313-73 Dtd. 24 th December 2007. (Refer TCP pg no. 112 - 113). 1. b. Buffer – Memo No. CWL/D/21(67)/2010-1147 – 1126 Dtd. 6 th August 2012. (Document attached). (Refer	1. Core and Buffer of Tiger Reserve has been delineated. 2. Tiger Conservation Foundation has been established. No meeting has been conducted till this date. 3. TCP in place. 4. State level Steering Committee constituted under the Chairmanship of Chief Minister, Arunachal Pradesh, but no meeting has taken place. 5. Tripartite MoU has been signed between FD, State Government and NTCA, but the same has not been renewed during this
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

			TCP pg no. 315 – 316). 2. Tiger conservation foundation – CWL/D/21(110)/06-07/2566 – 83 Dtd. 26 th October 2007. Refer TCP pg no. 116 – 117	year. However, certain conditions like auditing of accounts by CAG, furnishing list of assets created in TR to NTCA, etc has not been complied. Also under the agreement NTCA is supposed to release funds within four weeks, which has not been complied. Further State Government is also expected to release fund to the tiger reserves within two weeks of receipt of NTCA funds, which has also not been complied. 6. There are hardly any incidences of tiger straying in human areas, tiger mortality, conflict with human, orphaned cubs etc. The management has geared up to follow all SOPs as and when the situation arise.
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***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor	✓	Verification of records	No, The core of the TR is under Field Director Pakke TR, whereas the Bufferarea of Papum RF is under the Khellong Forest Division, Bhalukpong, and that of Tenga RF is under Bomdila Forest Division.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good			

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) +?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		F. No. 1-25/2009 – NTCA Dtd. 12 th March 2015.	TCP in place and is also approved by NTCA, but it prepared in sketchy manner. For instance the strategies to conserve biodiversity are not detailed in the Plan.
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		TCP	Yes, TR management has adopted protection strategy to ensure that no intruders enter the core area and inflict damage to the biodiversity. Conservation of biodiversity is not specifically discussed in the TCP.
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Discussion with FD.	There are no villages inside core of TR. However, there are villages in the buffer areas where communities participate in the planning of buffer management. NGOs like NCF, NCBS and Ghora-Aabhe Society have participated in the preparation of TCP. Nature Interpretation Centre at Seijosa & Tippi are established. NCF has extended help for Seijosa NIC and NCBS has assisted the department for Tippi centre.
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Grassland Report 2014 – 15 – Forest Department.	The following management practices are followed in habitat management works; 1. Controlled burning of weeds annually over 100 Ha Bigger target is not fixed due to limitation of budget. 2. Cutting of grassland over 100 Ha. Again it is restricted due to paucity of funds. 3. Eradication of weeds is planned but due to inadequate fund this activity is not being carried out. 4. Enrichment of salt lick in certain locations such as Khari, Upper Dekorai, Nameri, Diji and Denai is taken up.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

*This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as *Lantana sp.*, *Mikania sp.* etc. would be examined.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.5 Does the TR has an effective Protection Strategy (PS)+ and Security Plan and Security Audit (SA) in place?

Assessment criteria														
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks										
TR has little or no PS and SA.	Poor		Offence report drawn: 1. PSD/01 of 2016-17 Dtd. 30 th December 2016. 2. PSR/01 of 2017-18 Dtd. 22 nd April 2017. 3. PSR/Offence/02 of 2017 – 18 Dtd. 29 th May 2017. Arrests made - 4 person all 4 person on bail. Case is under trial CJM Court Seppa. Security Plan - Chapter 10 of TCP	There are numerous protection strategy adopted by the management; There are 39 Anti-poaching camps including 5 camps in upper reaches. Upper reaches are not accessible during monsoon. There are roads to facilitate the movement of staff for patrolling. Attempts are made to enlarge the road network further. The following equipments are also in place for appropriate communication. No. of Wireless (VHF) sets – 23. No. of Wireless handsets (HF) – 57. The strength of staff is shown below; <table border="1" style="margin-left: 20px;"> <tr><td>DFO</td><td>1</td></tr> <tr><td>Ranger</td><td>3</td></tr> <tr><td>Dy. FR</td><td>2</td></tr> <tr><td>Forest Guard</td><td>13</td></tr> <tr><td>Frontline staff</td><td>150</td></tr> </table> Existing Arms / Weapons .315 Rifles – 22 nos. DBBL Gun – 5 nos. 32 Revolvers – 13 nos. Camp elephants – 9 nos. which are used for patrolling in areas with thick undergrowth. Boats are also available for patrolling through water; Rubber boat – 9 nos. Wooden boat – 1 no. Weapon Training is also conducted for the benefit of the staff in 2015, 2016 & 2017 Joint Patrolling is also done with Khellong Forest Division & Eagle nest Wildlife Sanctuary. No. of offence cases pending in the court -3. No conviction or acquittal during the last three years has taken place. The security plan is in Chapter 10 of TCP. No security audit has taken place so far.	DFO	1	Ranger	3	Dy. FR	2	Forest Guard	13	Frontline staff	150
DFO	1													
Ranger	3													
Dy. FR	2													
Forest Guard	13													
Frontline staff	150													
TR has an adhoc PS and SA.	Fair													
TR has a generally relevant PS and SA but is not very effective.	Good	✓												
TR has a comprehensive and very effective PS and SA.	Very good													

*This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Verification of records in FD office	Human death by Elephant are narrated below; 2014 – 15 Lt. Karo Tayem, Forest Guard was killed and a compensation of Rs1,50,000/- was paid 2015 – 16 Lt. Junu Tirkey a Grass cutter of the Forest Department was killed and a compensation of Rs 1,00,000/- was paid. 2016 – 2017 Rakesh Nabam, STPF was attacked by a leopard and injuring him near Tippi ghat APC on 25 th October and Medical expenses are reimbursed to the victim. Also on 22 nd December a lady (wife of a Grass cutter of Khari Camp) was trampled to death by wild elephant and Compensation is still pending. <i>Crop damage by wild animal & compensation paid year wise:</i> 2014 -15 Rs 87,200/- 2015-16 Rs 68,800/- Cattle depredation by Tiger & compensation paid is shown below; 2014 -15 Rs 1,70,250/-
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Discussion with FD	There are two important corridors identified for the movement of wild animals from and to this TR; Tippi – Dezeling corridor Lanka – Papum corridor Plantations are being taken up in both the corridors with the support of NCF, Khellong Forest Division and local communities. Exchange of intelligence with the neighboring forest divisions of Arunachal Pradesh i.e. DFO Khellong and DFO Bomdila is in vogue. Intelligence is also exchanged with the Nameri TR of Assam. Further joint patrolling takes place between the staff of TR and also with the staff of Nameri TR of Assam and Eagle Nest WLS of Arunachal Pradesh.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

*Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned / implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize land use around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria																																																																																																																				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																																																																																																
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Verification of records and discussion with FD	The following table shows the strength of staff in TR. The vacancy of one RFO, 3 Dy RFO, 8 Forester and 4 Forest Guard is crucial. To make up the deficit, the TR management has engaged daily wages personnel for protection works in anti poaching camps.																																																																																																																
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair																																																																																																																			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓																																																																																																																		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good																																																																																																																			
<table border="1"> <thead> <tr> <th>Designation</th> <th>Sanctioned post</th> <th>Existing Strength</th> <th>Vacant Post</th> </tr> </thead> <tbody> <tr><td>DFO</td><td>1</td><td>1</td><td>Nil</td></tr> <tr><td>Ranger</td><td>4</td><td>3</td><td>1</td></tr> <tr><td>Dy. FR</td><td>5</td><td>2</td><td>3</td></tr> <tr><td>Forester</td><td>8</td><td>Nil</td><td>8</td></tr> <tr><td>F.Guard</td><td>17</td><td>13</td><td>4</td></tr> <tr><td>Driver</td><td>3</td><td>3</td><td></td></tr> <tr><td>UDC</td><td>2</td><td>Nil</td><td>2</td></tr> <tr><td>LDC</td><td>1</td><td>1</td><td>Nil</td></tr> <tr><td>Cine.Operator</td><td>1</td><td>Nil</td><td>Nil</td></tr> <tr><td>Cine. Attendant</td><td>1</td><td>1</td><td>Nil</td></tr> <tr><td>Office Peon</td><td>3</td><td>2</td><td>1</td></tr> <tr><td>Khalasi</td><td>1</td><td>1</td><td>Nil</td></tr> <tr><td>Forest Watcher</td><td>1</td><td>Nil</td><td>Nil</td></tr> <tr><td>Dak Runner</td><td>1</td><td>1</td><td>Nil</td></tr> <tr><td>Mali</td><td>1</td><td>1</td><td>Nil</td></tr> <tr><td>1</td><td>2</td><td>1</td><td></td></tr> <tr><td>Ex Army STPF</td><td>3</td><td>3</td><td>Nil</td></tr> <tr><td>NSTPF</td><td>45</td><td>45</td><td>Nil</td></tr> <tr><td>Beat Guard</td><td>60</td><td>60</td><td>Nil</td></tr> <tr><td>Conflict Mngmt.</td><td>2</td><td>2</td><td>Nil</td></tr> <tr><td>Elephant Squad</td><td>4</td><td>4</td><td>Nil</td></tr> <tr><td>Local People</td><td>30</td><td>30</td><td>Nil</td></tr> <tr><td>Un Skilled Casual Worker</td><td>32</td><td>32</td><td>Nil</td></tr> <tr><td>Skilled Casual Worker</td><td>32</td><td>32</td><td>Nil</td></tr> <tr><td>Fixed Pay Staff</td><td>2</td><td>2</td><td>Nil</td></tr> <tr><td>Field Biologist</td><td>1</td><td>1</td><td>Nil</td></tr> <tr><td></td><td></td><td></td><td></td></tr> </tbody> </table> <p>The persons are deployed as per the requirement. The patrolling is supported by strategically located camps, rations, road network, domestic elephants etc.</p>					Designation	Sanctioned post	Existing Strength	Vacant Post	DFO	1	1	Nil	Ranger	4	3	1	Dy. FR	5	2	3	Forester	8	Nil	8	F.Guard	17	13	4	Driver	3	3		UDC	2	Nil	2	LDC	1	1	Nil	Cine.Operator	1	Nil	Nil	Cine. Attendant	1	1	Nil	Office Peon	3	2	1	Khalasi	1	1	Nil	Forest Watcher	1	Nil	Nil	Dak Runner	1	1	Nil	Mali	1	1	Nil	1	2	1		Ex Army STPF	3	3	Nil	NSTPF	45	45	Nil	Beat Guard	60	60	Nil	Conflict Mngmt.	2	2	Nil	Elephant Squad	4	4	Nil	Local People	30	30	Nil	Un Skilled Casual Worker	32	32	Nil	Skilled Casual Worker	32	32	Nil	Fixed Pay Staff	2	2	Nil	Field Biologist	1	1	Nil				
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Field Biologist	1	1	Nil																																																																																																																	

*This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Refer TCP pg no. 201, 202, 203, 204, 205, 206, 207.	The relevant tables showing the buildings, vehicles, equipment are shown below this Para. The resources are not enough. The management feels that 2 patrolling vans, 4 residential Type I building for staff. One FRH at Tippi Wildlife Range Hq. and Twenty numbers .315 rifles are additionally required.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

***These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

***Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

LIST OF BUILDINGS IN PAKKE TIGER RESERVE

Sl No.	Type of Buildings	Nos	Location
1	SPT/III Buildings	5	Seijosa-3/Tipi-1/ PakkeKessang -1
2	SPT/II Building	13	Seijosa-7 /Tipi – 4/ Pakke Kessang -2
3.	SPT/I Building	7	Seijosa –5 /Tipi –2
4.	SPT Range Office Building	5	Seijosa- 3 /Tipi-1/PakkeKessang -1
5.	SPT Beat Office Building	2	Khari 1/Bhalukpong Ghat -1
6	SPT DFO, s Office Building	1	Seijosa
7.	SPT-Motor garage	3	Seijosa –2/Tipi-1
8.	SPT-V- DFO, s residence	1	Seijosa
9.	SPT Forest Rest House	5	Seijosa –2/ Khari-1/Lanka -1/Upper Dekorai -1
10.	SPT-4 roomed barrack	6	Seijosa -4/ Tippi -2/Khari -2
11	SPT Go down	1	West Bank
12.	SPT-community Hall	2	Mobusa -1 /west Bank-1
18	SPT/HT protection Hut	29	Bhalukpong Ghat-1, Denai -2, Diji-1, Sukha Nallah I-1, Sukha Nala III-1, Nameri (West)-1, Nameri (East)-2, Doigurung-1, Rhino-camp-1, UpperDekorai-2, Romoni nala-1,Khari -1,Dhuna Nala-1,Majo nala-1, Firing nala-1, Dichu-1, Lanka-1, NEC 10km camp-1, Lumta-1, Rilo-1, Ngoliko-1, Yortepobe-1, Leh-lung-1, Kimi-1, Sessa power house -1 and Tippi -1
19	SPT 3 roomed School Building	3	Jully/A-2 and Dibru
21.	SPT Double Unit Barrack	1	Tipi -1

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

LIST OF DEPARTMENT ELEPHANTS

Sl No.	Name of the Elephant	Sex	Age	Microchip No.	Location where the elephants are engaged	Remarks
1.	Manik	Male (makhna)	17 Years	961001000002740	At Doi-Gurung camp	
2.	Bahadur	Male (makhna)	20 years	961001000005687	At upper Dekorai camp	
3.	Vijaya	Female	32 years	961001000006291	At Khari camp	
4.	Jatra	Female	70 Years	961001000005926	At Khari	Very old
6.	Raja	Male (tusker)	34 Years	961001000004748	At Denai camp	
8.	Gulab Singh	Male (Makhna)				

LIST OF EXISTING ROAD AND PATROLLING PATHS IN PAKKE TIGER RESERVE

S.no.	Existing road	Type of road & Patrolling path	Length	Block No.
1	West Bank -Ditchu Road	Fair weather road	12 km	S1 & S2
2.	West Bank- Khari Road	Permanent all weather road	12 km	S1 & S4
3.	Khari Bhalukpong Road	Fair weather Road	41 km	S4, S7, S8, T4, T2, T1
4	Upper Dekorai – Nameri Road	Fair weather Road	8 km	P8a, P10, P9,P15
5	Patrolling path from Doi-gurung to Nameri	Seasonal	12 km	S8, T4
6.	Khari to Upper Dekorai	Seasonal	25 km	S4, S7, S8
7.	Jully Nallah to Khari	Seasonal	20 kms	S1, S2, S3, S4
8	Tipi to Denai	Seasonal	9 km	P42, P43a
9	Denai to Diji	Seasonal	5 km	P 41a, P42
10	Diji to Kimi	Seasonal	27 km	P31a, P33, P38, P41a
11	Nameri to Lelung	Seasonal	40 km	P40, P39, P32, P25, P24, P23, P27b
12	Khari to Dera	Seasonal	37 km	P4, P6, P12a,P13a, P18, P23, P22, P19a
13	Dera to Suchung	Seasonal	12 km	P19a, P19b
14	Dera to Seba	Seasonal	7 km	P19a, P21, P29
15	Jolly to Suchung	Seasonal	60 km	No Block Assigned yet

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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LIST OF VEHICLES

S.no.	Type of Vehicle	Registration Number of Vehicle	Under whom disposal	Remarks
1	Gypsy (Hard top)	AR-01-C -7712	Disposal of DFO	
2	Gypsy-King (Soft top)	AR-01-A 5367	Disposal of R.O.Tipi	
3	Gypsy (Hard top)	AR-01-A-9592	Disposal of R.O.Tipi	Off Road
4	Bolero Camper	AR-01-B-3595	Disposal of R.O.Tipi	
5	Mahindra Bolero	AR-01-E-8481	Disposal of DFO	
6	Mahindra Thar	AR-01-E-0092	Disposal of R.O Seijosa	
7	407 Mini Truck	AR-01-A-6064	Disposal of R.O.Seijosa	
8	407 Mini Truck	AR-01-C-0407	Disposal of R.O.Seijosa	
9	407 Mini Bus	ARC-1568	Disposal of DFO	
10	Yamaha Motor cycle	AR -01-E-7425	Disposal of R.O.Seijosa	
11	Yamaha Motor cycle	AR-01-E-7424	Disposal of R.O.Tipi	
12	Hero Honda	AR-01-E-1715	Disposal of R.O.Seijosa	
13	Bajaj Discover	AR-01-D-8983	Disposal of R.O.Seijosa	
14	TVS Suzuki Motorcycle	AR-01-E -0070	Disposal of R.O.Seijosa	
15	Hero Honda	AR-01-D-6982	Disposal of R.O.Seijosa	
16	Yamaha RX	AR-01-A-6601	Disposal of R.O.Seijosa	Off Road
17	Yamaha Libero	AR-01-D-8983	Disposal of R.O.Seijosa	Off Road
18	Yamaha Fazer	AR-04-1976	Disposal of R.O.Seijosa	Off Road
19	Yamaha Fazer	AR-04-1975	Disposal of R.O.Seijosa	Off Road
20	Yamaha Fazer	AR-04-1977	Disposal of R.O. Tipi	
21	Hero Honda (Splendor)	AR-01-E-1714		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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LIST OF ARMS

S.no	Type of Weapon	Number of Weapons
1	Tranquilizer Gun	1
2	Double Barrel Gun	5
3	0.315 Rifle	22
4	0.32 Revolver	21

LIST OF WIRELESS SETS

S. no.	Type of Wireless	Location where installed	Remarks
1	H.F.Base Station	Divisional Forest Office Seijosa	Not working
2	VHF Base station	Divisional Forest Office Seijosa	All sets are working fine
3	VHF Base station	D.F.Os residence	All sets are working fine
4	VHF Base station	West Bank Range Office	All sets are working fine
5	VHF Base station	Khari Wildlife Beat	All sets are working fine
6	Hand Set 1 no	Tarzan Camp	All sets are working fine
7	VHF Base station	Upper Dekorai	All sets are working fine
8	Hand Set 1 no	Rhino Camp	All sets are working fine
9	VHF Base station	Lanka	All sets are working fine
10	VHF Base station	Nameri (East)	All sets are working fine
11	Hand Set 1 no	Nameri (West)	All sets are working fine
12	Hand Set 1 no	Sukha Nala III	All sets are working fine
13	VHF Base station	Sukha Nala I	All sets are working fine
14	VHF Base station	Bhalukpong Ghat	Not working
15	VHF Base station	Doi-Gurung	All sets are working fine
16	VHF Base station	Tipi Wildlife Range	All sets are working fine
17	VHF Base station	Diji camp	All sets are working fine
	VHF Base station	Kimi	All sets are working fine
18	VHF Base station	Denai	All sets are working fine
19	V.H.F.Base Station (Vehicle)	Fitted in DFOs Gypsy	All sets are working fine
21	Hand Sets 13 Nos	Issued to Field staff of Tipi W/L/Range	All sets are working fine

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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S. no.	Type of Wireless	Location where installed	Remarks
22	Hand Sets 8 Nos	Issued to Field staff of Seijosa W/L/Range	All sets are working fine
23	Hand Sets 1 No	with DFO W/L Seijosa	All sets are working fine
25	Hand Sets 10 Nos	In DFOs Stock	Good Condition

LIST OF WIRELESS SETS IN STOCK

SI No	Type of Wireless	Number in Stock	Remarks
1	VHF Base Radio set	12	7 out of order
2	HF Base Radio Set	4	
3	Handset	66	22 out of order, 3 lost

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria ⁺																																														
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks																																										
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Verification of records	<p>The following fund received from NTCA - CSS Project Tiger</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Sanctioned amount</th> <th>Expenditure</th> </tr> </thead> <tbody> <tr> <td>2014 - 15</td> <td>3,11,26,400/-</td> <td>3,11,26,400/-</td> </tr> <tr> <td>2015 - 16</td> <td>3,07,62,000/-</td> <td>3,07,62,000/-</td> </tr> <tr> <td>2016 - 17</td> <td>3,65,67,000/-</td> <td>3,65,67,000/-</td> </tr> </tbody> </table> <p>CSS Project Elephant</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Sanctioned amount</th> <th>Expenditure</th> </tr> </thead> <tbody> <tr> <td>2014 - 15</td> <td>10,06,800/-</td> <td>10,06,800/-</td> </tr> <tr> <td>2015 - 16</td> <td>13,79,000/-</td> <td>13,79,000/-</td> </tr> <tr> <td>2016 - 17</td> <td>8,16,000/-</td> <td>8,16,000/-</td> </tr> </tbody> </table> <p>CSS Twelfth Finance Commission</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Sanctioned amount</th> <th>Expenditure</th> </tr> </thead> <tbody> <tr> <td>2014 - 15</td> <td>1,53,36,500/-</td> <td>1,53,36,500/-</td> </tr> <tr> <td>2015 - 16</td> <td>Nil</td> <td>Nil</td> </tr> <tr> <td>2016 - 17</td> <td>30,00,000/-</td> <td>30,00,000/-</td> </tr> </tbody> </table> <p>CSS IIFM</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Sanctioned amount</th> <th>Expenditure</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Year	Sanctioned amount	Expenditure	2014 - 15	3,11,26,400/-	3,11,26,400/-	2015 - 16	3,07,62,000/-	3,07,62,000/-	2016 - 17	3,65,67,000/-	3,65,67,000/-	Year	Sanctioned amount	Expenditure	2014 - 15	10,06,800/-	10,06,800/-	2015 - 16	13,79,000/-	13,79,000/-	2016 - 17	8,16,000/-	8,16,000/-	Year	Sanctioned amount	Expenditure	2014 - 15	1,53,36,500/-	1,53,36,500/-	2015 - 16	Nil	Nil	2016 - 17	30,00,000/-	30,00,000/-	Year	Sanctioned amount	Expenditure			
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Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair																																													
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓																																												
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good																																													

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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				2014 - 15	Nil	Nil
				2015 - 16	15,84,500/-	15,84,500/-
				2016 - 17	18,62,700/-	18,62,700/-
				The revenue generated for Tiger Foundation is shown below;		
				Year	Revenue generated from sales procedure	
				2014 - 15	1,03,681/-	1,03,681/-
				2015 - 16	43,982/-	43,982/-
				2016 - 17	2,40,981/-	2,40,981/-
				Grand Total		3,88,644/-
				The releases are delayed. NTCA funds for 2017-18 has been released by NTCA but yet not released by state so far.		
				There is shortage of funds for habitat improvement works.		

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*																
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks												
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor			The following fund received from State Government from State plan schemes for last three years; <table border="1"> <thead> <tr> <th>Year</th> <th>Sanctioned amount</th> <th>Expenditure</th> </tr> </thead> <tbody> <tr> <td>2014 - 15</td> <td>12,01,200/-</td> <td>12,01,200/-</td> </tr> <tr> <td>2015 - 16</td> <td>22,69,600/-</td> <td>22,69,600/-</td> </tr> <tr> <td>2016 - 17</td> <td>14,70,000/-</td> <td>14,70,000/-</td> </tr> </tbody> </table> The funds are generally salary and wages and are released on time	Year	Sanctioned amount	Expenditure	2014 - 15	12,01,200/-	12,01,200/-	2015 - 16	22,69,600/-	22,69,600/-	2016 - 17	14,70,000/-	14,70,000/-
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Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good															
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good	✓														

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.5 What level of resources are provided by NGOs?

Assessment criteria						
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks		
NGOs contribute nothing for the management of the TR.	Poor		Donation of Mahindra Thar: Memo No. PSD/02/2011/WCT/1175-76 Dtd. 26 th August 2016.	Wildlife Conservation Trust, Mumbai has been continuously supporting Pakke's management		
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			Year	Donated amount	
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		2014 - 15	15,67,000/-	Money donated towards ration, uniform and weapon training
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			2015 - 16	13,75,200/-	Money donated towards ration, uniform and weapon training. WCT also donated Mahindra Thar (4X4) 4WD for patrolling purpose.
				2016 - 17	13,47,850/-	Money donated for ration, uniform and weapon training

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Discussion with FD and verification of records	The following personnel were trained in wildlife:
Some trained officers and few trained frontline staff, posted in the TR.	Fair			1. Shri Tana Tapi – P.G. Diploma in Wildlife Management.
All trained officers and fair number of trained frontline staff posted in the TR.	Good	✓		2. Shri P.B. Rana – 3 months certificate course.
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			3. Shri Kime Rambia – Vertical Integration Training.
				Further the TR has organized following training for the Frontline Staff. All of them have attended the trainings..
				1. Weapon & Combat training
				2. Snake Handling & Rescue training
				3. Law Enforcement training
				4. Elephant Census training
				5. Training on Monitoring of Tiger, co-predator & prey species

*Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Discussion with FD and verification of records	The performance of the staff is linked to the management objectives. The following personnel of TR have been rewarded on different occasion 2015 – 16 1. Shri P.B. Rana – Excellent work done in wildlife Protection and Conservation. 2. Shri P.B. Rana – Silver Medal on the Occasion of statehood day. 3. India Biodiversity Award, UNDP – Awarded to the forest department of Pakke WLS & TR in collaboration with Ghora-Aabhe Society. 4. Shri Kime Rambia – Distinguished service as well wildlife protection in Pakke Tiger Reserve. 5. Shri Kime Rambia – NDTV award, on the occasion of Tiger day. 6. Fifteen frontline staff awarded for outstanding performance in various activities.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Discussion with FD	Communities residing in buffer areas have limited participation in management. Many of them are engaged in works relating to habitat improvement, construction and maintenance of civil works, patrolling etc. Further NGOs also help the management in following ways; ANCF provided training in the Synchronized Elephant Population 2017. WWF participated in the camera trapping. WTI participated in the Synchronized Elephant Population 2017. Aaranyak conducted genetic analysis of tigers from PTR. NCF monitoring of Hornbills.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGLs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Discussion with FD	Complain cum feedback register are maintained at Forest Rest House, Nature Interpretation Centre, Entry & Exist points . Any complaints, suggestions and feedback received are addressed by management.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			
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***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Discussion with FD	140 Local youths from the fringe villages are engaged as Tiger Protection force. Ghora – Aabhe Society consisting of 9 village heads, 4 VFDC, 14 Women Self Help Group have been formed. They were trained in various livelihood options such as Mushroom cultivation, gardening, pig rearing, vermin - compost, broom cultivation. Distribution of CGI sheets & RCC posts, Cattle immunization, LPG units, Piggery units, Fish ponds are provided to the communities.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		No assessment	There are no villages in the core; hence the question of relocation does not arise. The item is not assessed.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Discussion with FD	Adequate information is publicly available on Pakke Tiger Reserve Website – www.pakketigerreserve.org . In social media pages of Facebook – Pakke Tiger Reserve. YouTube – Video clip of Pakke Tiger
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			Reserve. Brochures about Pakke Tiger Reserve. Various articles on wildlife magazines such as Sanctuary Asia, Saevus. Regular press releases are printed in local daily about the activities of Pakke Tiger Reserve.
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good	✓		

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Field visit and discussion with FD	Visitor services such as Nature Interpretation Centre in Seijosa and Tippi provide adequate information to tourists visiting Pakke. Films on Pakke Tiger Reserve are available on YouTube. Five Forest Rest houses available for tourist along with food and comfortable stay. Each of the FRHs are equipped with healthy drinking water, rest rooms. Visitors visiting Pakke are provided guards and guide service in the field. The services are monitored from time to time and are effective.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Field visit and discussion with FD and other field staff	Annual monitoring of Tigers, co-predators and Prey species through camera trapping is carried out to estimate tiger population and its trend over the years. Line transects method is adopted to estimate prey density and improve habitat quality. Monitoring of habitat provides information on its quality as well as human interference in the Tiger Reserve. The above reports generated are submitted annually to NTCA. Annual immunizations of livestock are carried out in the fringe villages to avoid livestock borne diseases to the wild species of the TR. Hornbill nest monitoring carried out in the Core and in the Reserve Forest to monitor Hornbill nesting. All above information is utilized to improve management.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Discussion with FD	There is no schedule for the management of infrastructures such as buildings, roads, etc. FD takes up frequent visits in the Reserve and decides the priority of works. The prioritized works are implemented based on availability of fund.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Discussion with FD	Consecutive Elephant Census reveals that the Elephant populations are increasing. Population of other threatened species like hog deer, Chinese pangolin, fishing cat and wild dog is monitored annually through field exercise by laying line transects. The reports are not analyzed by Wildlife Institute of India for quite some time and the trend of population of these species is not known.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Field Visit and discussion with FD	The population of tiger is increasing based on the annual Phase IV Monitoring of Tigers, but it is below the carrying capacity. During the visit in the field no evidence was found showing the big herds of ungulates. Hunting of ungulates is suspected for meat.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good	✓		
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

***This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Field visit and discussion with FD	The insurgency activities of nearby Assam state has reduced after Operation ALL-Out launched by Indian army. Not many cases of hunting of wild animals are booked by management. Also big herds of ungulates were not sighted during the visit in the reserve. It appears that poaching goes on unabated.
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		Field visit and discussion with FD	Tourists are taken on designated routes along with the armed guards and field guide. During holidays more number of tourists visit the TR. Other tourist infrastructures like Forest Rest houses for boarding and lodging, roads, interpretation centers etc have been maintained well.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good	✓		
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

***Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Visit in TR and discussion with FD	Local communities support the management but there are fringe elements who indulge in illicit cutting of trees and poaching of wild animals for meat. The fact that only three offence cases are booked in last three years, local support also appears to be opportunistic.
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	32.5	70.9%
2.	Planning	07	10	70	47.5	
3.	Inputs	05	10	50	40	
4.	Process	05	10	50	35	
5.	Outputs	04	10	40	32.5	
6.	Outcomes	05	10	50	32.5	
Total		31		310	220	

*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	✓	Grassland management requires burning. Management has undertaken this important step, in the interest of conservation of threatened faunal species.	Management must find an alternative to burning. Till then the periodicity of burning may be increased.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓	The area is the catchment of many rivers, which change the course inside PA. Soil erosion and soil deposit is the annual feature.	The area claimed due to newly deposited soil can be planted with suitable tree species or even grasses can be grown in some patches so that the area is stabilized.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4. Kaziranga Tiger Reserve, Assam

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		a). Proposed TCPChapter 1 Section 1.3 b). whc.unesco.org/en/list/337	<p>Kaziranga Tiger Reserve (KTR) is situated in floodplains of Brahmaputra river. The habitat is the outcome of the sediments carried by rivers flowing through/near the Park, mainly Brahmaputra and those originating in neighboring Karbi Anglong District. During monsoon, these rivers inundate the area by overflowing banks and filling low lying areas of the park. As a result, flood has become an annual feature in the Park. The TR has a large diversity of mammals, birds and reptiles. One horned rhinoceros, wild buffalo, elephant, tiger and swamp deer are present in good number in the tiger reserve and are popularly called as big five of Kaziranga TR. This protected area has many appellations to its credit. It is a tiger reserve, a world heritage site, an elephant reserve, Important Bird Area (IBA) and a National Park (Core area of TR). The park has inter-digitation of wet alluvial grasslands, wetlands and woodland, the grasslands forming more than 50% of the habitat.</p> <p>Some more details are as follows;</p> <p>(a) Kaziranga Tiger Reserve (KTR) represents one of the last unmodified natural areas in the State of Assam. It is the single largest undisturbed and representative area in the Brahmaputra Valley floodplain. The fluctuations of the Brahmaputra River result in spectacular examples of riverine and fluvial processes in this vast area of wet alluvial tall grassland interspersed with numerous broad shallow pools fringed with reeds and patches of deciduous to semi-evergreen woodlands. Kaziranga is regarded as one of the finest wildlife refuges in the world. The park's contribution in saving the Indian one-horned rhinoceros from the brink of extinction at the turn of the 20th century to harboring the single largest population of this species is a spectacular conservation achievement. The area also harbors significant populations of other threatened species including tigers, elephants, wild water buffalo and bears as well as aquatic</p>
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>species including the Gangetic River dolphin. It is an important area for migratory birds.</p> <p>(b) River fluctuations by the Brahmaputra river system result in spectacular examples of riverine and fluvial processes. River bank erosion, sedimentation and formation of new lands as well as new water-bodies, plus succession between grasslands and woodlands represents outstanding examples of significant and ongoing, dynamic ecological and biological processes. Wet alluvial grasslands occupy nearly two-thirds of the park area and are maintained by annual flooding and burning. These natural processes create complexes of habitats which are also responsible for a diverse range of predator/prey relationships.</p> <p>(c) KTR provides habitat for a number of globally threatened species including tiger, Asian elephant, wild water buffalo, gaur, eastern swamp deer, Sambar deer, hog deer, capped langur, hoolock gibbon and sloth bear. The park has recorded one of the highest densities of tiger in the country and has been declared a Tiger Reserve since 2007. The park's location at the junction of the Australasia and Indo-Asian flyway means that the park's wetlands play a crucial role for the conservation of globally threatened migratory bird species. The Endangered Ganges dolphin is also found in some of the closed oxbow lakes.</p> <p>(d) Excess water of river Brahmaputra drains through KTR back to the river and recharge all important water bodies annually.</p> <p>The values enumerated in TCP draft are shown in the table below this Para. Most values are systematically identified, assessed and monitored.</p>
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Values	Focal Management Targets	World Heritage Values	Additional Attributes
BIODIVERSITY VALUES	Greater One Horned Rhinoceros	World's largest population	A 'keystone' species of the wet grassland habitat in mainly the Brahmaputra river flood plains.
Wild Buffalo	World's largest population	An endangered species mainly confined to the site.	
Eastern Swamp Deer	World's largest population	Endemic species mainly confined to the site.	

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Asian Elephant	Large population	Approximately 15% of north east Indian population confined to the site	
Tiger	Highest density in any protected area	The site is recognized as tiger reserve	
Raptors, Turtles,	High diversity	Significant breeding habitat of 13 species of turtle and several species of Raptors	
Resident and migratory waterfowl	High density	Already identified as Important Bird and Biodiversity Area (IBA) site [Code IND390, IBA Criteria A1, A2, A4i and A4iii]	
River floodplains and wetlands	Large diversity of aquatic fauna, Important Bird Area (IBA), important waterfowl flyway and wintering ground	Breeding habitat for a large number of fish species and Gangetic river Dolphins(30% of the Indian river dolphin population)	
Other Natural Values	Mosaic of tall and short grassland habitat	Unique diversity of wetlands(beels), grasslands and forests	Highly dynamic river system
Cultural / Social Values	Tourism	A natural heritage site of immense diversity and close to a proposed cultural heritage site – Majuli	Famous and popular wildlife tourism site not only for the region but nationally and globally.
Ethno botanical values	Rich diversity of medicinal with continued traditional use by local community from the surrounding landscape	Genetic reservoir for economically important plants	

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		a) TCP (Volume A) Section 3.8	The key threats include rhino poaching, riverbank erosion, invasive species, tourism pressure, heavy highway traffic on the National Highway through KTR, and livestock grazing. Some of these threats are explained in detail as follows; (a)Poaching of wild animals, mainly Great One horned rhinoceros is the biggest threat of the Park. (b) The river bed of Brahmaputra was raised during 1950 high intensity earthquake and also by gradual silt deposition. The runoff from catchment areas during the monsoon often results in high intensity flood. Similarly flash flood breach the dykes on the eastern side of KTR resulting in sudden rise of water, unusual to the normal drainage pattern. (c) Erosion is one of the major factors playing a vital role on the future of the park.
Threats generally identified but not systematically assessed.	Fair		Page 61	
Nic x Most threats systematically identified and assessed.	Good	✓	b) DETAILED REPORT ON	
All threats systematically identified and assessed.	Very good		ISSUES AND POSSIBLE SOLUTIONS FOR LONG TERM PROTECTION OF THE GREATER ONE HORNED RHINOCEROS IN KAZIRANGA NATIONAL PARK PURSUANT TO THE ORDER OF	

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

		<p>THE HON'BLE GAUHATI HIGH COURT. Section 7.3 Page: 126</p> <p>c) "UNESCO – IUCN Enhancing Our Heritage Project : Monitoring and Managing for Success in Natural World Heritage Sites Initial Management Effectiveness Evaluation Report : <i>Kaziranga National Park, Assam, India, August 2003</i> (Page 12.)</p>	<p>Every year large chunks of land from the northern boundary are washed away by the Brahmaputra river. The points of erosion go on changing according to the change of course of the river. Sometimes the areas eroded earlier are restored by heavy silt depositions. The gravity of the situation can be judged from the fact that the estimated area of the park in 1998 by computation from a study based on multi-date satellite remote sensing was found as 40,790 ha as against the notified area of 42,993 ha in 1974.</p> <p>Flood of mild nature is required for maintaining the habitat of the Park; however floods of high intensity, which is in fact a regular phenomenon, causes severe losses to the Park in terms of death of wild animal in large numbers, damage to infrastructure etc.</p> <p>(d) Continuous sedimentation and invasion of <i>Eichornia</i>, <i>Mikania</i>, <i>Mimosa</i>, <i>Bombax ceiba</i>, <i>Lagerstroemia spp</i>, <i>Glochydion indica</i> etc. in the existing water bodies and on the land have posed a big problem for the existence of the wetlands of the Park. Since the wetlands of the Park is an integral part for survival of the many important Fauna such as Rhinos, Wild Buffalo, myriad bird species etc. the Park management is facing tremendous problem for containing sedimentation and weed invasion..</p> <p>(e) Pollution and contamination from effluents from the oil industry is also a threat.</p> <p>(f) There are encroachments in 2nd, 3rd and 5th Addition areas of KTR.</p> <p>The threat from Rhino poaching is understood from the statistics shown in the table below this Para;</p>
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*This assessment should be based on number, nature and extent of threats

Rhino poaching (last four years)

YEAR	POACHED RHINO
2014	27
2015	17
2016	18
2017 till November 2017	6

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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1.3 Is the 'Core Area' of TR free from human and biotic interference* ?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Discussion with Field Director (FD) and visit of the Park by the team.	There is no human habitation inside the core area of the TR. However, there are villages inside the 2 nd , 3 rd and 5 th additions. Moreover these additions are yet to be handed over to KTR management. There is poaching, illegal cattle grazing in some parts of the Reserve.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Discussion with FD	<ol style="list-style-type: none"> 1. Legal delineation of core and buffer has been notified. 2. Tiger conservation foundation has been established 3. TCP is under preparation. 4. Steering committee for Tiger Conservation has been constituted and the last they met was in 2014-15. No meeting has been conducted thereafter. 5. It is found that the Viscera sample after tiger death is sent for examination in the lab in Guwahati, but the reports are not collected in time and sometimes the crucial clue in the investigation is missed. To this extent, the SOPs are not being followed.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair	✓		
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		Discussion with FD and DFO Wildlife Navgaon	Management of Core is under Field Director of Tiger Reserve. Buffer is also under partial control of FD except a small portion, which is not under his control. There are the two Sanctuaries namely Laokhowa Wildlife sanctuary and Burachapori Wildlife sanctuary which are in the buffer of KTR and situated in the west of TR and are managed by DFO Wildlife Navgaon, who reports to Chief Wildlife Warden directly.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good	✓		
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good			

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Discussion with FD and IGF NTCA.	The work of preparation of TCP is nearing completion. MEE team has relied on this newly coming up document to answer many questions.
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		a) TCP (Volume A) Section: 7.3.1 to 7.4.7 Page no.136-209	There are ample provisions and plans listed in TCP under preparation, which guides the management to safeguard the wildlife values, especially threatened biodiversity values. The said Plans are listed below; a) Zone Plan for Relocation of Population b) Zone Plan for Erosion Control c) Zone Plan for Tourism d) Zone Plan for Grassland Management e) Zone Plan for Eastern Swamp Deer f) Zone Plan for Bengal g) Zone Plan for Wetlands h) Zone Plan for the Gangetic River Dolphin i) Theme Plan for Long Term Rhino Conservation j) Theme Plan for Elephant Conservation k) Theme Plan for Turtle Conservation l) Theme Plan for Habitat Extension m) Theme Plan for Habitat Improvement n) Theme Plan for Floods and Disaster Management, o) Theme Plan for Highland Management
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work are intended to work**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Based on the discussions done with the Field Director and his team	<ol style="list-style-type: none"> The institutions like Assam Agriculture University, Jorhat, and NGOs like Aarnayak, Bhumi, LBCS, WTI, WWF and local tour operators were involved in the planning process. Also in the buffer areas of Laokhowa WLS and Burachapori WLS, EDCs are involved in the planning process.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

⁺The result of participation must show in the field and not merely reported as a routine exercise.

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		TCP Section:4.2 Page-69	<p>Some important habitat improvement works taken up in KTR are as below;</p> <p>(a) 'Seral' stage of grassland is maintained by burning the grassland. This helps in enhancing the nutritional value of coarse grasses in new shoots.</p> <p>(b) Some water bodies inside the Park have shrunk in size due to siltation caused by flood. Though de- siltation is taken up but not comparable to the magnitude of the problem.</p> <p>(c) The proliferation of various weeds like <i>Mikania</i>, <i>Mimosa</i> and <i>Eichhornia</i>, causes ecological degradation of the habitat. The target is huge and the achievements are comparatively less.</p> <p>(d) With the onset of dry season, earthen bunds are also constructed in some of the <i>Beels</i> (water bodies) to retain water to attract various species of migratory avifauna.</p> <p>(g) About 111 highlands have been constructed inside the Park to provide shelter to the animals during high flood. This includes 33 new highlands constructed during 2016. These were very helpful during high flood of 2017.</p> <p>(h) Tree species of <i>Bombax cieba</i>, <i>Lagestromia parviflora</i>, <i>L. speciosa</i> are uprooted to prevent their invasion in grassland.</p>
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

⁺This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

habitats. Have these been addressed? Is there a planning process in place? The management practices dealing with invasive species such as *Lantana sp.*, *Mikania sp.* etc. would be examined.

2.5 Does the TR has an effective Protection Strategy (PS)+ and Security Plan and Security Audit(SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor			<p>The poaching of the Rhino is the biggest challenge for management. At strategic location and also on the periphery of the Park camps are constructed on stilt. There are 178 such camps in operation. Some of the newly constructed camps are with the concept of Watch tower cum camp. There are 4 to 5 personnel in each of these camps who patrol the Park, collect intelligence and act on credible information. The members in the camp comprise of home-guards, casual workers, trained Forest staff and members from Assam Forest Protection Force and have been provided necessary equipments like fire power i.e. guns and bullets, binoculars, camera, GPS etc.</p> <p>Anti Rhino Poaching Task Force (ARPTF): The Govt. of Assam, vide their order No. FRW.2/2014/2 Dt. 16Th May, 2014 constituted the "Anti Rhino Poaching Task Force" a Special Task Force under the overall supervision of the Addl DG (P), STF, Assam with the Superintendents of Police of Golaghat, Nagaon, Sonitpur and Karbi Anglong districts along with the Park authorities. The Director, Kaziranga National Park is a member of the ARPTF. The Task Force has already started its operations in the last week of May, 2014 as many arrests of poachers were made by police and forest personnel in a series of commando based raids.</p> <p>Use of Dog Squad: Dog squad was used for the first time in Kaziranga National Park in 2013. Looking at the advantage that the dog squad offers, the Park authorities are using it frequently since January, 2014. Currently "Zorba" a trained member of the Dog Squad Unit trained as a tracker dog has been stationed at Kaziranga for investigating wildlife crimes in the Park.</p> <p>Electronic Eye; The project in its current phase consists of 9 nos of 45 m tall towers (one of which at Kohora is the control tower),</p>
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>each mounted with a very high resolution optical and thermal camera. The resolution of the optical camera is such that about 6-8 km radius around the tower is visible in day light, while at least 3 km visibility is available using thermal cameras at night. The images would be beamed to the control panels located at the Central Control Room Kohora. The monitoring team at Kohora keeps surveillance over portion of the Park covered under each of the towers.</p> <p>Anti Poaching Measures Taken; The Government of Assam has not only taken effective steps to protect rhino in all rhino bearing areas but has also made sincere efforts to scientifically plan and manage its protected areas to ensure long term survival of rhino, assemblages and habitats. With the spurt in poaching incidents, following major initiatives have been taken by the Government:-</p> <ul style="list-style-type: none"> • Government of Assam has taken many measures for effective management of Wildlife in the state including legislative changes, bringing Wildlife (Protection) (Assam Amendment) Act, 2009 for strict enforcement in handling wildlife crime including poaching of Rhinos. • Additional support for control of poaching in KTR has been provided by placing 535 Assam Forest Protection Force personnel with 200 SLRs and 125 home guards. Process is on to acquire more sophisticated arms like AK Series weapons. <p>The Government has engaged services of the elite investigation agency of the country, the CBI, to establish forward and backward linkage of the wildlife crime.</p> <ul style="list-style-type: none"> • An Electronic surveillance system, called the Electronic Eye in under implementation in Kaziranga. Under the scheme, 8 nos of tall towers of 45 meter height and one control tower are erected and fitted with visual and thermal imaging cameras with 24X7 access. • Aerial surveillance using Unmanned Aerial Vehicle (UAV) has been tested in Kaziranga. However, the Govt of India, Ministry of Defense has so far not given clearance on flying of UAVs in the Park. • A “Special Task Force” under Addl D.G. of Police has already been constitution by the Govt. of Assam. The Force has become
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				operational in the field. The Tiger Reserve has a very comprehensive security plan however the security audit has not been carried out. The status of offence cases from 2012-13 onwards is shown in below mentioned table;
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

Sl.No.	Offence No.		Date of detection	No. of arrested person
	Divn. SL No.	Range/Beat		
2012-2013				
1	WLE/1	KR/01	24.04.2012	2 Nos.
2	WLE/2	NR/01	14.07.2012	2 Nos.
3	WLE/3	NR/02	24.08.2012	Nil.
4	WLE/4	ER/01	08.12.2012	1 No.
5	WLE/5	KR/02	15.10.2012	1 No.
6	WLE/6	WR/2	09-10-12	Nil.
7	WLE/7	WR/3	16-9-2012	12 Nos.
8	WLE/9	WR/4	11-09-12	1 No.
9	WLE/10	WR/2	02-04-12	12 Nos.
10	WLE/11	NR/1	01-11-13	12 Nos.
11	WLE/12	NR/4	11-08-12	1 No.
12	WLE/13	ER/1	03-04-12	1 No.
13	WLE/14	ER/03	30/3/2013	4 Nos.
14	WLE/15	WR/6	14/3/2013	1 No.
15	WLE/16	NR/02	29/3/2013	1 No.
16	WLE/17	NR/03	30/3/2013	2 Nos.
17	WLE/18	NR/04	31/3/2013	2 Nos.
2013-2014				
1	WLE/14	NR/05	04-03-13	3 Nos.
2	WLE/15	KR/7	13/5/2013	2 Nos.
3	WLE/16	ER/2	26/3/2013	5 Nos.
4	WLE/17	NR/06	05-04-13	1 No.
5	WLE/18	WR/7	18/3/2013	2 Nos.
6	WLE/19	ER/04	29/04/2013	6 Nos.
7	WLE/20	ER/08	06-10-13	2 Nos.
8	WLE/21	ER/05	06-01-13	1 No.
9	WLE/22	ER/07	06-02-13	3 Nos.
10	WLE/23	ER/05	06-02-13	7 Nos.
11	WLE/28	WR/02	21/7/2013	3 Nos.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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12	WLE/29	WR/01	24/6/2013	3 Nos.
13	WLE/30	NR/08	15/9/2013	2 Nos.
14	WLE/31	NR/09	10-04-13	2 Nos.
15	WLE/33	KR/2	03-03-14	1 No.
2014-2015				
1	WLE/10	WR/01	26/08/2014	1 No.
2	WLE/11	BR/1	05-10-13	4 Nos.
3	WLE/13	WR/03	06-09-14	1 No.
4	WLE/18	NR/01	11-01-14	1 No.
5	WLE/19	ER/01	11-09-14	2 Nos.
6	WLE/20	KR/04	30/08/2014	2 Nos.
7	WLE/24	ER/02	30/09/2014	1 No.
8	WLE/25	NR/02	15/12/2014	1 No.
9	WLE/26	NR/03	16/12/2014	1 No.
10	WLE/27	NR/04	21/12/2014	2 Nos.
11	WLE/28	BR/05	28/12/2014	1 No.
12	WLE/30	ER/3	20/2/2015	1 No.
13	WLE/31	NR/06	12.01.2015	1 No.
14	WLE/32	NR/07	06.02.2015	1 No.
15	WLE/33	NR/08	12.02.2015	2 Nos.
2015-2016				
1	WLE/01	WR/04	29.09.2014	1 No.
2	WLE/02	KR/07	26.02.2015	2 Nos.
3	WLE/03	NR/09	06.03.2015	2 Nos.
4	WLE/04	BR/01	21.03.2015	1 No.
5	WLE/05	BR/02	27.03.2015	1 No.
6	WLE/06	BR/03	04.04.2015	2 Nos.
7	WLE/07	ER/01	16.01.2015	2 Nos.
8	WLE/08	ER/02	30.03.2015	1 No.
9	WLE/09	ER/04	30.12.2014	2 Nos.
10	WLE/10	NR/01	14.04.2015	3 Nos.
11	WLE/11	KR/01	21.04.2015	3 Nos.
12	WLE/12	BR/04	08.03.2015	1 No.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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13	WLE/13	WR/01	14.04.2015	1 No.
14	WLE/17	KR/06	12.12.2014	1 No.
15	WLE/18	NR/08	12.04.2015	1 No.
16	WLE/21	BR/05	08.03.2015	2 Nos.
17	WLE/25	BR/06	22.05.2015	2 Nos.
18	WLE/28	BR/09	09.07.2015	1 No.
19	WLE/29	BR/08	07.07.2015	1 No.
20	WLE/30	KR/02	11.06.2015	1 No.
21	WLE/31	KR/03	02.07.2015	1 No.
22	WLE/32	KR/04	04.07.2015	6 Nos.
23	WLE/35	ER/03	15.04.2015	2 Nos.
24	WLE/36	BR/11	24.07.2015	1 No.
25	WLE/37	ER/04	22.07.2015	1 No.
26	WLE/38	BKT/09	20.04.2015	3 Nos.
27	WLE/45	NR/02	30.04.2015	4 Nos.
28	WLE/46	NR/04	28.05.2015	5 Nos.
29	WLE/47	NR/05	28.06.2015	2 Nos.
30	WLE/49	BR/07	11.07.2015	6 Nos.
31	WLE/51	NR/03	21.05.2015	1 No.
32	WLE/52	NR/04	28.05.2015	6 Nos.
33	WLE/53	NR/07	02.08.2015	1 No.
34	WLE/54	BR/12	19.11.2015	1 No.
35	WLE/55	NR/06	11.07.2015	1 No.
36	WLE/56	NR/08	12.10.2015	3 Nos.
37	WLE/57	BKT/17	14.02.2016	1 No.
2016-2017				
1	WLE/13	BR/01	08.05.2016	4 Nos.
2	WLE/14	BR/02	23.05.2016	1 No.
3	WLE/15	BR/03	25.05.2016	2 Nos.
4	WLE/16	BR/04	16.06.2016	2 Nos.
5	WLE/17	ER/02	02.08.2016	3 Nos.
6	WLE/19	BKT/05	09.07.2016	2 Nos.
7	WLE/20	KR/01	11.06.2016	1 No.
8	WLE/21	KR/02	15.06.2016	1 No.
9	WLE/22	KR/03	17.06.2016	1 No.
10	WLE/23	KR/05	03.09.2016	7 Nos.
11	WLE/24	KR/04	01.09.2016	2 Nos.
12	WLE/25	BKT/06	05.08.2016	1 No.
13	WLE/26	WR/13	03.08.2016	12 Nos.

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Discussion with FD	<ol style="list-style-type: none"> 1. Compensation paid for crop loss, human injury and human death etc is shown in a table below this Para. 2. Public awareness is carried out through regular meetings 3. Solar fencing is being erected in various places to prevent straying of wild animals in human areas. 4. Anti depredation squads are deployed regularly. 5. Alert system is generated for the benefit of communities in the fringe villages. 6. EDCs and NGOs help in mitigating man animal conflict.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

Year	Person killed	injured	Ex-gratia paid (in Rs.)
2011	3 Nos.	4	200,000.00
2012	1 No.	4	100,000.00
2013	3 Nos.	6	450,000.00
2014	2 Nos.	4	200,000.00
2015	0	0	-
2016	1 No.	3	89,833.00
2017 (up to 23/11/2017)	2 Nos.	0	

Nagaon WI Division

Year	No. of Cases	Dead	Injury	House damage	Crop damage	Other s	Sanction amount	No. of paid Cases	Paid amount	No. of to be paid cases	To be paid amount
2012	31	4	11	20	-	-	6,56,000.00	31	6,56,000.00		
2013	26	0	4	14	8	0	90,800.00	26	90,800.00		
2014	11	0	3	8	0	0	45,700.00	11	45,700.00		
2015-16	41	0	7	29	5	0	1,47,500.00	41	1,47,500.00	48	1,67,013.00

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		i) Kaziranga Tiger Reserve TCP 2014-15 to 2024-25 Volume C Part I&II CORRIDOR Page 48 of 149 Section 3 of Volume C part 1 &2	Kaziranga Tiger Reserve is connected to different PAs and Forested areas through structural and functional corridors- i) Corridors on the South & ii) Riverine Corridors Corridors on south of the KTR links forested wildlife habitats in Karbi Anglong, Cachar and Nagaland. Riverine Corridors links Orang Tiger Reserve in the west and Forested areas located north of the Brahmaputra and Arunachal Pradesh. The corridors connecting the PAs are generally human dominated areas and do not serve the purpose in true sense. However TR is quite well integrated in the landscape.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Discussion with FD	Adequate staff has been allocated for different management activities. Though there is some vacancy shown in the table below, it has been made up by other category staff like Assam Forest Protection Force, Home Guards, and Casual Workers etc of frontline staff. The vacancy shown is given in the table given below for both core and buffer management of TR.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

Name of Post	Sanction strength	Man in Position	Existing Vacancy
DCF	2	2	0
FVO	1	1	0
WLRO	1	1	0
ACF	4	4	0
Forest Ranger	10	7	3
Deputy Ranger	10	10	0
Game Keeper	3	0	3
Forester-I	67	67	0
Hd GW	5	0	5
Forester-II	34	21	13
Forest Guard	298	233	65
Game Watcher	75	52	23
Head Mahut	1	0	1
Mahut	35	18	17
Tractor Driver	2	1	1
Driver	20	7	13
M.L. Driver	6	2	4
OBM Driver	2	2	0
R. Technician	1	1	0
Electrician	1	0	1
Boatman	77	74	3
Grass Cutter	36	35	1
Office Peon	9	4	5
Chowkidar	14	6	8
Mali	3	1	2
Handiman	1	1	0
Vety Field Asstt	1	0	1
Paniwalla	1	0	1

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Khansama	2	0	2
Sweeper	3	0	3
Hd Asstt	1	1	0
Accountant	2	2	0
Senior Asstt	6	4	2
Junior Asstt	11	8	3
Range Asstt	1	0	1
Statistical Asstt	1	1	0
Record Kepeer	1	0	1
TOTAL	748	566	182

Table 2:

Staff Details	Man in Position
Casual Workers	308
AFPF	405
Home guards	177
Deputation	47

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Discussion with FD	Resources like Vehicles, Country boats, Mechanized boats, All Terrain Vehicles, Elephants are adequately and specifically allotted to achieve, supervision and monitoring management activities. Besides wireless, GPS, Binoculars, Night Vision Devices, Range finder etc. provided for specific purposes. The resources are well organized and accessed by the concerned staff. The list of the resources are listed in table below this Para ;
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

***These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

List of Vehicles in KTR

Type of vehicle	Serviceable	Unserviceable	Total
Bolero	8	0	8
Bolero SLX	1	0	1
Bolero Invader	1	0	1
Bolero Camper	6	0	6
Gypsy	20	2	22
Gypsy (King)	1	0	1
Maruti Van	1	0	1
Mahindra Thar	1	0	1
407 Truck	4	2	6
Tractor	1	3	4
Motor Cycle	12	2	14
Total	56	9	65

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Boats

Type of Boat	Serviceable	Un-Serviceable
Mechanized Boat	8 Nos	1 No.
Speed Boat	48 Nos.	8 Nos
Country Boat	180 Nos	16 Nos
Ship	2 Nos	2 Nos.
Rubber Boat	1 No.	1 No.

Arms

SI No.	Type of Arms	Serviceable							Total Serviceable	Unserviceable	Lost/snatched	Seized	Grand Total
		E R	K R	W R	BP R	N R	BOB KT	Div n					
1	0.315 Rifle	23	24	102	15	12	8	1	185	301	5	7	498
2	0.303 Rifle	39	27	48	17	4	5		150	50			200
3	0.32 Revolver								9	2	1		12
4	.12 Bore DBBL Gun	2	10	6	2		6		26	37	1	1	65
5	.12 Bore SBBL Gun		5	1			1		7	19		7	33
6	Tranquilising Gun								3	2			5
7	.22 rifle									1			1
8	.243 win caliber rifle									10			10
9	.470 DBBL Rifle									1			1
10	.404 Rifle									1			1
Grand Total									380	424	7	15	826

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Discussion with FD and perusal of records in his office	There is comprehensive planning and allocation of resources for objectives. The funds are released by NTCA on time, but final release from the state is delayed and that is how sometimes the funds are not fully utilized. Table showing fund released from the Central government for past few years is given below this Para.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

Year	Scheme	Total sanction	Total release	Utilized	Date of receipt of fund
2012-13	CSS-PT Central share 1 st release	250.286	250.286	250.286	26/03/2013
	CSS-PT –State share		14.92	14.92	30/03/2013
2013-14	CSS-PT Central share 1 st release	708.906	550.869	550.869	05/03/2014
	CSS-PT –State share		27.113	27.113	05/03/2014
2014-15	CSS-PT Central Share 1 st release	905.577	174.973	174.973	17/12/2014
	CSS-PT Central Share 2nd release		437.686	437.686	26/03/2015
	CSS-PT State share		Nil	Nil	
2015-16	CSS-PT Central Share Additional release	457.80	457.80	457.80	14/09/2015
	CSS-PT Central Share 1 st release	866.8088	484.99	484.99	04/02/16
	CSS-PT Central Share 2nd release		60.97478	60.97478	30/03/16
2016-17	CSS-PT Central Share 1 st release	622.94	523.885	523.885	02/03/17
	CSS-PT Central Share Unspent balance of 2015-16		220.4841	220.4841	23/09/16
	CSS-PT Central Share Unspent balance of 2015-16		136.12	136.12	20/01/17
	CSS-PT State share		163.814	163.814	28/03/17

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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a) The details of funds released by Central Govt. and their utilization for the last three years.

Year	Scheme	Total Sanction	Total Release	Utilized	Date of Receipt of Funds
2014-15	CSS-PT-Central Share-Fresh Released	1,93,74,000.00	1,54,99,300.00	1,54,99,300.00	20-05-2014
	CSS-PT-Central Share-2 nd Released				15-01-2015
	CSS-PT-State Share				
	CSS-BR	0	0	0	
	CSS-PE	0	0	0	
	CAMPA-Project	0	0	0	
	APFBC-Sate Fund	28,00,000.00	28,00,000.00	28,00,000.00	
2015-16	CSS-PT-Central Share-Fresh Released	80,50,383.00	64,40,307.00	64,40,307.00	19-02-2016
	CSS-PT-Central Share-Balance Amount Released				30-03-2016
	CSS-PT-State Share				
	CSS-BR	0	0	0	
	CSS-PE	0	0	0	
	CAMPA-State Fund	0	0	0	
	APFBC-State Fund	34,73,000.00	34,73,000.00	34,73,000.00	
2016-17	CSS-PT-Central Share-Fresh Released	1,96,51,480.00	1,57,21,185.00	1,57,21,185.00	27-10-2016
					23-02-2017
					20-03-2017
	CSS-PT-State Share	15,37,500.00	12,30,000.00	12,30,000.00	31-03-2017
	CSS-BR	0	0	0	
	CSS-PE	0	0	0	
	CAMPA-State Fund	0	0	0	
APFBC-State Fund	65,43,000.00	65,43,000.00	65,43,000.00		
Total =		5,17,06,792.00	5,17,06,792.00	5,17,06,792.00	

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Discussion with FD and verification of records in his office.	Table for fund released from the state government for last three years is given below this Para. Generally the releases are made on time and also the funds are fully utilized.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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**Details of fund received from the State Govt.under different Non-Plan Head for the last three years
Pertaining to Eastern Assam Wildlife Division,Bokakhat**

Year	Scheme	Total amount received
2014-15	Elephant Feed	42,00,000.00
	Forest Protection	34,50,000.00
	Building maintenance	4,75,000.00
	Road maintenance	3,75,000.00
	Staff ration allowance	73,05,000.00
	Vehicle maintenance	50,000.00
	Office expenses	70,000.00
	Total amount received under different Non-Plan head	1,59,25,000.00
2015-16	Elephant Feed	43,07,000.00
	Forest Protection	48,50,000.00
	Building maintenance	5,00,000.00
	Road maintenance	10,00,000.00
	Staff ration allowance	44,36,000.00
	Vehicle maintenance	50,000.00
	Office expenses	45,000.00
	Total	1,51,88,000.00
2016-17	Elephant Feed	34,13,338.00
	Forest Protection	29,76,000.00
	Building maintenance	1,76,000.00
	Road maintenance	8,64,000.00
	Staff ration allowance	59,64,000.00
	Vehicle maintenance	20,000.00
	Office expenses	22,000.00
	Total	1,34,35,000.00

**Details of fund allotted by the State Govt.under Salary component under Non-Plan for the last three years
Pertaining to Eastern Assam Wildlife Division,Bokakhat**

Year	Scheme	Total sanction(in lakhs)
2014-15	Salary component	1326.87
	Total	1326.87
2015-16	Salary component	1330.75
	Total	1330.75
2016-17	Salary component	1584.02
	Total	1584.02

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Perusal of records in FD office	NGOs do not support the management with any direct funding, however some of them support in kind for activities such as insurance of the field staff, logistics like vehicles, bikes, shoes, jacket, torch, conducting animal health camps etc
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Discussion with FD and perusal of records	Number of staff trained at different levels are given below: DCF-1 PG Diploma in Wildlife Management WLRO: PG Diploma in Wildlife Management ACF: Certificate in Wildlife management Wildlife management is one of the important subjects in the foundation training of frontline staff i.e. RFO, Forester and Forest Guards. Short duration workshops, training etc are regularly organized to upgrade their knowledge and skill in the subjects relating to Wildlife management.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Discussion with FD and DFO WL Navgaon	<ol style="list-style-type: none"> The protection is the prime objective of the management and all efforts are taken to preserve the flora and fauna. The performance of the staff is judged based on the status of protection in their respective jurisdiction. During wildlife week celebration at state level, the staffs are rewarded based on their performances. The staffs of Kaziranga Tiger Reserve receive several of these awards.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good			
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good	✓		

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Kaziranga Tiger Reserve TCP 2015-16 to 2025-26 Volume A Section 6.11 Page 131	<ol style="list-style-type: none"> Public is supportive for TR management. In the recent flood in 2017, the public have gathered in big number and have regulated the movement of vehicles to enable the wild animals to cross the road towards Karbi Anglong hills. The public help the forest department in rescuing of
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good	✓		<p>distressed animals like deer, rhinos etc.</p> <p>3. Whenever it is necessary, additional assistance in patrolling is provided by private Jeep safari etc.</p> <p>Apart from the anti protection measures undertaken by staff, the following stakeholders also chip in some way to help the management:</p> <ul style="list-style-type: none"> . Local Population of Kaziranga Landscape <ul style="list-style-type: none"> ▪ EDCs ▪ Fringe Villages ▪ Tea gardens Tourists visiting Kaziranga . Local Civil Society Organizations .Local Business Entities dependent upon Tourism in Kaziranga <ul style="list-style-type: none"> • Hotel owners • Tour operators • Commercial establishments
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**The involvement of NGOs/ NGOs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Discussion with FD and DFO Wildlife Navgaon	<ol style="list-style-type: none"> 1. Every range and Division HQ has a control room to respond to distress calls. The phone numbers are displayed on the highway in the banners and posters. 2. The written complaint is also investigated and suitable action is taken. 3. Public grievance mechanism in buffer areas especially in the control of DFO Wildlife Navgaon is also very strong.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good	✓		

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.5 Does TR management address the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		TCP. Vol .A Section5.2.1	EDCs have been constituted in fringe villages within 1 to 3 km from the boundary of the Park. Development works undertaken by EDCs improve the infrastructure and hence the economic condition of the villagers. EDCs work under overall administration of the Forest Development Agency (FDA). The FDA for Kaziranga was registered on 24th July, 2011. The list of EDCs and the amount involved in activities undertaken by them are shown in the series of tables below this Para.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

EDCs: List 1

Sl. No	Name of EDC	Name of Revenue Village	House Hold	Population	Existing House Hold	Existing Population
1	Sildubi-Haldhibari	No.1 Sildubi	126	596		
		No.2 Sildubi	111	624		
		Haldhibari	85	397		
2	Hatikhuli-Amguri-Holmora	Hatikhuli T.G.	965	4624		
3	No.1 Kohora	No.1 Kohora	413	1899		
4	Halowa N.C.	Halowa N.C.	310	1311		
5	Chepenakubua	Chepenakubua	168	714	142	555
		Halowagaon	13	47		
6	Bochagaon	Bochagaon	291	1404		
7	Kakjuri-Panbari	Kakjuri	137	707		
8	Diffalopathar	Diffalopathar	618	3010	108	343
9	Japoripathar	Japoripathar	63	297	69	287
10	Da-Gosanibor	Gosdanibor	229	1071		
11	Lukhurakhonia-Domjan	Lukhurakhonia	79	348	79	395
		Domjan No.1	68	341	122	694
		Domjan No.2	28	145		
12	No.2 Kohora-Mohpora	No.2 Kohora	124	672	138	578
		Mohpora	104	529		
13	Panbari Missing Adarsagaon				219	1170
14	Palashguri-Dhansirimukh	Palashguri	240	1221		
15	Ahomgaon	Ahomgaon	361	1784	287	1412
16	Dhubaati-Beloguri	Beloguri	162	956	112	682
17	Teliabari-Sarogaon				80	499
18	Egaratoli	Egaratoli	32	156	112	512
19	Tamulipathar	Tamulipathar	97	529	139	696
20	Borbheta	Borbheta	190	924		
21	Bohikhowa	Bohikhowa	493	3139	800	4365
22	Bagori	Bagori	278	1223	279	957
23	Harmoti	Harmoti No. 1	259	1394	373	2402

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

		Harmoti No.2	107	520		
24	Nabasti - Najan	Nabasti	153	670	159	670
		Najan	442	2137	501	1476
25	Kuthori - Baghmari	Kuthori	170	777	299	1397
		Kuthori TE	76	331		
			103	465		
26	Deopani - Bandardubi	Deopani	153	833	70	921
		Bandardubi	214	1285	251	1740
27	Kanchanjuri - Mandugaon	Kanchanjuri	58	248	258	1630
28	Naharubasti - Silimkhowa	Naharubasti	77	336	126	800
		Silimkhowa	116	619	93	600
29	Natundanga	Natundanga	79	594	72	350
30	Rangalugaon	Rangalugaon	91	923	168	545
31	Amgurigaon	Amgurigaon	157	349	170	965
32	Deosurchang	Deosurchang	207	1078	110	780
33	Phulogurichang	Phulogurichang	78	1051	100	530
34	Amguri Bagan	Amguri Bagan				
35	Rangchali	Rangchali			150	700
36	Kachakatia	Kachakatia			140	700
37	Dipordani gaon	Dipordani gaon			80	400
38	Difalupathar Sukani gaon	Difalupathar Sukani gaon			70	350
39	Bahbari	Bahbari			60	300
40	Baruapathar	Baruapathar			80	400
41	Balamguri dani gaon	Balamguri dani gaon			70	350
42	Amguri dani gaon	Amguri dani gaon			70	350
43	Gopaljarani	Gopaljarani			40	400

Area	Village Name	Village Type	Total House holds	Total Population	Total Male	Total Female	Revenue Circle	District
Laokhowa	ChitalmariPathar	Revenue	401	2903	1468	1435	Rupahi	Nagaon
	DhingbariPathar	Revenue	339	1921	980	941		
	LalungGaon	Revenue	662	3927	2039	1888		
	KachariGaon	Revenue	313	1777	920	857		
	Kathalguri	Revenue	682	3925	2030	1895		
	KaliaDinga	Revenue	682	3925	2030	1895		
	KaliaDinga Pam	Revenue	407	2325	1182	1143		
	PachimPotaljar	Revenue	442	2550	1290	1260		
	Pub Potaljar	Revenue	868	5354	2711	2643		
	Pub Amrakanda	Revenue	431	2551	1322	1229		
	PachimSingimari	Revenue	788	4256	2198	2058	Samaguri	
	Pub Singimari	Revenue	628	3367	1718	1649		
	Pub Salpara	Revenue	279	1610	849	761		
	Bhurbandha No 3	Revenue	256	1542	825	717		
	Bogamukh No 5	Revenue	111	736	370	366		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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	Bogamukh No 6	Revenue	198	1253	655	598		
	Bogamukh No 7	Revenue	320	1940	995	945		
	Haldhiasuti TV	Taungiya	65	-	-	438	Ruphi	
	LalungGaon TV	Taungiya	67	-	-	336		
	Kaliadinga TV	Taungiya	55	-	-	272	Samaguri	
	Nalkata TV	Taungiya	47	-	-	280		
	Sunsahar TV	Taungiya	48	-	-	326		
	Laokhowa TV	Taungiya	85	-	-	437		
	Barunguri TV	Taungiya	42	-	-	175		
	Singimari FV	Forest	185	-	-	986		
Burhachapori	ChenimariBeel NC	Revenue	138	1249	636	613	Rupahi	Nagaon
	ChitalmariBeel NC	Revenue	236	1480	784	696		
	ChitalmariPathar	Revenue	401	2903	1468	1435		
	Bogamukh No 4	Revenue	159	1029	531	498	Samaguri	Do
	Bogamukh No 5	Revenue	111	736	370	366		
	Bogamukh No 6	Revenue	198	1253	655	598		
	Bogamukh No 7	Revenue	320	1940	995	945		
	Sisuoti-Jhaoni	Revenue	83	-	-	234	Tezpur	Sonitpur
	Dhania	Revenue	116	-	-	365		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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List of Registered Eco-Development Committees under FAWL Division Bokakhat, Fund Sanctioned from APERC.

SL.No.	Name of EDC	Name of Range	Proposed Amount for Entrypoint activities	Amount released (1st Installment)	Amount released (2nd Installment)	Activities	Estimated Amount	Works executed Yes/No	Balance Amount	To be released	Proposed Activities	Estimated Amt.
1	1 No, Kohora P.O.- Kaziranga National Park Dist.- Golaghat (Assam)		Rs. 25,00,000/-	Rs. 12,50,000/-	Nil	1. Cultural Centre cum EDC office	Rs. 25,00,000/-	Yes	Nil	Rs. 12,50,000/-		
			Total-					Rs. 25,00,000/-				
2	Chepenakubua P.O.- Kaziranga Dist.- Golaghat (Assam)	Kaziranga Range, Kohora	Rs. 25,00,000/-	Rs. 10,00,000/-	Nil	1. Construction of Dairy Firm.	Rs.3,00,000/-	Yes	Rs. 440/-	Rs. 15,00,000/-	1. Construction of Pigsty Building.	Rs. 10,50,000/-
						2. Construction of Broiler Firm.	Rs.1,80,000/-	Yes			2. Purchasing of Pig	Rs. 2,10,000/-
						3. Construction of Goatery Firm.	Rs.1,50,000/-	Yes			3. Purchasing of Duck	Rs.2,40,000/-
						4. Purchase of 32 nos Tailoring Foot Machine.	Rs.2,34,560/-	Yes				
						5. Fishery Development	Rs.60,000/-	Yes				
						6. Home stay Renovation	Rs.75,000/-	Yes				
						Total-						
3	Difalupathar P.O.- Borjuri Dist.- Golaghat (Assam)		Rs. 25,00,000/-	Rs. 12,50,000/-	Nil	1. Desk-bench supply at Japoripathar L.P. school	Rs. 1,20,000/-	Yes	Rs.1,40,000/-	Rs. 12,50,000/-	1. Earth filling of EDC Office	Rs. 1,50,000/-
						2. Installation of Ceiling of Japoripathar M.E. school	Rs. 90,000/-	Yes			2. MS Grill for EDC Office	Rs. 2,00,000/-
						3. Construction of Community Hall.	Rs. 9,00,000/-	Yes			3. Construction of Market Shed	Rs. 3,00,000/-
						Total-						
4	Japoripathar P.O.- Borjuri, Dist.- Golaghat (Assam)	Kaziranga Range, Kohora	Rs. 25,00,000/-	Rs. 12,50,000/-	Nil	1. Construction of Community Hall	Rs. 8,00,000/-	Yes	Rs. 4,50,000/-	Rs. 12,50,000/-		
Total-						Rs. 8,00,000/-						
5	Teliabari-Sarogaon P.O.- Borjuri, Dist.- Golaghat (Assam)		Rs. 25,00,000/-	Rs. 12,50,000/-	Nil	1. Construction of Handloom Centre.	RS. 9,00,000/-	Yes	Rs. 2,38,000/-	Rs. 12,50,000/-	1. Installation of Hand Tubewell	Rs. 2,28,500/-
						1. Purchase of Handloom & other assecories.	Rs. 1,12,000/-	Yes				
						Total-						
6	Agoratoli P.O.- Borjuri, Dist.- Golaghat (Assam)	Eastern Range, Agaratoli	Rs. 25,00,000/-	Rs. 10,00,000/-	Nil	1. Constructing Community Hall	Rs. 5,00,000/-	Yes	Nil	Rs. 15,00,000/-	1. Purchase of Tractor	Rs. 10,15,124/-
						2. Making 2 nos. Country boat	Rs. 2,00,000/-	Yes			2. Purchasing 21 nos Tailoring Machine	Rs. 1,36,500/-
						3. Purchase of 32 nos. Tailoring foot Machine.	Rs. 2,20,000/-	Yes			3. Purchasing of 35 nos. Cow	Rs. 3,48,390/-
						4. Agaratoli connecting road repairing.	Rs. 80,000/-	Yes				
						Total-						
7	Tamulipathar P.O.- Borjuri, Dist.- Golaghat (Assam)		Rs. 25,00,000/-	Rs. 10,00,000/-	Nil	1. Constructing Community Hall	Rs. 7,50,000/-	Yes	Nil	Rs. 15,00,000/-	1. Construction of Sand gravel road	Rs. 9,00,000/-
						2. Renovation of Sat-sang Namghar.	Rs. 2,50,000/-	Yes			2. Tent House	Rs. 4,40,000/-
						Total-						

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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SL.N o.	Name of EDC	Name of Range	Proposed Amount for Entrypoint activities	Amount released (1st Installment)	Amount released (2nd Installment)	Activities	Estimated Amount	Works executed Yes/No	Balance Amount	To be released	Proposed Activities	Estimated Amt.	
			Total-				Rs. 10,00,000/-					Desk-bench	1,69,000/-
												Rs. 15,09,000/-	
8	Bohikhowa, P.O.- Dhansirimukh, Dist.- Golaghat (Assam)	Eastern Range, Agarotoli	Rs. 25,00,000/-	Rs. 10,00,000/-	Rs. 14,47,000/-	1. Constructing 9 Nos. Piggy firm 2. Purchase of 35 nos. Tailoring Foot Machine. 3. Construction of Community Hall.	Rs. 7,41,000/- Rs. 2,59,000/- Rs. 14,47,000/-	Yes Yes No	Rs. 14,47,000/-	Rs. 3,000/-			
			Total-				Rs. 24,47,000/-						
	Dhubaati Beloguri, P.O. Dhansirimukh, Dist.- Golaghat (Assam)		Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil			
9	Bagori P.O.- Bagori, Dist.- Nagaon (Assam)	Western Range, Bagori	Rs. 25,00,000/-	Rs. 12,50,000/-	Nil	1. Construction of Community Hall	Rs. 12,50,000/-	Yes	Nil	Rs. 12,50,000/-	1. Construction of Durga mandir 2. Construction of Namghar 3. Improvement of Cremation Ground	Rs. 7,00,000/- Rs. 5,00,000/- Rs. 2,44,000/-	
			Total-				Rs. 12,50,000/-					Rs. 14,44,000/-	
10	Kuthori Baghmani P.O.- Kuthori, Dist.- Nagaon (Assam)	Western Range, Bagori	Rs. 25,00,000/-	Rs. 10,00,000/-	Nil	Nil	Nil	Nil	Rs. 10,00,000/-	Rs. 15,00,000/-			
11	Kanchanjuri-Mandugaon P.O.- Burapahar, Dist.- Nagaon (Assam)		Rs. 25,00,000/-	Rs. 12,50,000/-	Nil	1. Constructing Community Hall 2. Construction Namghar. 3. Construction of Concrete Floor of Church. 4. Construction of Fishery	Rs. 6,52,000/- Rs. 1,97,000/- Rs. 1,23,600/- Rs. 3,51,000/-	Yes Yes Yes Yes	Nil	Rs. 12,50,000/-			
			Total-				Rs. 13,23,600/-						
12	Naharubasti-Silimkhowa P.O.- Burapahar, Dist.- Nagaon (Assam)	Western Range, Bagori	Rs. 25,00,000/-	Rs. 12,50,000/-	Nil	1. Constructing Community Hall 2. Installation of Hand Tubewell. 3. Installation of Ceiling of Silimkhowa L.P. school. 4. Distributed piglet.	Rs. 6,48,600/- Rs. 1,14,250/- Rs. 1,20,700/- Rs. 2,50,000/-	Yes Yes Yes Yes	Rs. 1,16,450/-	Rs. 12,50,000/-	1. Construction of Road 2. Community Fishery 3. Tent House	Rs. 1,50,000/- Rs. 8,58,700/- Rs. 2,70,000/-	
			Total-				Rs. 11,33,550/-					Rs. 12,78,700/-	
13	Natundanga P.O.- Jakhlabandha, Dist.- Nagaon (Assam)	Burapahar Range, Ghorakati	Rs. 25,00,000/-	Rs. 12,50,000/-	Nil	1. Village road repairing. 2. Construction of Karbi Traditional Food Centre.	Rs. 9,07,900/- Rs. 3,42,100/-	Yes Yes	Nil	Rs. 12,50,000/-	1. Construction of Market Shed 2. Construction of EDC Bhawan	Rs. 3,00,000/- Rs. 9,50,000/-	
			Total-				Rs. 12,50,000/-					Rs. 12,50,000/-	
14	Rangalugaon P.O.- Jakhlabandha, Dist.- Nagaon (Assam)	Burapahar Range, Ghorakati	Rs. 25,00,000/-	Rs. 12,50,000/-	Nil	1. Construction of Weaving centre 2. Construction of Boundary wall of Weaving Centre 3. Construction of Toilet for Weaving Centre.	Rs. 6,90,000/- Rs. 1,08,000/- Rs. 1,00,000/-	Yes Yes Yes	Rs. 500/-	Rs. 12,50,000/-	1. Construction of Community Hall	Rs. 12,50,000/-	

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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					4. Purchase of Handloom and 4 nos. Tailoring Machine and other accessories.	Rs. 2,31,000/-	Yes					
					5. Purchase of Desk-bench and other accessories of L.P. school.	Rs. 1,20,500/-	Yes					
					Total-	Rs. 12,49,500/-				Rs. 12,50,000/-		
15	Amguri Bagan P.O.- Jakhlabandha, Dist.- Nagaon (Assam)		Rs. 25,00,000/-	Rs. 12,50,000/-	Nil	1. Drinking water supply pipe line facilities completed	Rs. 9,01,438/-	Yes	Rs.562/-	Rs. 12,50,000/-	1. Construction of Community Hall cum Kali mandir	Rs. 12,50,000/-
					2. Construction of Dairy Firm.	Rs. 3,48,000/-	Yes					
					Total-	Rs. 12,49,438/-						Rs. 12,50,000/-
16	Borbhela, P.O.- Borjuri, Dist.- Golaghat (Assam)	Forest Beat, Bokakhat	Rs. 25,00,000/-	Rs. 21,52,000/-	Nil	1. Pigery Farm	Rs.1,50,000/-	No	Rs.21,52,000/-	Rs. 3,48,000/-		
						2. Construction of Computer Room	Rs.2,36,000/-	No				
						3. Construction of Community Hall.	Rs.15,00,000/-	No				
						4. Construction of Weaving & Tailoring Centre	Rs. 17,70,000/-	No				
					Total-	Rs. 36,56,000/-						

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor	✓	Discussion with FD and DFO	The territories of the KTR under the control of its management is 100% encroachment free. These territories are the originally notified Kaziranga National Park, the 1 st Addition to KTR, the 4 th Addition to KTR and part of the 2 nd Addition to KTR (in possession of the Park Authorities). However, the areas which are either not finally notified (6 th Addition to KTR), or not handed over by the Revenue Department to the Park Authorities (part of 2 nd Addition to KTR, 3 rd Addition to KTR and the 5 th Addition to KTR) have encroachment. In the 5 th Addition, some areas were forcibly occupied by a certain section of people in 2012 and 2013. It was preceded by encroachments in parts of the 3 rd Addition areas in 2005. Presence of khutis in the 6 th Addition areas is a matter of concern. No relocation is planned for any of the areas occupied.
Plans have been made but no implementation	Fair		Wildlife Navgaon	
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

*Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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5. Output

5.1 *Is adequate information on TR management publicly available?*

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		MEE team visit	<ol style="list-style-type: none"> The Park has an informative website and a Face book page. The park also distributes pamphlets and information brochures to the tourists and school children. Information lounge is maintained in Kohora and Bagori Ranges.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 *Are visitor services and facilities appropriate and adequate?*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Visit and discussion with FD	<ol style="list-style-type: none"> Basic amenities like toilets for tourist, watch towers and information centers are available. Accommodation for tourist is also available which is supported by 28 hotels situated around the park. This information is also available in the KTR website. An Assistant Conservator of Forests is designated as nodal officer for tourism to assist the tourists. Online booking for elephant is also in the process.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

5.3 *Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		TCP. Vol.A Chapter 8	In the past, research in Kaziranga was limited to assessing food preferences of rhinos, land mass dynamics, satellite based habitat suitability analysis, compiling checklist of mammals, birds,
Some evaluation and	Fair	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

reporting undertaken but neither systematic nor routine.			<p>reptiles, butterflies and other flora and fauna. Some of these findings are monitored and have been used in management in adhoc manner.</p> <p>Recent research projects include study of grassland biomass production and siltation of water bodies.</p> <p>Draft TCP has proposed following research subjects for future.</p> <p>i. Biodiversity of Kaziranga National Park.</p> <p>ii. Study of succession in grasslands Dynamics of wetlands</p> <p>iv. Habitat and food preferences of certain key species such as rhino, elephants, tigers, wild buffalo, swamp deer, sambar, hog deer, black bear etc.</p> <p>v. Effect of flood and controlled burning on seasonal availability of grasses for mega herbivores namely Elephants, Rhinos and Wild Buffaloes</p> <p>vi. Habitat ecology of ungulates</p> <p>vii. Ecology of Aquatic mammals</p> <p>viii. Seasonal Habitat suitability for swamp deer</p> <p>ix. Invasion, impact on habitat and food availability and control of exotic and other weeds. The Brahmaputra river geotectonic, geomorphology, landmass dynamics and bank erosion in Kaziranga</p> <p>xi. Population studies-including regular monitoring of tigers, co-predators, prey and habitat Rhino population dynamics, inter-calving periods etc.</p> <p>xiii. Ecology of sympatric herbivores of Kaziranga.</p> <p>xiv. Study of animal behavior</p> <p>xv. Understanding land use pattern by animals for movement and dispersal between Kaziranga National Park and Karbi Anglong hills and other areas</p> <p>xvi. Ecological Carrying Capacity studies with respect to different important species such as rhino, tiger, elephant, wild buffalo, eastern swamp deer, sambar etc.</p>
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good		
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good		

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		TCP. VolA Chapter12 Discussion with FD	All roads, culverts, water supply system is repaired every year after the floods. Other infrastructures are also created and maintained periodically. No schedule is maintained for management of infrastructures/ assets.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Discussion with FD and perusal of records	Population of all the threatened species is increasing/ stable. The table showing animal population estimation is given below.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good	✓		

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

Species	2010	2011	2012	2013	2014	2015	2016
RHINO	-	-	2290	2329	-	2401	-
ELEPHANT	-	1165	-	-	-	-	1089
SWAMP DEER	-	1168	-	-	-	1129	1148
WILD BUFFALO 1937 in 2008	-	-	-	-	-	-	-

Estimation figures:

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Carrying capacity	Population of Tiger within the park is saturated; as a result the conflict has increased in fringe villages. The tiger population based on phase IV monitoring using camera traps during last four years are shown below; Year Tiger numbers 2013: 108 2014: 116 2015: 111 2016: 104 (Minimum number captured in camera; Final estimation figures yet to be published by WII)
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good	✓		

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Discussion with FD and field assessment	There has been no escalation in poaching of rhinos during the recent years Year Rhino Poaching (no) 2014: 27 2015: 17 2016: 18 2017: 6 Thus there is no change in the level of threat.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good	✓		
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		TCP. Vol A Chapter 11.	The visitor management is appropriate. The planning is good. It is monitored well.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good	✓		
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

**Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			Local communities are very supportive of the park management, especially during flood, when they help management in rescuing distressed animals, guarding the NH-37 to enable the wild animal movement across the road reducing road kills due to vehicular hits etc. Also villagers help in intelligence gathering and assist the management in bringing poachers to book. The local people also assist the park authorities in controlling the man animal conflict.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

*There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	35	76.6%
2.	Planning	07	10	70	50	
3.	Inputs	05	10	50	42.5	
4.	Process	06	10	60	47.5	
5.	Outputs	04	10	40	27.5	
6.	Outcomes	05	10	50	42.5	
Total		32		320	245	

*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	✓	Grassland management requires burning. Management has undertaken this important step, in the interest of conservation of threatened faunal species.	Management must find an alternative to burning. Till then the periodicity of burning may be increased.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓	The area is in Brahmaputra flood plain. Soil erosion and soil deposit is the annual feature. Artificial highlands are created for the shelter of wild animals during flood.	Slopes of the highland should be planted with grasses so that it is less prone for erosion/damage.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5. Manas Tiger Reserve, Assam

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Tiger Conservation Plan 2014-2024 Page 4 to 12: Statement of Significance	TR is Biologically very rich and located in the confluence of 3 major bio-geographic zones, lower Gangetic plains, Central Himalayas and Brahmaputra valley. The TR provides shelter and protection to various wildlife species in the red data book of IUCN. Royal Manas National Park of Bhutan is situated along the northern boundary of the TR, which provides international corridor for migration of wild animals. Conservation values such as Biodiversity values as a world heritage site and socio-cultural values as Manas biosphere reserve is also listed in para 1.4 on pages 9 and 10 of TCP. The TR also includes Barnadi WLS which is connected to Manas National Park through the forests of territorial divisions and many private Tea gardens. In the TraMCA (Trans boundary Manas Conservation Area) initiative the TR management in collaboration with forest department of Bhutan have been monitoring the movement of wildlife through international corridor. Further most of the red listed animals are monitored in Phase IV monitoring annually. Most values are systematically identified, assessed and monitored.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Tiger Conservation Plan 2014-2024 Page 75 and 317	The threats for the core area are listed on page 75 of TCP whereas the threats in the buffer are listed on page 317. Based on this the security plan has been prepared and all the threats of the TR are available in chapter 6 'SWOT' analysis. Several villages located on the southern periphery of Manas National Park pose anthropogenic pressure on the forests of the National Park. Similarly there are some villages inside Barnadi Wildlife Sanctuary, which pose even bigger threat to the forests and Wildlife of the sanctuary.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

*This assessment should be based on number, nature and extent of threats

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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1.3 Is the 'Core Area' of TR free from human and biotic interference* ?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Visit and discussion with FD.	There are no villages inside the Manas National Park, yet the communities residing on the periphery have encroached forest land of the National Park for the cultivation of agricultural crops. Villagers enter the forests for small timber and firewood collection and also send their cattle for grazing. Similarly Barnadi Wildlife sanctuary is disturbed by the presence of some villages. Thus the core area of National Park has some human and biotic interference.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Discussion with FD and perusal of records.	All the four statutory committee have been constituted and also the tripartite MoU have been signed. Further it is found that the meeting of the steering committee for tiger conservation as well as the tiger foundation has not been held in any of the tiger reserves of Assam. SOPs relating to disposal of carcass, tiger mortality and straying of tiger outside TR have been followed by the management. There are no instances relating to other SOPs.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair	✓		
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		Discussion with FD.	Buffer areas are spread over six territorial divisions, all situated on the foot hills of Himalayas and are managed by respective DFOs. Field Director (FD) manages core area of TR. The territorial DFOs in charge of the buffer areas report to respective CCF of the circle. However all DFOs keep FD Manas Tiger Reserve informed about matters relating to wildlife. The management of core, buffer of TR and all territorial divisions in Bodo area are under council head of the forest department of Bodoland Territorial Council (BTC). Thus the buffer area is under partial control of FD..
Management of Core is under Field Director of TR but Buffer is under partial control	Fair	✓		
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good			

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) +?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Discussion with FD.	TCP for the period from 2014 to 2024 is submitted to NTCA. FD has pursued with NTCA. However the approval of the plan is yet not received.
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Chapter 8,9 and 10 of the TCP. Visit of works during MEE exercise	TCP is being followed by the management. Chapters 8, 9 and 10 of the TCP has laid down detail plans regarding research, monitoring, training, tiger population, habitat management, protection and intelligence gathering. Many of these prescriptions are seen to have been implemented on the ground. Despite Bodo agitations, the management of TR have constructed several anti poaching camps for protection of flora and fauna including threatened species
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Discussion with FD, perusal of records and interaction with EDCs & NGOs.	Researchers, NGOs, EDCs, NTCA are the main stakeholders and they all contribute in the planning process. NGOs like Aranyak and Panthera conduct extensive education and awareness campaign among the communities to bring them on board and participate in the planning process.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good	✓		

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Para 9.7 pages 103 to 105 of TCP	This is very good habitat for conservation of wildlife. The habitat comprises of wonderful vegetation cover and grassland. Grasslands are key site for biodiversity conservation and support wide range of endangered fauna. During the visit of the team to Mathangudi, it was found that the fresh forests were being cleared for converting the area to grassland. All natural trees were chopped off and FD informed that the timber and debris would be burnt during winter to extend the grassland. During the visit in Bansbadi range it was noticed that some more grassland were artificially created. It is better to maintain the existing natural grassland and not clear fresh forests for additional area under grassland. .Like grassland forests are equally important for conservation of biodiversity. . The action of the management to clear fresh tree growth and convert into grassland is not justified, nor it is prescribed in proposed TCP.. There is a practice of burning the grassland every year during winter. It was found that well grown trees are being chopped off in the name of removal of weeds. The matter needs to be debated among the experts and a clear policy of grassland management should be formulated.
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.5 Does the TR has an effective Protection Strategy (PS)+ and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		TCP and security plan.	TCP is being followed by the management. The protection strategy is clearly laid down in the plan and the same is being followed. There are more than two dozen personnel from Assam Forest Protection Force deployed for the protection of the tiger reserve. There are vacancies among the front level staff of Forest department. State has not taken up recruitment and training of Foresters and Forest Guard. As a result 89 posts are lying vacant especially that of Forest Guard. Facilities for camping in interior locations are in place, which has increased the level of protection. There is a plan for the security audit. The same is likely to be conducted within next few months.
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Discussion with FD and verification of records	The management has effective plan to address human wildlife conflict. Human wildlife conflict in Manas National Park is minimal. This year one person had died due to elephant attack. Last year also one staff person had died on duty due to elephant attack inside the core area. The details relating to conflict and Compensation paid for the conflict is shown in the table below this para. In Barnadi WLS there have been more deaths of human due to elephant attack. The details relating to conflict and compensation paid are shown in the second table below.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

Manas National Park

Year	No. of Cases	Dead	Injury	House damage	Crop damage	Others	Sanction amount	No. of paid Cases	Paid amount	No. Of paid to be cases	To be paid amount
2012	-	-	-	-	-	-	-	-	-	-	-
2013	20		7	6	7	1		14	104000.00	6	26500.00
2014	19	1	2	14	6			12	161000.00	7	31500.00
2015	143		5	97	80	2		92	388000.00	51	219500.00
2016	91		1	29	66	1		60	238000.00	31	124000.00
Total=	253	1	15	146	159	4		178	891000.00	95	401500.00

Baranadi WLS

Man-Elephant conflict is a major problem to adjoining villages of the Sanctuary. The following casualties are occurred during last three years in both sides.

Year	Elephant death	Human killed by Elephant	Crops damage	House damage
2011-12	8 nos	10 nos	250 Hect	261 nos
2012-13	9 nos	10 nos	210 Hect	536 nos
2013-14	10 nos	19 nos	185 Hect	616 nos
2014-15	7 nos	22 Nos	265 Hect	520 nos
2015-16	5 Nos	21 Nos	180 Hect	420 nos
2016-17	6 nos	8 nos	110 Hect	350 nos
2017-18	1 no	3 nos	-	120 nos

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Natural habitat corridors are described in the pages 307 to 309 of the TCP.	The TR is properly connected with Royal Manas National Park in the north, reserve forest areas of territorial divisions in the east as well as similar forested areas of territorial divisions in the west. The TR also provides connectivity to Buxa TR through territorial forests in the west of the TR as well as through the forests and Protected Areas of Bhutan. Ideally management Plans of all PAs and Working Plan of all territorial divisions should have similar prescriptions for the management of wildlife. But there is no single forum/ platform where all the plans are compared and discussed. However all Plans support wildlife conservation and it can be construed that TR is quite well integrated in wider ecological network.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

*Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Discussion with FD and perusal of records.	Out of 355 sanctioned posts there are 89 vacancies, especially at the level of Forester-I and Forest Guard. The vacancy position of the TR is shown in the table below this para. There are 63 vacancies of Forest Guards against the sanctioned strength of 117. The protection of the forest and wildlife is also carried out with the assistance of nearly 20 men from the Assam forest protection force (AFPF). It is also found that 119 staff members are above the age of 50 years. The fresh recruitment of Forest Guard, Forester and RFO has not taken place for quite some time. The last recruitment of Forest Guard was in 2011-12, Forester was 2014-15, whereas the last recruitment of RFO was in 2011-12. State should endeavor to take up the regular/ annual recruitment and training of protection staff at all the levels, otherwise the vacancies would increase The management also have deployed 100 casual laborers and 100 home guards to add to their strength to meet the challenges of protection of forests.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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No. of sanctioned staff (cadre wise), no. of staff in place and the existing vacancies.

Sl. No.	Category of Post	Sanction strength	Allotted by BTC Vide O.O.No.241 dt.02.09.2014	Man in Position	Vacant	Transfer Vacant	Excess
1	FDTP	1		1			
2	Dy. Director	1		1			
3	A.C.F	1		2			1
4	Research Officer	1				1	
5	Superintended	1		1			
6	V.A.S	1		1			
7	U.D.A. (Director Level)	2		2			
8	U.D.A. (Dvn. Level)	1		1			
9	L.D.A. (Director Level)	5		5			
10	Record Keeper	1		1			
11	Range Asstt.	3		3			
12	V.F.A.	1		1			
13	Steno	1		1			
14	Forest Ranger	3		2		1	
15	Dy. Ranger	4		2	2		
16	Forester -I	31	2	24	3	6	
17	Forester -II	2	10	17			5
18	Forest Guard	165	15	117	29	34	
19	Mahut	22		14	8		
20	Game Watcher	44		44			
21	Driver	8		6	2		
22	Office Peon	4		4			
23	Chowkider	9		9			
24	Handyman	3		1	2		
25	Grass cutter	23		24			1
26	Boat Man	10		10			
27	Sweeper	1			1		
28	Attendant	1		1			
29	Laboratory Attendant	1		1			
30	Duk Runner	1		1			
31	Mali	1		1			
32	Paniwala	1		1			
33	Bearer	1		1			
		355	355+27=382	300	47	42	7

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Discussion with FD, perusal of records and field visit of the team..	The TR has adequate vehicles and equipments. Also there are sufficient buildings to take care of offices and residences of the employees of the tiger reserve. Further during the visit, the team found that anti-poaching camps have been constructed in all areas to enable the members of the camp to take up patrolling. However enough footpaths have not been created to enable the patrolling staff to keep surveillance in all corners of the tiger reserve.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

*These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Discussion with FD and perusal of records.	There are adequate funds released by central govt. and the details of the funds released and utilized are shown in the table below this para. However the releases of the fund are not made timely. In some budget heads the second installment is never released
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.

d) The details of funds released by Central Govt. and their utilization for the last three years.

Year	Scheme	Total Sanction	Total Release	Utilised	Date of Receipt of Funds
2014-15	CSS-PT-Central Share-Fresh Released	427.044	140.00	140.00	17/03/2015
	CSS-PT-Central Share-2 nd Released		183.144	183.144	20/03/2015
	CSS-PT-State Share	Nil	Nil	Nil	
	CSS-BR	Nil	Nil	Nil	
	CSS-PE	Nil	Nil	Nil	
	CAMPA-Project	Nil	Nil	Nil	
2015-16	APFBC-Sate Fund	Nil	Nil	Nil	
	CSS-PT-Central Share-Fresh Released	339.80	54.5706	54.5706	30/03/2016
	CSS-PT-Central Share-Balance Amount Released		210.3444	210.3444	25/07/2016
	CSS-PT-State Share	Nil	Nil	Nil	
	CSS-BR	Nil	Nil	Nil	
	CSS-PE	Nil	Nil	Nil	
2016-17	CAMPA-State Fund	Nil	Nil	Nil	
	APFBC-State Fund	4.62	4.62	4.62	14/12/2015
	CSS-PT-Central Share-Fresh Released	748.944	512.585	512.585	23/02/2017
	CSS-PT-State Share		42.177	42.177	21/03/2017
	CSS-BR	110.876	88.7008	88.7008	06/02/2017
	CSS-PE	0.80	0.80	0.80	31/03/2017
Total =		1821.66475	1426.52255	1426.52255	

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Perusal of records.	Funds are received from Bodo territorial Council (BTC) on irregular basis. Year wise fund received are as below; Year Fund (Rs in Lakhs) 2013-14 714.27129 2014-15 213.80761 2015-16 98.64047 2016-17 378.17096 Under AFPBC funds have started flowing from 2015-16. During this year only Rs 4.62 lakhs have been received while in the following year Rs 154.077 lakhs are received. The fund received in 2016-17 was spent in 2017-18. CAMPA funds to the tune of Rs 35.50375 was received in 2016-17 only.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Perusal of records and discussion with FD.	Aranyak has provided 10 motor cycles. In addition other NGOs like WCT, Panthera, WWF-India, ATREE etc. have provided equipments like uniform, foot gear, rain coat etc.. The works done by different NGOs are shown in the table mentioned below this para.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good	✓		
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Sl. No.	Name of NGOs	Name of Range	Remarks
1	Manas Maozigendri Eco-Tourism Society	Bhuyanpara	The members of NGOs are working as Service Provider inside the Park and the supported by BTC Government.
2	Manas Agrang Society	Bhuyanpara	
3	Manas Bhuyanpara Conservation & Eco-tourism Society	Bhuyanpara	
4	Swmkhwr Mithinga Onsai Afat	Bansbari	
5	United Social Welfare Society	Bansbari	
6	Panbari Manas National Park Protection & Eco-Tourism Society	Panbari	
7	WWF-India	Manas NP	Organizing Awareness camps, Solar Fencing, distribution of LPG connections
8	Aranyak	Manas NP	Assistance in SMART patrolling, awareness camps, livelihood programs
9	ATREE	Manas NP	Awareness camps, livelihood programs
10	WTI-India	Manas NP	Animal rescue, Animal treatment, Translocation

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Discussion with FD	FD is trained in 9 months wildlife diploma course in WII, Dehradun. Forest Guards and Foresters have been provided their foundational training in Assam Forest Training Center. Foundation course always includes the subjects relating to wildlife management. Further, Forest Guards and Foresters are provided training by NGOs in subjects like GPS based smart patrolling, camera trapping and legal issues. A few of them are provided commando training by Assam Forest Protection Force. However none of the front line staff have received exclusive training on Wildlife.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

***Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		MEE team's field visit and discussion with FD.	The staffs are deployed to ensure the protection of forest and wildlife with the assistance of stakeholders, which is one of the main objectives of the management. The performance of the staff is judged based on their achievement in protection. 60 numbers of staff have been given special incentive based on their performance and a sum of rupees 1 lakh spent for this purpose in the year of 2016-17. In addition state also rewards persons based on their performance during wildlife week celebrations.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Visit of MEE team at Laxmi Bazar, Kokilabari and discussion with FD.	The forest and wildlife of TR have undergone deterioration during Bodo agitation between 1989 and 2003. Forest staff had left their headquarters located in the interior of the TR and no one was there to protect the forests between 1989 and 2003.. An NGO by name Manas Maozigendri Eco-tourism Society (MMES) comprising of the persons from villages on the fringes of the NP mobilized likeminded people to protect forests and wildlife of the Tiger Reserve. For the first time they were active since 2001. Slowly Forest Staff also ventured in forests along with this NGO. By now the system is built and protection has started. Forests and Wildlife has revived to some extent. Bodoland Territorial Council (BTC) has handed over the services of 162 Service Providers who are utilized for protection duty in the TR. These service providers being local, some of them are effective in protection duty and intelligence collection. NGOs like Aaranyak, WWF-India, WTI, ATREE also engage with families residing on the southern fringe of the core area of the TR. There are 23 EDCs who are actively participating in management and helping forest staff in achieving objectives. The entry point activities of these EDCs are funded by Forest Department..
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGLs in population estimation may be taken into account)

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Discussion with FD	Complaint box is put in all three range offices as well as FD office. Complaint register is also maintained in FD office. The complaints received are referred to concerned officer for conducting inquiry and submitting report. In addition oral complaints are also received when FD, DD, ACF, RFO tour the area. Immediate action is taken to mitigate the grievances of the concerned.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

4.5 Does TR management address the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Discussion with FD and perusal of records.	Through 23 EDCs, the management has been imparting training for the skill development of the families of the communities depending on forest for their livelihood. They have been trained in duckery, piggery, goatery, handlooms, food-processing and advanced apicultural practices. The details are provided in table below this para. All the NGOs working in the TR support in upgrading skill for the members of the communities.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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Sl. No.	Name of Range/Bea t	Name of EDC	Preparation of Micro-plan	Piggery		Duckery		Goatery		Apiculture		Tube Well		Total
				Physical	Financial	Physical	Financial	Physical	Financial	Physical	Financial	Physical	Financial	
1	Bansbari	Barengabari	0.00		0.00	100	0.50		0.00		0.00	1	0.125	0.625
2	Bansbari	Madlijhara	0.00		0.00	100	0.50		0.00		0.00	1	0.125	0.625
3	Bansbari	Lahoripara-Langdangpara	0.00		0.00		0.00	20	0.24		0.00	2	0.250	0.490
4	Bansbari	Bithorai	0.00		0.00		0.00	20	0.24		0.00	1	0.125	0.365
5	Bansbari	Khantalguri	0.00	25	0.30		0.00		0.00		0.00	1	0.125	0.425
6	Bansbari	Rajabil	0.00	25	0.30		0.00		0.00		0.00	1	0.125	0.425
7	Bansbari	Katajhar	0.00		0.00		0.00		0.00	20	0.30	1	0.125	0.425
8	Bansbari	Daoraibari	0.00		0.00		0.00		0.00	20	0.30	1	0.125	0.425
9	Bhuyanpara	Kokilabari	0.10		0.00	100	0.50		0.00		0.00	1	0.125	0.725
10	Bhuyanpara	Betbari	0.10		0.00	100	0.50		0.00		0.00	1	0.125	0.725
11	Bhuyanpara	Bhuyanpara	0.10		0.00		0.00	20	0.24		0.00	1	0.125	0.465
12	Bhuyanpara	Mazrabari	0.10	25	0.30		0.00		0.00		0.00	1	0.125	0.525
13	Panbari	Panbari	0.10		0.00	100	0.50		0.00		0.00	1	0.125	0.725
14	Panbari	Manas Khwina	0.10		0.00		0.00	20	0.24		0.00	1	0.125	0.465
15	Panbari	Nandini	0.10	25	0.30		0.00		0.00		0.00	1	0.125	0.525
16	Panbari	Himalaya	0.10		0.00		0.00		0.00	20	0.30	1	0.125	0.525
17	Kahitama Beat	Manas Elephant	0.10		0.00		0.00		0.00	20	0.30	1	0.125	0.525
18	Kahitama Beat	Manas Rhino Labdanguri	0.10		0.00		0.00	20	0.24		0.00	1	0.125	0.465
19	Kahitama Beat	Manas Tiger	0.00		0.00		0.00		0.00	20	0.30	1	0.125	0.425
Total =			1.00		1.20		2.50		1.20		1.50		2.500	9.900

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Discussion with FD	The core of the TR comprise of MNP and Barnadi WLS. There are no villages inside MNP and hence the question of relocation does not arise. However there are few villages in 26 sq km Barnadi WLS. No family in any village inside this sanctuary has volunteered for relocation.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Discussion with FD.	Website of Assam Forest Department and also the exclusive website of Manas TR provide all information relating to TR management. The same can be accessed by public. They can also obtain information through RTI. The TR management also publishes Pamphlet, Posters, and calendars. Forest Guards and casual laborers also have come out with a video in Assamese language for awareness of local people.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Discussion with FD.	Tourists are allowed to visit the designated tourism area inside the core and management has outsourced accommodation facilities, vehicles, guides etc. tourists in safari vehicles are provided with armed forest guards by the management.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		The documents provided by the FD.	There are many research proposals approved by management. The outcome of the research is very useful and some of these are utilised. The research outcomes are also monitored at the level of FD as well as CWLW. The research permissions granted have been listed in a table mentioned below this para.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

**Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?*

5. Details of Research Project undertaken in Manas National Park.

Sl. No.	Research Project	Organization/Name	Year
1	Ecological study of pygmy hog	Pygmy hog Conservation Programme, Dr. Goutam Narayan	1995-1997
2	Plant diversity status in Manas Biosphere Reserve	Dept of Botany, Gauhati University Prof C.K Baruah Dr. Pranjal Bezbaruah	2000-2003
3	Butterfly diversity in Manas NP	Dr. Prasanta Saikai Gauhati University	2000-2003
4	Grassland Ecological study, specially on Pygmy hog	Pygmy hog Conservation Programme Bibhuti Prasad Lahkar	2000-2005
5	A study of habitat utilization patterns of Asian elephant <i>Elephas maximus</i> and current status of human elephant conflict in Manas National Park within Chirang-Ripu Elephant Reserve	Aaranyak Bibhuti Prasad Lahkar Jyoti P Das Naba K Nath	2006-2009
6	Monitoring of tiger and prey	Raj Kamal Goswami, Atree	2006
7	Ecological study of elephant	Gauhati University Brigu Saikia	2008-2012
8	Research and conservation of Bengal florican	Namita Brahma, Aaranyak	2008-2012
9	Identification and Strengthening of	Bibhuti Lahkar, Aaranyak	2008-

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

	Key Habitat Linkages in Manas Tiger Reserve using Geo-spatial Technology and Policy Advocacy		2010
10	Ecology of hispid hare	Naba K Nath, Aaranyak	2009-2011
11	Monitoring of tiger and prey	Aaranyak, Atree, WWF Firoz Ahmed Jimmy Borah	2010 - 2012
12	Monitoring of tiger and prey	Aaranyak, Atree, WWF Firoz Ahmed Jimmy Borah	2012 till date
13	Ecological Study of Hog deer	Alolika Sinha, Aaranyak	2013 till date
14	Monitoring human elephant conflict around Manas NP	Bibhuti Lahkar, Aaranyak	2009-2014
15	Habitat suitability analysis of tiger in Indo-Bhutan Manas Tiger Conservation Landscape	Sonali Ghosh	2010-2013
16	World Heritage Biodiversity Project	Sarala Khaling, Atree	2010-2015
17	Population estimation of tiger using Genetics tool	Udayan Borthakur, Aaranyak	2011
18	Monitoring and control of invasive species in Grassland ecosystem of Manas NP	Bibhuti Lahkar, Aaranyak	2014 till date

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		The documents provided by the FD.	Infrastructure like building, roads, vehicles etc. require periodical maintenance. Without providing for the maintenance the system would break down and the important works like protection of forest and wildlife would suffer. Thus the management consciously makes arrangements to maintain all infrastructures. The list of vehicles available in TR is shown in the table provided below this para. Earlier the fund for maintenance for buildings, road, boat etc. were not adequate but now from 2016 onwards funds for these works are provided under CSS-PT and APFBC (Assam Project on Forest and Biodiversity Conservation) and there is no dearth of funds for maintenance..
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Type of Vehicle including Motor Cycle, Bi cycle, Mechanised boat, country boat	Registration number (in case of bicycle and boats indicate the total number of such vehicle available in the Division)	Allotted to whom	Present condition	Whether condemnation process initiated against the vehicle which require condemnation (Yes or no)	Remarks
Bolero ZLX	AS-28/5936	Field Director	Running		
Bolero SLX	AS-28/5870	Deputy Director	Running		
Bolero GLX	AS-15/2297	RO Bansbari	Running		Not in good condition needs major repairing.
Bolero GLX	AS-15-C/0640	RO Bansbari	Running		Require major repair
Mahindra Max (Ambulance)	AS-01BC/3446	Field Director Office	Running		
Gypsy	AS-01A/9568	BO Mathanguri	Running		Not in good condition needs major repairing.
Truck	AMA-7096	RO Bansbari	Un serviceable		
Bolero Invader	AS-01Z/5720	BO Kahitama	Running		Requir repairing
Tata Mobile	AS-16/9704	-do-	Not serviceable		
Bolero Camper	AS-15B/6560	-do-	Running		Require repairing
Bolero Camper 4WDB58	Registration under process	-do-	Running		
Mahindra Thar-DI	AS-01B1/7474	-do-	Running		
Max Pik Up Van	AS-15A/0029	-do-	Running		
Bolero Camper	AS-28/0021	-do-			Require major repairing
GYPSY	AS-25/8084	RO Panbari	Running		Require repairing
Max Pik Up Van	AS-15A/0028	-do-	Running		Require major repairing
Mini Truck	AS-16A/3114	-do-	Running		Require repairing
Bolero Camper	AS-15G/4413	-do-	Running		Require repairing
Maruti Gypsy	AS-28/9106	H.Q. Beat	Running		New

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Discussion with FD, NGOs and perusal of records provided by them.	The population of certain species such as rhino, tiger, elephants etc. had dipped during bodo agitation in the area. FD stated that the population of these species had practically become zero during 1989 agitation. Thereafter, with the help of the stakeholders like MMES, other service providers and many other NGOs the management has succeeded in recovering the population of threatened species. Species like rhino, swamp deer were re-introduced during the course of revival of the TR after the closure of the agitation (2003). The team observed during the visit that ungulate population density is low. As the protection work was limping back to normal, there are sporadic incidences of the agitation. It has been observed between 2009 and 2014 that staff were abducted and ransom was demanded, forest infrastructures were burnt/ damaged. The trend of population of some of the threatened wild animals as found during analysis by Aaranyak is shown in the table below this para. Even after reintroduction the population of Rhino is showing decreasing trend. Two consecutive elephant census figures are not available and it becomes difficult to conclude about the population of elephant..
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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*This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.

The details on estimation of important wildlife population conducted by the Management. (Trend/time series)

Wildlife	2014-15	2015-16	2016-17
Tiger	16	11	31
Rhino	32	30	28
Wild Buffalo	Census not done	454	503
Elephant	Census not done	Census not done	1034

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Discussion with FD, NGOs and perusal of records provided by them.	Two successive results of All India tiger estimation undertaken by WII with the support of the management of Manas Tiger Reserve show that the tiger number is increasing. The regular Phase-IV monitoring undertaken by the management with the support of NGOs show that the tiger no came down to 11 in 2015-16 from 16 in 2014-15. However the same has gone up to 31 in 2016-17. The camera trapped data for the TR is compiled and analyzed by Aaranyak. As the analysis is being done by an independent agency, the result has to be accepted. The trend of tiger population along with other threatened species is shown in the table below para 6.1.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good	✓		
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

*This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Discussion with FD.	The major threat for TR is from poaching and anthropogenic pressure exerted by large number of villages situated along the southern boundary of the TR. In Bhuyapara range the management has repeatedly failed in evicting encroachment for lack of support from department. BTC government has a system of engaging all unemployed in Forest Department. TR management has engaged 162 such persons called Service Provider, whose salary etc. is borne by BTC. As opposed to the wages of casual laborers which is Rs. 7200/- per month, the service providers are being paid
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>@ rate of Rs. 6000/- per month. Sometimes when they have to accommodate their unemployed friend from the locality they redistribute the salary among themselves and salary for each one of them falls below Rs. 6000. The service providers as well as casual laborers are not provided ration and project allowances. Sometimes there are two or three kitchens run in the same camp, one for elephant mahuts, the second for AFPP personnel and the third for service providers.</p> <p>At Daodhora RF, in the buffer of TR some local tribal are claiming rights under Forest Rights Act 2006. However the management is ensuring that the land occupied by tribal is not increased any further.</p> <p>Following are two serious threats looming large on the Tiger Reserve.</p> <ol style="list-style-type: none"> 1. The Govt. of India is contemplating to construct a road all along Indo-Bhutan international boundary and 500 meters inside India with border outpost at every 3 to 4 kms and WII is the consultant for this project. The road and other infrastructures would damage this TR and break the international corridor, which will bring in additional threat to the habitat. 2. More than 400 hectare forest land in village Kokilabad on south eastern corner of Manas National Park is handed over to State Agriculture Department on lease basis for seed production. They have also used the land in the past for several activities such as cattle semen collection, milk production etc. There are many old buildings without any utilization. The lease is due to expire this year and in the last year of the lease many new buildings are being constructed by Agriculture Department. Forest Department should make efforts to resume the area after the expiry of lease.
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***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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6.4 Is visitor management appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		Discussion with FD.	The visitors facilities are managed outside the TR by private operators the TR management is not accountable for any mismanagement. However the protection of the safari visitors, in designated tourism zone is taken care of by the management by providing armed guard to each safari vehicle..
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good	✓		
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

*Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Discussion with FD.	The consortiums of all NGOs especially Aaranyak have worked in the fringe villages and persuaded them not to collect firewood, any other forest produce and prevent cattle from grazing inside the forest. The management has taken it seriously and by and large successful in checking illegal activities. The combined effort of Department and NGOs has helped villagers in finding alternate to firewood and also alternate livelihood options. The communities are generally supportive of TR management.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

*There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	30	71%
2.	Planning	07	10	70	52.5	
3.	Inputs	05	10	50	37.5	
4.	Process	06	10	60	45	
5.	Outputs	04	10	40	30	
6.	Outcomes	05	10	50	32.5	
Total		32		320	227.5	

*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	✓	The TR management is in the process of burning all grassland of the reserve annually They also clear fell huge trees and burn the timber along with debris. Manas Tiger Reserve has already 40% grassland which is more than sufficient for conservation of biodiversity. The practice of creating additional grassland be discontinued.	Like Buxa Tiger Reserve the burning of grassland should be done once in three four years by rotation. They are also clearing forests and creating additional grassland, which is unnecessary. The carbon emission can be reduced.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓	No tree planting is being taken up by Tiger Reserve. Villages on the southern boundary indulge in illicit collection of fire wood, small timber and cattle grazing.	Tiger Reserve Management and NGOs are making efforts to spread education and awareness among the communities so that they do not resort to above mentioned illicit activities.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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6. Nameri (Assam) Tiger Reserve

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Tiger Conservation Plan (2015-2020) of Nameri National Park & Tiger Reserve Page 2 of TCP Para 1.3	<p>Following the important values of Nameri TR enumerated in the Tiger Conservation Plan</p> <p>1. Nameri Tiger Reserve (NTR) is one of the most important Protected Area of north bank landscape of Assam in having diverse species of carnivores as well as herbivores.</p> <p>2. Though a small PA in terms of its extent, it still harbours rare assemblage of sympatric carnivores such as Royal Bengal Tiger, Leopard, Clouded Leopard and Wild Dogs.</p> <p>3. An example of ongoing ecological succession with vegetation composition ranging from riverine grasslands towards the flood plains of Assam valley to the evergreen forests at the foothills of Eastern Himalayas.</p> <p>4. NTR as a part of Sonitpur Elephant Reserve has been playing an important role in conservation of Asian Elephant in Assam.</p> <p>5. Diverse habitats of Nameri supports rich avifaunal diversity and it is one of the few remaining breeding place for rare and endangered white winged wood duck in Assam.</p> <p>6. Despite the destruction of surrounding forests till today Nameri survives as symbol of dedication of wildlife staff.</p> <p>7. NTR provides invaluable ecosystem services by acting as harbinger of biodiversity, sequesters carbon dioxide and conserves soil and moisture.</p> <p>8. By virtue of Nameri's location at the junction of Indo-Malayan and Indo-China realms, the PA harbours the biodiversity of both the realms.</p> <p>The southern and the western boundary of the Park is along the river Jai bharali and the eastern boundary is along the river Bordikroi. The TR provides catchment to these rivers and thus it has very important hydrological significance. The said value is not assessed and monitored. However most values have been documented as above and are also being monitored as discussed in chapter 14 of TCP.</p>
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good	✓		
All values systematically identified, assessed and monitored.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Page 42 of TCP of Core	Most threats are systematically identified and assessed. The following are the list of threats brought in TCP. 1. Volatile law and order situation, chronic insurgency problem 2. Complete loss of forest cover in the buffer areas 3. Tribal with hunting tradition inhabit the fringe areas of PA 4. Pressure on natural resources of PA for illegal exploitation 5. Inadequate and erratic funding 6. Difficult to gather intelligence because of law & order issues
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Discussion with FD	The 200 sq km of the Nameri TR core has an encroachment of about 5 sq km in the southern corner on left bank of river Jia-Bharali. The satellite Core which has been notified in 2015 as part of Nameri TR extends over 120 sq km and nearly 5 sq km in Satellite core is also under encroachment. The satellite Core is a part of Sonai-Rupai WLS (220 sq km). Nearly 100 sq km of this sanctuary is under encroachment for quite some time and at the time of notifying in 2015 the portion of WLS free from encroachment was only considered as Satellite core. This is also under influence of biotic pressure from fringe villages as the villagers draw fuel wood, fodder, small timber illegally from the forest. Cattle grazing in portion of Satellite Core are rampant.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		TCP	1. Core and Buffer Areas are legally delineated 2. Tiger Foundation is established and functional 3. Tiger Conservation Plan for Core & Buffer area exists. However TCP for Satellite Core is yet to be prepared 4. State level steering committee has been constituted under the Chairmanship of the Chief Minister. However the committee has not met during last three years. Tripartite Agreement between FD, State Govt. & NTCA has not been renewed for the year 2017-18. All SOPs are not applicable. But the SOPs which are relevant are being followed.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor	✓	Discussion with the FD	144 sq km of Buffer are managed by the two Territorial Divisions. 84 sq km of East Buffer (Naduar RF) is under the administrative control of Sonitpur East Division & 60 sq km of West Buffer (Balipara RF) is under Sonitpur West Division. The Core of Nameri (200 sq km) & the Satellite Core (120 sq km) is under the control of FD and DFO Western Assam Wildlife Division.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		TCP	TCP of Nameri Core & Buffer have been prepared & also approved by NTCA vide no.1-14/2011-NTCA (Part I) dt 31 st December, 2014. However, the TCP for Satellite Core is yet to be prepared.
TCP is under preparation	Fair	✓		
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Chapter 7 Management Strategies para 7.2.1 Biodiversity Conservation Zone	The objective & strategies proposed for the safeguard of threatened biodiversity values are as follows Objective: 1. To protect the key habitats and the associated habitat from external biotic interferences. 2. To maintain the viable population of species of conservation importance like the sympatric carnivores and the associated herbivores. Strategies proposed: 1. Preparation of detailed inventory of existing biodiversity within the core for formulating appropriate management interventions without disturbing the natural ecological processes and the wilderness value. 2. Protection of the core through intensive patrolling and intelligence gathering. 3. Managing the habitats like the riverine grasslands and the wetlands/beels using the evidence based prescriptions.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Para 8.3 of Buffer Plan	The various stakeholders do participate in Planning of Buffer zone management. The rural development programmes are implemented in such a way that each line department focus on welfare of communities residing in buffer & fringe areas. Under the France project, Micro Plans are prepared by the EDCs with the help of a consortium named COMPELO between the Indian Institute of Entrepreneurship, Guwahati & Rashtriya Gramin Vikas Nidhi.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Para 4.2 page 24 of Core Plan.	As per detail study of different habitat in Nameri Core extent of Grassland found to be around 16.36 sq km. In Satellite Core the extent of Grassland is around 10 sq km Following strategies are adopted for grassland management Cutting of tree seedlings in grasslands during November and completing the task before grassland burning. 1. Girdling of species such as <i>Albizia odoratissima</i> , <i>Salmalia malabarica</i> during November. 2. Uprooting / cutting of weeds. 3. Burning of grassland patches present in the western and north western part of the PA during January. Depending upon the soil moisture condition, in wet areas burning may extend up to March. 4. <i>Protection of evicted area to prevent against re-encroachment and illegal grazing of grasslands.</i> Further the wetlands are also preserved by protecting it from illegal fishing, grazing through regular patrol.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as *Lantana sp.*, *Mikania sp.* etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Chapter 10 of TCP	Strategy for Protection and Communication The terrain of NTR core area often poses a challenge for the movement of patrolling teams. At many places, the undergrowth of the forest is so thick that it is even departmental elephants find it difficult to navigate through the thick jungle. In order to overcome the challenges of protection, the following strategies are proposed: 1. Development of extensive patrolling path network: One of the main deterrence for poachers or illegal doers is the possibility of swift retaliation by the strike force/camp
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>staff.</p> <p>The terrain of Nameri particularly the core area with criss crossing rivers/streams coupled with thick undergrowth of the forest prevents rapid movement of the strike force. To overcome such difficulties road network have been developed in both the core and Satellite core and presently altogether there are 85 km road network connecting many of the camps. Management is also extending the patrolling path network to remote and interior areas in both the cores.</p> <p>2. Expansion of wireless network: Over the years, a fairly good network of wireless base stations has been established in almost all the anti-poaching camps of the reserve. However, what is lacking is the ability for the patrolling parties to communicate with nearest base station. The existing wireless network will be modernized with the latest technology available in the market so that the entire park is well connected with the information network.</p> <p>3. Augmenting the staff strength of anti-poaching camps: Wildlife protection is perhaps one of the physically challenging as well as hazardous activity. Patrolling persons not only face the threat from poachers and timber smugglers but also from the mega herbivores like the Asian elephant and carnivores. The members of the anti-poaching camps are equipped with firearms (either .315 rifle/ single barrel guns) but the current staff strength is way below the optimum level. Effective patrolling would require a minimum of 6 staff per camp. There are 25 Anti-poaching camps in Nameri core while 14 anti-poaching camps in Satellite core of Sonai rupai.</p> <p>4. Fire Protection</p> <p>Prevailing weather conditions do not favour the development of wild fires that have the potential to damage large stretches of forest. Forest fires are not major issue in both the core areas of the NTR. However, the fire may become a management issue mainly during the exceptional dry years particularly during the winter months.</p> <p>5. Intelligence Gathering and Coordination</p> <p>The task of gathering intelligence is difficult as fringe villages are predominantly tribal and homogeneous in composition. However, attempts are made to generate information at the level of camp, range headquarter as well as division headquarter. At the camp level, the field staffs try to generate information through their contacts in the neighboring villages whereas at the range level, a small group of informers is maintained by the</p>
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				Range officer. Field Director and the Deputy Director of the tiger reserve is involved in securing information at the divisional / reserve level in coordination with buffer area managers and the Police. On receipt of information, strike force swings into action. In order to sustain the information channel, the informants or the source are paid suitably.
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor			The conflicts due to straying elephants take place in buffer areas which are in administrative control of two Territorial Divisions. TR management also assists territorial staff in driving elephants back into the forest. All the compensations cases on account of loss of live of human, cattle as well as injuries and property damage are dealt in respective territorial Divisions
TR has been able to mitigate few human-wildlife conflicts.	Fair	✓		
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

***The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.**

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Discussion with FD and field visit in Nameri and Pakke TRs.	The northern boundary of the TR is common with the Pakke TR of Arunachal Pradesh. Regular exchange of information & intelligence are shared between both the managements. Satellite core of Sunai rupai sanctuary is connected to Nameri core through the forests of Arunachal Pradesh. In addition to coordinating with FD Pakke, the management has also to coordinate with DFOs Kellong and Bomdila of Arunachal Pradesh. However ground realities are different the management is not in a position to properly coordinate with Sonitpur East and Sonitpur West divisions (the divisions in charge of buffer areas of TR) in Assam, there are no question of proper coordination with the territorial divisions of Arunachal Pradesh.
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/ implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize land use around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Discussion with FD & office records.	To supplement the shortfall in vacancies, the following personnel are also engaged across the 39 camps in the Core as well as Satellite Core. Fixed Pay (Daily waged labour) = 9 Casual workers = 27 Home Guards = 45 Assam Forest Protection Force = 26 The vacancies against the sanctioned strength are shown in the table below this Para.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

*This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

Sl. No.	Category of Post	Sanctioned strength	Man in Position	Vacancy	Excess
1	D.F.O	1	1	0	0
2	A.C.F	2	1	1	0
3	Forest Ranger	4	1	3	0
4	Deputy Ranger	3	3	0	0
5	Forester -I	13	12	1	0
6	Forester -II	7	6	1	0
7	Accountant	1	1	0	0
8	Sr.A	2	2	0	0
9	Jr.A	4	2	2	0
10	D.M	1	0	1	0
11	Forest Guard / Game Watcher	44	40	4	0
12	Elephant Sardar	1	1	0	0
13	Mahaut	22	17	5	0
14	Driver	5	3	2	0
15	Handyman	1	1	0	0
16	Boatman	20	11	9	0
17	Grass Cutter	12	11	1	0

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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18	Office Peon	3	2	1	0
19	Chowkidar	9	7	2	0
20	Plantation Mali	2	0	2	0
21	Game Keeper	2	0	2	0
22	Head Game Watcher	3	0	3	0
23	Sweeper	2	0	2	0
24	Dak Runner	3	0	3	0
25	Paniwalwa	1	0	1	0
26	Khansama	1	0	1	0
27	Bearer	1	0	1	0
28	Attendant	2	0	2	0
	Total	172	122	50	0

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Office records of FD	The management has following vehicles, buildings, equipments etc. <u>Vehicle</u> Bolero/Gypsy etc.: 7 nos. Mini Truck: 04 (1 in the process of condemnation) Motor Bick: 08 (3 in the process of condemnation) The numbers are adequate however many of the vehicles need replacement. <u>Boat:</u> Rubber Boat: 7 nos. Country Boat: 12 nos. <u>Wireless Sets</u> Main Set: 23 nos. Handheld Set: 39 nos. <u>Rifle & Gun</u> 0.315 Rifle: 77 nos. 0.303 Rifle: 20 nos. SBBL Gun: 38 nos. DBBL Gun: 21 nos. Tranquilized Gun: 4 nos. (2 Pneumatic & 2 Dist Inject) <u>Camera trap:</u> 59 nos. (Functional) <u>Building</u> Anti-poaching Camp: 39 nos. (Both the core) Range Office: 2 Range Officer's Quarter: 2 FD/Division Office: 1 FD Quarter: 1 Forest Rest House: 1
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

*These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Official record of FD	The fund released by the NTCA during last 5 years is shown below this Para. Generally the fund is released by NTCA on time but sometimes there is delay in release by state Govt. In the year 2014-15 no fund was released, as unspent amount of previous year was revalidated. Also the fund for 2017-18 is yet not received by the management. The funds have been utilized in other years. The funds are sufficient for urgent priority works. However if habitat improvement works are carried out in more areas, additional funds are required.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

Year	Released Amount (Central Share)	Remarks
2013-14	162,02,000/-	
2014-15	Nil	Revalidated the unspent amount of previous year
2015-16	55,68,000/-	
2016-17	186,11,800/-	
2017-18	187,89,000/-	Allotted fund yet to be received by the Management

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Official record of FD	The fund released by the State Govt. for past 5 years are shown below this Para. The salary of all protection staffs are paid on time as budget release under respective heads is adequate and timely. However the payment of salary to casual laborers is managed from fund under Tiger Foundation, which is refunded after the actual release.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much	Good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

delay and mostly utilized.				
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

Year	Released Amount (State Share)
2014-15	Nil
2015-16	Nil
2016-17	25,62,800/-
2017-18	Yet to be received by the Management

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor	✓		No fund is provided by any NGO.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Office record of FD	Field Director & DFO Sri Pankaj Sharma has undergone 3 months Wildlife Certificate Course in WII in the year 1991. No other staffs have undergone any special Wildlife Course. However, all front line staffs have undergone Forestry Course in their respective Training Institute, where wildlife management is comprehensively covered. Also they have been participating in workshop & symposium in subjects relating to wildlife management. All staffs have recently participated in training "methodology to be adopted in field for monitoring of Tiger, co-predator and prey animals". Legal orientation is also conducted for the benefit of frontline staff regularly.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

***Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		FD office record	To archive the objective of the management the performance of the staff is very crucial. The good performers have been rewarded at the State level during Wildlife Week celebration. Further, Judiciary under Section 60 (A) of Wildlife (Protection) Act 1972 amended up to date have also rewarded some officers of the TR. Since 2010 onwards, 67 offence cases have been registered in the court of law out of which conviction has been secured in 33 cases involving 64 miscreants. Both the lists are of rewards shown below.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

Year	Occasion	Name
2016	State level Wildlife Week Celebration	1. Dilip Das FR, Nameri WL Range 2. Bishnu Das, CL
2017	Do	1. Bishnu Das CL
	Reward under Sec. 60(A) of WL(P) Act, 1972	
2017	Session case no. 185/15	1. Amrit Doley Fr I 2. Lakhi Prasad Sarmah Fr I 3. Manjit Dutta Fgd 4. Harihar Medhi Fgd 5. Gargaras Nath Fgd 6. Shyamal Dey Mahut 7. Dulen Gogoi Hgd 8. Ganesh Kumar Hgd 9. Dilip ch Roy Fgd 10. Sidartha Saikia Hgd 11. Biplab Medhi Fgd 12. Benudhar Bagh Hgd
2017	Session case no. 291/16	1. Amrit Doley Fr I 2. Biplab Medhi Fgd 3. Hadayat Ullah Fgd 4. Jadav Kalita Fgd 5. Gargaraj Nath Fgd 6. Dehram Bora Mahut 7. Binod Basumatary Hgd 8. CN Jiten Das AFPP 9. CN Umesh Barman AFPP 10. Tileswar Mahut 11. Dulen Gogoi Hgd 12. Ashim Bhuyan Hgd 13. Hasanta Doimari Hgd
2017	Session case no. 373/15	1. Sudarshan Johori FR 2. Amrit Doley Fr I 3. Manjit Dutta Fgd 4. Dimbeswar Das Fgd 5. Gargaraj Nath Fgd

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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		6. Harihar Medhi Fgd 7. Dilkip Ch Regon Fgd 8. CN Ankur Kutum AFPP 9. CN Dinesh Kalita AFPP 10. CN Dilip Mech AFPP 11. Sidartha Saikia Hgd 12. Kishor Borah Hgd 13. Ganesh Kumar Hgd
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4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Office record of FD & field visit	There has been enough public participation in Planning & implementing ECO development works. Lack of willingness by the communities in the fringe villages to provide intelligence affects the protection measures. Thus the participation is opportunistic.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGLs in population estimation may be taken into account)

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		FD office records	The complaints are received through Email & letters and the TR management has a system in place to consider the same and take appropriate measures to readdress it.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

*Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Office record/ Field visit	More than 30 local community boatmen are engaged in conducting rafting for tourists in the river Jia bharali. Some villagers are trained to guide tourists while they go for bird watching, walking on trail for wilderness experience at Pota Sali camp. Villagers as boatman and tourist guide supplement their income from these activities. The local villagers are also provided job in implementing habitat improvement works, maintenances of roads, patrolling path etc. Further they are also engaged for anti-poaching activities in camps.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor	✓		There are nearly 150 families who have encroached about 5 sq km area of Nameri Core. In Satellite Core also 5 sq km area is encroached by a particular ethnic group. There are no revenue villages in both the Cores. Management has no plan to remove the encroachers from both the Core and Satellite Core areas and rehabilitate them elsewhere.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		FD office records	The TR has exclusive Web site, where public give many suggestions. All vital information is available in the Web site. Further, pamphlet, brochures are regularly published and distributed among public. The TR has extensive Bird checklist that has been published in FORKTAIL by Armature Bird Club of UK.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Field visit & TCP	There is designated route for rafting in the river Jia Bharali (Kameng in Arunachal Pradesh). Visitors cross the river in the boats organized by the TR and are also taken on the 5 km long trail for wilderness experience and bird watching at Pota Sali camp. Several tourists do not cross the river and remain on the right bank doing picnic. The trail and the watch towers are well maintained by the TR management.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Report of Assessment of Predator & Prey status in Nameri TR.	The management has conducted the assessment of predator & prey in the TR between 2012 and 2014. During the study population size of predator like Tiger, Leopard was estimated based on the model of capture & recapture method. The prey population & occupancy was also estimated. One of the finding of the study was the photographic proof of Tiger dispersing between Kaziranga & Nameri. This helped in securing corridors by respective management. The analysis of satellite data between 1973 & 2011 indicate the loss of grasslands by river erosion and woodland invasion. The management is focusing on restoring the remaining grassland, which is important for the survival of hog deer. Given the prey biomass availability & the low Tiger density, the management has strengthened protection measures & habitat improvement works.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Building register, Annual Plan of Operation.	There is a building register maintained in the office of FD. Buildings are maintained periodically and also roads, bridges, culverts, patrolling paths etc. are maintained annually. Sufficient fund is made available for such works. However the funds are insufficient for new works.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Discussion with FD	The elephant estimation done during 2010 & 2017 in this TR it has been found that the population is stable. The estimation for other threaten species like White winged Wood duck, Hog deer, Hornbill have not been periodically carried out and thus difficult to state whether the respective population is declining/stable/increasing.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

***This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.**

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Report of Assessment of Predator & Prey status in Nameri TR.	The camera trap laid in the Nameri core area indicates that the Tiger population is stable. However, in the satellite core no such monitoring has been carried out. Satellite core is relatively more disturbed. The both the core & satellite core have potential of increasing the tiger number.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good	✓		
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

***This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Discussion with FD & field visits of core & satellite core	This area was affected by Bodo insurgency. The law and order situation has improved and insurgency is checked to some extent. However Bodos have encroached more than 100 sq km area of Sonai rupai WLS. Although the encroachment is not notified in satellite core, but the presence of encroachers continued to be a threat on Satellite core. The forest cover which is lost in buffer areas of Nameri core is also the threat on the core area. The protection strategies have helped in reducing the hunting by the tribal of the fringe villages. Courts have become more sensitive and have convicted culprits in 36 cases out of 67 cases taken up for prosecution during last three years. Illegal exploitation of forest produce has been checked in the core area but it goes on unabated in satellite core and buffer areas.
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		Field visits & discussion with FD	There is designated route for rafting in the river Jia Bharali (Kameng in Arunachal Pradesh)). Visitors cross the river in the boats organized by the TR and are also taken on the 5 km long trail for wilderness experience and bird watching in Pota sali. The trail and the watch towers are well maintained by the TR management. Visitor management is well monitored.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good	✓		
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

***Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Discussion with Potasali EDC members.	There is very limited local support. Many villages in buffer and around the satellite core are opportunistic and do not support TR management.
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	32.5	63.3%
2.	Planning	07	10	70	45	
3.	Inputs	05	10	50	30	
4.	Process	06	10	60	35	
5.	Outputs	04	10	40	30	
6.	Outcomes	05	10	50	30	
Total		32		320	202.5	

*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weight ages to the 32 Assessment Criteria including 'normalization'.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	✓	Grassland management requires burning. Management has undertaken this important step, in the interest of conservation of threatened faunal species.	Management must find an alternative to burning. Till then the periodicity of burning may be increased.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓	The area is the catchment of Rivers like Jia Bharali and Bor Dikroi, These rivers and many others change the course inside PA. Soil erosion and soil deposit is the annual feature.	The area claimed due to newly deposited soil can be planted with suitable tree species or even grasses can be grown in some patches so that the area is stabilized.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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7. Orang Tiger Reserve, Assam

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Para 1.3, page 8 of Management Plan of Rajiv Gandhi Orang National Park for the period 2015-16 to 2019-20	<p>The following are the values of the Tiger Reserve enumerated</p> <p>1. Conservation Values</p> <p>Last refuge of one-horned rhino on the northern bank of Brahmaputra River.</p> <p>High density of tiger.</p> <p>Representative area of Brahmaputra valley flood plain, grassland, forest and wetland.</p> <p>Research, recreation and educational values.</p> <p>2. The Park area is a shallow depression located on the northern bank of Brahmaputra River in the plains. The area comprises of grasslands with woodlands and water bodies. The gestational succession is arrested at the grassland seral stage by annual controlled burning and uprooting of trees which colonize the grasslands. The fertile soil deposited by floods every year also promotes the growth of grasses.</p> <p>3. Some endangered species like Bengal Florican <i>Houbaropsis bengalensis</i>, Greater Adjutant Stork <i>Leptoptilos dubius</i>, Lesser Adjutant Stork <i>Leptoptilos javanicus</i>, Spot-billed Pelican <i>Pelecanus philippensis</i>, Baer's Pochard <i>Aythya baeri</i>, Blyth's Kingfisher <i>Alcedo hercules</i>, Swamp Francolin <i>Francolin francolinus</i> Yellow Weaver <i>Ploceus megarhynchus</i> find a home here. The Park has also a considerable Tiger <i>Panthera tigris</i> population. The Gangetic Dolphin <i>Platani</i> is also found in the Park.</p>
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Para 3.12, page 32 of Management Plan of Rajiv Gandhi Orang	The following factors pose a serious threat, in varying degrees, to the existence of wildlife of the National Park.
Threats generally identified but not systematically assessed.	Fair		National Park for the period 2015-16 to 2019-20 Para 2.6.2.2, page 20 of Management Plan of Rajiv Gandhi Orang	a) Rhino poaching: This makes the rhinos vulnerable to the bullets of unscrupulous elements owing to false beliefs associated with the horn properties.
Most threats systematically identified and assessed.	Good	✓	National Park for the period 2015-16 to 2019-20 Para 3.6.3.4 page 25 of Management Plan of Rajiv Gandhi Orang	b) Retaliatory tiger killings: There has been alarmingly high number of tiger killings (17 nos. since 1991) especially through poisoning by fringe villagers in retaliation to cattle depredation by tigers in the Park in areas where illegal grazing is practised.
All threats systematically identified and assessed.	Very good		National Park for the period 2015-16 to 2019-20 Para 3.6.3.4 page 25 of Management Plan of Rajiv Gandhi Orang	c) Biotic interference in fringe areas: This leads to degradation of the habitat and makes the wild animals prone to various diseases of the domesticated animals. d) Invasion of grasslands by trees: This leads to shrinkage of the habitat of rhinoceros. e) Spreading of invasive weed species: <i>Mimosa</i> and <i>Mikania</i> are spreading at an alarming rate in the Park reducing the habitat of rhinoceros and other herbivores. f) Siltation of wetlands: This creates a situation of artificial scarcity of water for rhinos and other mammals. g) High floods: Absence of sufficient highlands in the Park leads to death of rhino calves and deer in times of high floods. i) Choking of water bodies by aquatic weeds: This makes wallowing difficult. Most threats have been documented and assessed.

*This assessment should be based on number, nature and extent of threats

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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1.3 Is the 'Core Area' of TR free from human and biotic interference* ?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Discussion with DFO Mangaldai	The TR is free from human habitation. 2.35 sq.km. Area which was under encroachment has been evicted on 2.3.2017 & 11.4.2017 following the direction of Hon'ble Gauhati High Court vide their order dated 5 th August 2013. In this process, 2151 persons of 343 families have been evicted and the TR is free from encroachment.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			
There are altogether 14 villages and other char habitations across Brahmaputra River in the Zone of influence with over 50,000 human population and over 30,000 cattle heads.				
The human population from fringe villages and cattle population put pressure on habitat for their requirement of timber fuel wood, grasses etc. Cattle grazing are rampant in the Park.				

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Discussion with DFO and perusal of records	The core and Buffer area has been notified vide Notification No. FRW.14/2004/34 dated 24/2/2016. Core area is 79.28 sq.km. and Buffer area is 413.18 sq.km.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			The proposal for Tiger Foundation has been moved, which is yet to be approved by the State Government.
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		Tripartite agreement has been done and SOPs of NTCA are followed for tiger mortality, disposal of carcasses and dealing with orphaned tiger.
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			The Tiger Reserve has been recently notified in February 2016. It is being managed under a 5 year Management Plan commencing from 2015-16. The Tiger Conservation Plan has yet been formulated.

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor	✓	Discussion with DFO, Wildlife, Mangaldai	Core and buffer are not in unified command. Core is managed by Tiger Reserve management i.e. DFO, Wildlife, Mangaldai, while the buffer area is managed by the Territorial divisions.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good			

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) +?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor	✓	Discussion with DFO Mangaldai Management Plan from 2015-16 to 2019-20	The TR has been notified recently in Feb 2016. Earlier it was managed with the help of management Plan of National Park and TR management has continued to manage under the same plan. Tiger Conservation Plan (TCP) is not in place.
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

**The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.*

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Management Plan	The core zone is a habitat of rare, threatened and endangered fauna. The following guidelines is operative in this zone. a. Protection is given top priority b. Visitors are not allowed in this Zone, except in designated tourism area. c. No exploitation of any kind is permitted. Thus the TR Is being managed to keep the area free from all exploitation and biotic interference and also to restore degraded habitat.
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

**Remarks need to elaborate on the kind of safeguards and how they work or are intended to work*

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Discussion with DFO Mangaldai	11 EDCs are formed in 2009-10 but presently they are not functional. The NGOs like WTI, WWF, Eco-System, India etc. are supporting the management.
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good			
Stakeholders routinely and systematically participate in all planning processes.	Very good			

***The result of participation must show in the field and not merely reported as a routine exercise.**

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Para 3.9.2 page 29 of Management Plan of Rajiv Gandhi Orang National Park for the period 2015-16 to 2019-20	Presently the following interventions are made in the habitat management: (i) Annual Burning: Every year the grasses are burnt in a phased manner in the months of March and April. The control burning has the following effects on the grasslands: a. It helps in arresting the succession of vegetation at the grassland seral stage. b. It prevents invasion of grasslands by woody trees. c. It promotes the development of grasses, which increases the food availability for Rhinos, as they prefer palatable new tender grasses. The Rhinos do not prefer the tall grasses, which become quite coarse. Removal of water hyacinth: The water bodies are choked by the water hyacinth. It is manually cleared. Some habitat improvement works carried out in 2016-17 are listed in the table below this Para.
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Location	Activity	Remarks
Nichalamai, Ramkong, Naowrasisa, Jhawani etc.	Removal of saplings of Simul, Sidha etc.	100 Ha
Old Orang & Rowmari Beel	Removal of weeds and cleaning of water body	4 nos
Desiltation of water body	Old Orang pond, Rowmari Beel part I & II.	3 No

2.5 Does the TR has an effective Protection Strategy (PS)+ and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Para 3.9.1 page 27 of Management Plan of Rajiv Gandhi Orang National Park for the period 2015-16 to 2019-20 Offence records perusal in the office of DFO Mangaldai.	<p>Staff: The National Park has field staff strength of 65 permanent personnel and 52 casual workers. 35 Assam Forest Protection Force personnel and 45 armed Home Guards are also deployed in the Park for protection duties. The guards organize their patrolling in the morning, evening and if required at night also. The guards use the patrolling paths and the dandies made by the rhinos for moving in the area.</p> <p>Camps: The National Park has a network of 40 anti-poaching camps well distributed over the entire area. The risk of poaching and the concentration of the flagship species of the Park i.e. Rhinoceros determine the location of these camps. Armed guards are permanently stationed in these camps.</p> <p>Watch towers: There are 9 tall watch towers for observation and surveillance constructed at strategic locations in the Park.</p> <p>Arms: The field staff is provided with .315 rifles and DBBL guns while the AFPP and Home Guards use .303 rifles.</p> <p>Wireless sets and Binoculars: All camps are provided with VHF wireless sets for communication purpose and binoculars for surveillance.</p> <p>Elephants: The present fleet of elephants is 30, of which 24 are adults and 6 are calves. The elephants are used for patrolling duty especially during rainy season.</p> <p>The information relating to offence cases are shown in the table below.</p>
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Year	Offence	Person Arrested	Poacher died in encounter.	Disposal
2013	7	9	1	1
2014	5	6	0	1
2015	6	6	1	Under trial
2016	5	12	2	Under trial
2017	9	20	2	Under trial

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor			The human death, injury and crop losses are compensated to affected families in accordance with the policy of the State Government. 5.5 km long solar fence is constructed and maintained by the management along northern and partly on the western boundary of the Park to prevent the straying of wild animal. The compensation paid for last 3 years to affected families is shown in table below the Para:
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Discussion with DFO and study of landscape map	The TR through its buffer areas on western portion is connected to Kaziranga National park and to Laokhowa and Burhachapori Wildlife Sanctuaries. It is on the northern shore of Brahmaputra floodplain. The habitats are fragmented and the connecting corridors go through human areas. In all the PAs and even in forest areas conservation of flora and fauna is the main focus. Thus the TR is integrated in wider ecological landscape.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

*Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in

Year	Human Death		Human injury		Cattle lifting		Crop damage	
	No.	Amt. (Rs.)	No.	Amt. (Rs.)	No.	Amt. (Rs.)	No.	Amt. (Rs.)
2014-15	0	0	0	0	0	0	0	0
2015-16	0	0	0	0	0	0	0	0
2016-17	0	0	01	30000	20	75000	3	75000

TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Perusal of records in DFO's office as well as discussion with DFO	There are 6 vacancies of Forester-I, 4 vacancies of Forest Guard and 5 vacancies of Game Watcher. To make-up the vacancies 10 fixed pay casual labors and 63 casual workers are deployed by the management. Further the management has the support of 42 Assam Forest Protection Force men and 41 Home Guards. The staff strength is adequate and well organized.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair			
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Discussion with the DFO Mangaldai.	List if vehicles, equipment and building are shown in table below this Para. The resources are sufficient to manage the Park and fulfill the objectives of the management.:
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

***These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

Vehicle Information

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Type of Vehicle including Motor Cycle, Bi cycle, Mechanized boat, country boat	Registration number (in case of bicycle and boats indicate the total number of such vehicle available in the Division)	Allotted to whom	Present condition	Whether condemnation process initiated against the vehicle which require condemnation (Yes or no)	Remarks
Bolero SLX	AS-13B 2395	DFO	Running		
Bolero LX	AS-13E 9701	DFO	Running		
Bolero camper	AS-13D 9200	RO	Running		
Bolero camper	AS-13E 9699	RO	Running		
Gypsy	AS-13B 2845	RO	Running		Require repairing
Gypsy	AS-13B 2394	DFO	Running		
Gypsy	AS-13F 2907	DFO	Running		
Jeep	AS-13 6062	RO	Running		Require repairing
Gypsy	AS-25 6870	DFO		Yes	
Jeep	AS-13 5904	RO		Yes	
Jeep	AMK- 4881	RO		Yes	
Jeep	AME- 4565	RO		Yes	
Jeep	AXA- 5426	RO		Yes	Chassis only
Bolero camper	AS-16A 2289	RO		Yes	
Motor cycle	AS-13E 9694	RO	Running		
Motor cycle	AS-13A 9420	RO			Require repairing
Motor cycle	AS-13 9231	RO			Require repairing
Motor cycle	AS-13D 5370	DFO	Running		
Motor cycle	AS-13E 9695	DFO	Running		
Mechanized boat	2 nos.	RO	Running		
Country boat	19 nos.	RO	Running		
Polaris Ranger	1 no.	RO	Running		
Speed boat	3 nos.	RO	1 no. running		2 nos. require repairing

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Discussion with DFO and verification of office records	The funds release by the NTCA during last 2 years (Tiger reserve notified in Feb 2016) are shown in the table below this Para. There has been delay in release of the fund, especially by State Government.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too. The details of funds released by**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Year	Scheme	Total Sanction(in Lac)	Total Release(in Lac)	Utilized(in Lac)	Date of Receipt of Funds
2014-15	CSS Integrated Dev. of Wildlife Habitat	26.25	23.33	23.23	27.3.2015
	CAMPA Project	Nil	Nil	Nil	Nil
	APFBC	Nil	Nil	Nil	Nil
	NTCA	Nil	Nil	Nil	Nil
2015-16	CSS Integrated Dev. of Wildlife Habitat	Nil	Nil	Nil	Nil
	CAMPA Project	Nil	Nil	Nil	Nil
	APFBC	35.46	35.46	35.46	3.5.2016 & 30.8.2016
	NTCA	Nil	Nil	Nil	Nil
2016-17	CSS Integrated Dev. of Wildlife Habitat	12.76	12.76	12.76	13.2.2017
		3.68	3.68	3.68	30.3.2017
	CSS Project Elephant	2.60	2.60	2.60	31.3.2017
	CAMPA Project	Nil	Nil	Nil	Nil
	APFBC	312.597	312.597	192.2672	22.3.2017
	NTCA	299.648	299.648	299.648	3.10.2016 & 30.3.2017

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Discussion with DFO and verification of office records	The funds for last 3 years released by the State are shown in the table below the Para: The release has been made generally on time and also the funds have been utilized.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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State Non-plan funds and their utilization for the last three years.

Year	Schemes	Amount Received Lakh	(in
2014-15	Elephant Feed	8.20	
	Forest protection	9.87	
	Building maintenance	6.50	
	Road maintenance	10.00	
	Vehicle maintenance	0.30	
	wages	11.95	
	Minor works	0.04	
	Office expenditure	0.58	
	Material supply	0.65	
	Development of NP	0.16	
2015-16	Elephant Feed	32.75	
	Forest protection	15.20	
	Building maintenance	5.00	
	Road maintenance	8.00	
	Vehicle maintenance	0.10	
	Wages Home guard	16.00	
	Office expenditure	0.20	
	Material supply	0.20	
	Development of NP	1.00	
	ASEB Bill	0.29	
	Other surcharges	2.60	
	Ration & Logistic	10.14	
2016-17	Elephant Feed	58.60	
	Forest protection	8358	
	Building maintenance	3.50	
	Road maintenance	4.40	
	Vehicle maintenance	0.35	
	Dev. of NP & Wildlife Sanctuary	17.00	
	Office expenditure	0.62	
	Material supply	0.50	
	ASEB Bill	0.87	
	Other surcharges	2.93	

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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The detail of funds released by State Plan and their utilization for the last three years.

Year	Schemes	Amount Received (in Lakh)
2014-15	Dev. of National Park	41.00
	Dev. of other Wildlife Areas	2.50
2015-16	-	-
2016-17	-	-

The details of funds released under Non- Plan (salary component) for the last three years

Year	Salary	Amount Received (in Lakh)
2014-15	Salary (regular staff)	251.51969
	Salary (Fixed pay)	9.24
2015-16	Salary (regular staff)	258.15687
	Salary (Fixed pay)	9.24
2016-17	Salary (regular staff)	461.99510
	Salary (Fixed pay)	9.24

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor	✓	Perusal of records in DFO office as well as discussion with DFO	The NGOs used to support the TR management financially in the past but no such support provided during last three years.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Discussion with DFO and perusal of records	DFO (Wildlife) is trained in Advanced Post Graduate Diploma in Wildlife management in the Wildlife Institute of India, Dehradun. No other staff has been trained Wildlife diploma/certificate. While short duration training/workshop is conducted for the staff of TR in subjects like census, weapon training, management of vulture, legal matters etc.
Some trained officers and few trained frontline staff, posted in the TR.	Fair	✓		
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

***Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Discussion with DFO and perusal of records	Main objective of the management is to protect the Forest and Wildlife and also to conserve the habitat as well as to reverse the trend of habitat destruction by way of grazing, illicit cutting etc. The duty of the TR staff is mainly to protect the habitat and prevent any illegal activity which is also in accordance with the management objectives. The performance is directly linked to management objective and they are even awarded and honoured for good performance.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

Awardees:

2017

1. Chakrapani Ray, Forest ranger
2. Ayez Ali, Forester-I
3. Jitumani Deka, Forest Guard
4. Kashab Swargiary, Boat man
5. Madhusing Bordoloi, Boat man
6. Rafikul Hoque, AFPP
7. Saiful Ali, AFPP
8. Abdul Malik Oster, AFPP

2016

1. Rubul Ali, Forest guard
2. Sanjoy Malo Das, Boat man
3. Bhaven Boro, Grass cutter
4. Mafiz Ali, Mahut
5. Rahit Ali, Mahut
6. Rustam Ali, Mahut
7. Naresh Pegu, Casual labour
8. Hasen Ali, Casual Labour

2015

1. Chakrapani Ray, Forest Ranger
2. Abani Haloi, Forest Guard
3. Ansula Basumatary, Forest guard
4. Mehed Hasan, Forest guard
5. Madhusing Bordoloi, Boat man
6. *Ghaneswar Deka, Casual labour*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Discussion with DFO and perusal of records	11 EDC constituted in 2009 have become non-functional. However NGOs participate in the management. Thus there is opportunistic public participation in some aspect.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGLs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Discussion with DFO and perusal of records	Complaint received are processed in relevant files and suitable action is taken. It is also monitored by senior officers. No complaint box is kept either in DFO office or in Range office.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair	✓		
Coordinated system logs and responds effectively to most complaints.	Good			
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor	✓	Discussion with DFO and perusal of records	TR management has not addressed any livelihood issues of the resources dependent communities.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

**The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Discussion with DFO and perusal of records	There are no villages in the Core area of the TR. Even 2.35 sq.km. area which was under encroachment has also been evicted. Thus there is no question of village relocation from critical tiger habitat.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good	✓		
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Discussion with DFO Mangaldai and visit in the Park, Range office and division office	All information regarding Orang TR has been uploaded into the Website – www.orangtigerreserve.gov.in . <u>Public can also access any information through RTI.</u> <u>Different signage have been put in the Range Office premises.</u> <u>Broachers and pump let are also printed and distributed among the visitors.</u>
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Visit to TR Discussion with DFO.	Management facilitate safaris on designated routes of the core area. Elephant ride is also available for the tourists. There are private hotels for the stay of the tourists. Facilities maintained by TR management are monitored and are fairly effective.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Discussion with DFO	<p>Very little research has been pursued on the flora, fauna and the ecological processes that operate in the National Park. The following are some of the important initiatives in the field of Research in the past.</p> <p>So far the checklist of birds has been prepared by Pankaj Sarma and B.N. Talukdarin the year 1995. However, there is need to update this list with the new discovery of birds.</p> <p>Nath Surendra Mohan (1999) <i>Floristic Composition of Orang Wildlife Sanctuary of Assam: A Comparative Study</i>. Ph.D. Thesis, Guwahati University.</p> <p>Ahmed Firoz M. (2002) <i>Survey of Amphibians of the Orang National Park, Assam, India</i>. In a survey by him three new species of anuran amphibians (<i>Kalophrynus orangensis</i>, <i>Kaloula</i> sp., <i>Microhyla</i> sp.) have been found and one rediscovered (<i>Chrixalus simus</i>) after a gap of nearly 90 years.</p> <p>There is an urgent need to build up an inventory of the flora and fauna found in the Park. The distribution and estimation of Hog deer & Wild pig need to be studied and quantified. The status and distribution of Bengal Florican and Gangetic Dolphin also need to be studied.</p> <p>The research conducted in the past have not been systematically evaluated and used in the management.</p>
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair	✓		
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Discussion with DFO	No maintained schedule for funds for infrastructure/assets is maintained. However such maintenances are carried out depending on the availability of funds and adhoc priorities fixed.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor			The rhino estimation was done in 2009 and 2012 where all animals were counted and the final figure was 64 and 100 respectively. No counting has been done after 2012. There are generally 3 to 4 poaching per year. Therefore the population seems to be stable. Even elephant population appears to be stable. Pigmy hog has been re-introduced and its population is on the rise. Bengal Florican population is also stable for the last 3 years.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		Discussion with DFO	Tiger No. is stable as found in successive estimations. TR management has to deal with the cases of straying tigers.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good	✓		

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Visit in the Park	Threats like poaching of rhinoceros, insularity of the Park, invasion of weeds like mimosa and erosion due to rivers bordering the Park remain unchanged. However measures have been taken to reduce biotic interference, but cattle grazing is found to be rampant..
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		Discussion with DFO and visit in the Park.	Visitor management is implemented and properly maintained.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good	✓		
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

***Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Visit inside TR and discussion with DFO	The villagers are not supportive to TR management owing to the reduction of access to the Park for their requirement like thatching grass, fishing, cattle grazing etc.
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	27.5	60.1%
2.	Planning	07	10	70	40	
3.	Inputs	05	10	50	32.5	
4.	Process	06	10	60	32.5	
5.	Outputs	04	10	40	25	
6.	Outcomes	05	10	50	35	
Total		32		320	192.5	

*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	✓	Grassland management requires burning. Management has undertaken this important step, in the interest of conservation of threatened faunal species.	Management must find an alternative to burning. Till then the periodicity of burning may be increased.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓	The area is in Brahmaputra flood plain. Soil erosion and soil deposit is the annual feature.	The area claimed due to newly deposited soil can be planted with even suitable tree species or even grasses can be grown in some patches so that the area is established.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

8. Dampa Tiger Reserve, Mizoram

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Statement of significance in TCP	Dampa TR lies at the tri-junction of Bangladesh and two Indian states Mizoram and Tripura. It is interspersed with precipitous hills, sparkling streams and rivulets and dominated by moist deciduous forests in the lower reaches while a mixture of tropical wet evergreen and tropical semi-evergreen in the remaining reserve. The altitude ranges from 50 meter to 1095 meter. The presence of 5 species of felids namely common leopard, clouded leopard, marbled cat, Asiatic golden and the leopard cat makes the reserve unique. Endangered primate species such as hoolock gibbon, rare stumped tailed macaque etc are found here. Gaur, sambar, serow, barking deer and wild boar are prey to tigers and leopards in Dampa. The little known Malayan sun bear, Asiatic black bear were also captured in Camera trap in the past. Dampa once harbored Asiatic elephants. There are several species of birds in TR. Values are identified in TCP but are not being monitored.
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Para 3.4 Assessment of Threats in TCP	Following threats are identified and recorded in TCP. However these threats are not systematically assessed. (a) Hunting and poaching to tigers, co predator and prey animals is the most significant threat. It was hunting ground for Mizos under Chief's rule. Poaching pressure remained high even after the area was notified as Sanctuary. Tribal consider hunting as their traditional right. With increasing awareness, the hunting is said to have come down, as 200 hunters have surrendered their firearms. Myanmar wildlife traders have also inflicted damage in the area in the past. (b) Insurgent groups around Bangladesh border also threaten biodiversity of the Reserve. Labourers working on BSF border fencing works were abducted in
Threats generally identified but not systematically assessed.	Fair	✓		
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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				<p>2012 and were released after a month. Similarly forest officials were abducted from Chikha anti-poaching camp and were released after one and half month. There are some incidences of abduction. It is a very big threat to management.</p> <p>(c) Encroachments; Maintenance of Forest boundary and records are not proper. 15 villages in buffer have been practicing jhum extensively. The communities in Phuldungsei, Lallen and Kawnmawi villages have removed boundary pillars from forest boundary of the core. The forests in buffer are exhausted and some villages are keeping an eye on the core area of the tiger reserve.</p> <p>(d) Weeds like Eupatorium, Mikenia and Ageratum weeds are invading forest area of TR.</p> <p>(e) Poisoning feeder channel by fishermen, even in buffer areas may be detrimental to wild animals straying there.</p> <p>(f) Ban on collection of non timber forest product and regulation of jhuming has resulted in communities to be unsupportive of TR management.</p> <p>(g) Illegal removal of timber, firewood, bamboo and canes etc is matter of concern.</p>
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***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference* ?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Discussion with staff and field visit	Core area of the TR does not have any village, but the buffer area has 15 villages. Communities residing in these villages are poor tribal, who exert enough pressure on the forests of core area.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Discussion with FD	The management has signed tripartite agreement. Core and buffer of TR is also delineated . Steering committee and Tiger Foundation are in place, but no meeting have taken place.. No tigers have strayed after last MEE. In fact there are no tigers in the reserve, so none of the seven SOPs are required to be followed.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair	✓		
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor	✓	Discussion with FD	Core and buffer are not in unified command of FD. Territorial DFO is in control of buffer area.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		TCP	The TR has relevant TCP.
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor	✓	AG audit report for the period 2012-17	TCP prescribes several measures to protect flora and fauna of TR. But there has been delay in sending APO to NTCA for approval and release of funds.. The same is observed by Accountant General in performance audit of TR for the period 2012-17. Many measures for protection could not be taken up for delay in release of fund/ as well as scarcity of fund. There is charge on earlier FD for misappropriating funds especially with regard to construction of anti-poaching camps, relocation of village etc..
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Interaction with Women self help group in village Dampa Rengpui.	Management has helped few groups to find some alternate livelihood. But as AG has pointed out sufficient fund is not asked from NTCA to expand similar program in all 15 villages of buffer. Similarly Eco tourism potential is also not harnessed. Poor community residing in villages do not have enough scope for alternate livelihood option.
Stakeholders participate in some planning.	Fair	✓		
Stakeholders participate in most planning processes.	Good		AG audit report	
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		AG audit report for the period 2012-17	Fruit bearing tree species were planted from 2012-13 to 2016-17. Against a target of 400 ha at the cost of Rs 16 lakhs, only 200 ha was achieved at the cost of Rs 4.50 lakhs. Under soil and moisture conservation work, gully plugging, de-siltation of ponds etc was prescribed to be taken up. However planting of fruit bearing tree species was taken up. Evaluation report with regard to success of these plantations is also not available on record.
Limited planning and monitoring programmes are in place for habitat management.	Fair	✓		
Habitat management programmes are generally planned and monitored.	Good			
Habitat management programmes are thoroughly planned and monitored.	Very good			

***This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.**

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor	✓	AG audit report	It has been found by audit that a number of temporary and semi-permanent structures for anti-poaching camps were not built. These constructions are said to have been completed departmentally, but some of it did not exist on the ground. The audit has also found out that out of 47 sanctioned post, only 10 are in position. 37 posts are lying vacant including the post of FD. There is no ACF. In the absence of the Rangers, Deputy Rangers are manning both the Ranges, 9 out of ten Foresters positions are vacant, 10 out of 15 Forest Guards positions are vacant. Also all the ten Constable posts are vacant. APCs are manned by two or three wildlife Guards who are on daily wages. In fact there are 170 such Guards in the TR, but they are directionless as there is huge vacancy at the middle level of management. The patrolling register maintained in camps reveal no information about patrolling. Details of offence cases booked during last three years are brought on record and are shown in a table below this Para. Basic amenities are not provided in camps. No one can be believed to be staying there. The system of GPS based patrolling/ smart patrolling are not heard off in the TR. It has also pointed out on page 17 of AG
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good			
TR has a comprehensive and very effective PS and SA.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

													audit report that only 24 guns are available as on 31 st March 2017 in 41 APCs for 170 Wildlife Guards supposed to provide protection to a TR having international border and insurgent activities. AG has also pointed out that even fire watchers were not taken as per the targets fixed in APOs. The TR has no Security plan, nor has it conducted any Security audit.
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

**WILDLIFE OFFENCE CASES UNDER DAMPA TIGER RESERVE, MIZORAM
DURING 2015 TO 2017**

Sl. No.	Name	Father/Husband	Address	Case ID	Section of Law	State	Division	Police Station/Forest Range	District	Species Common Name	Crime Date	Tools Used	Case Detecting Agency
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Lalthanzama	Laukungha	Teirei	No. 6/2015	U/S 27/39(2)/39(3) OF WP(Act), 1972 & U/S 51/51(ic) of WP (Act), 1972	Mizoram	Dampa Tiger Reserve	Teirei Wildlife Range	Mamit	Barking Deer's meat (boiled) 35 pieces	27.1.2015	1 No. of Snare/Trap	Staff of Dampa Tiger Reserve
2	Israeltang Reang	Gutirai Reang	Thangnangpara	No.3 / 2015	U/S 39(2,3) 40/44/49 (b) wp(Act), 1972 & U/S 51/51(IC) OF wp (Act), 1972	Mizoram	Dampa Tiger Reserve	Teirei Wildlife Range	Mamit	Killing of Clouded Leopard	1.6.2015	-	Staff of Dampa Tiger Reserve
3	Birguram Churaham	Konsimoni Gonoram	Dampangpara	OR/25	U/S/ 9/27 (1)/31 WP(Act), 1972 & U/S 51/51(IC) of WP(Act), 1972	Mizoram	Dampa Tiger Reserve	Teirei Wildlife Range	Mamit	1 Fish – ½ kg 2 3kg meat of Barking Deer along with Liver (1/2 kg) 3 Sambar with its skin & Meat	4.5.2016	-	Staff of Dampa Tiger Reserve
	Thanmawii	Churaham											
	Lalramthari	Lalhmingliana											
4	Joysen	Chandro Kumar	Rajivnagar – II	OR/26	U/S 9/27(1)/31 WP(Act), 1972 & U/S	Mizoram	Dampa Tiger Reserve	Teirei Wildlife Range	Mamit	1 smoked meat of Phayre's leaf monkey	11.7.2016	1 Rack shack – 1 no. 2 Mobile Phone – 1 no.	Staff of Dampa Tiger Reserve
	Sneho Ranjan	Phul Chondro											
	Gurul Joy	Chalu Chondro											
	Guri	Gopal											

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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	Moruttua				51/51(ic) of WP(Act), 1972					y- 11 pieces		(Hi-Tech-Yuva-Y1) 3 U.T Gun – 2 nos.	
5	Remsang puia Biakzuali Lalhimpui a	Lalngakliana (L) Liansuaka Vanlahluna	Phulbial, Phuldungsei	OR/27	U/S 9/27 (i) 31/32 WP (Act), 1972 & U/S 51/51(ic) of WP (Act), 1972	Mizoram	Dampa Tiger Reserve	Phuldungsei Wildlife Range	Mamit	Fish – 250 gm	18.7.2016	1 SBBL Gun – 1 no. 2 Dynamo – 1 no. 3 Battery – 1 no. 4 Empty Cartridge – 6 nos. 5 Live Cartridge – 1 no.	Staff of Dampa Tiger Reserve
6	Lalthlamuana Lalfamkima Lalchhanhima Ngurnunanga Pachhunga Vanlalsanga Ramdingina VL Hruaia Lalchhanhima		Saithah	OR/28		Mizoram	Dampa Tiger Reserve	Phuldungsei Wildlife Range	Mamit	Illegal entry to Tiger Reserve & illegally catching of crabs	23.8.2016		Staff of Dampa Tiger Reserve
7	Lalnunfela Dania Sandro		Phuldungsei	OR/29		Mizoram	Dampa Tiger Reserve	Phuldungsei Wildlife Range	Mamit	Poaching of wild pig in the buffer area	4.9.2016		Staff of Dampa Tiger Reserve
8	Lallngmuana ZD Lalhriatpuia		Phuldungsei	OR/30		Mizoram	Dampa Tiger Reserve	Phuldungsei Wildlife Range	Mamit	Illegal possession of deer meat in the buffer area of DTR	6.9.2016		Staff of Dampa Tiger Reserve
9	K.Zomua na Zoramsanga		Damparengpui	OR/31		Mizoram	Dampa Tiger Reserve	Teirei Wildlife Range	Mamit	Illegal entry to Tiger Reserve & illegally poisoning of the nallah and catching crabs	9.9.2016		Staff of Dampa Tiger Reserve

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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10	1)Namo Shanti Chakma	Chandra Joy Chakma	Hnahva	OR / 34	u/s 9 & 51	Mizoram	Dampa Tiger Reserve	Phuldungsei Wildlife Range	Mamit	Illegal Killing of Sambar	14.12.16	Staff of Dampa Tiger Reserve
	2)Kalpa Ranjan Chakma	Raniahava										
	3)Dipangkar Chakma	Hola										
	4)Tulaji Ranjan Chakma	Hengorang Pumo										
11	Lalngaihawma	Saikaithanga	Saithah	OR / 35	U/S 9/51	Mizoram	Dampa Tiger Reserve	Teirei Wildlife Range	Mamit	Illegal Killing (Shooting) of Red Jungle fowl	22.11.17	Staff of Dampa Tiger Reserve
	Lalchhanhima	Zanghinglova	Sathah									

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Interaction with staff AG audit report	During the visit of the team in Rajivnagar, it was reported by staff that compensation for crop damages by wild animals for 2014-15 and 2015-16 have not been paid. Most of these cases relate to the damage of maize crop by sloth bear and potato by wild boar and porcupine. AG has pointed out that the Department has paid a total compensation of Rs 11.33 lakhs to 849 villagers, whose crops were damaged by wild animals. TCP provided for electric fencing and establishment of Wildlife Rescue Center, but the same was not included in APO and no fund was provided for the purpose.
TR has been able to mitigate few human-wildlife conflicts.	Fair	✓		
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor	✓	Field visit on western border along River Sajek	Dampa TR had continuity with Khaslong Forest Reserve of Bangladesh. Border fencing is done along the international border and the corridor for wildlife movement is permanently broken. Further there is nothing on record to substantiate that the officials from both side discuss the issues of wildlife trade as well as hunting of wild animals.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

*Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Discussion with FD AG audit report	The main charge of Field Director is CF (Research & Development). He is holding this post in additional charge. I have therefore counted FD's post as vacant. Including this there are 36 vacancies within the sanctioned strength of 47. In addition there are 170 Wildlife Guards who are daily wages employees. In the absence of regular ACF and Rangers, the daily wages staff is directionless. Vacancies at Forester and Forest Guard level have weakened the protection work. The personnel are inadequate and are not properly organized and deployed. AG audit on pages 25 and 26 have pointed out that the amenities like housing, medical kits, solar lights, field kits, mosquito nets, kerosene, effective communication mechanism and basic education and medical facilities are lacking. Even daily wages employees are not found to be in high spirit for protection works.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a-vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

SANCTIONED AND VANCANT POST
UNDER FIELD DIRECTOR, DAMPA TIGER RESERVE

Sl.No.	Name of Post	Sanctioned	Fill up	Vacant
1.	Field Director	1	-	1
2.	Assistant Conservator of Forest	1	-	1
3.	Forest Ranger	2	-	2
4.	Deputy Ranger	2	2	-
5.	UDC	2	1	1
6.	LDC	2	1	1
7.	Forester	10	1	9
8.	Forest Guard	15	5	10
9.	Constable	10	-	10
10.	Driver	1	-	1
11.	Peon	1	1	0
	Total :	47	11	36

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		AG audit report	AG has pointed out that money utilized for construction of APCs has been siphoned off. There is no structure on the ground in many cases. The existing APCs do not have adequate facilities for sanitation, water, light etc. These camps are manned by daily wages employees. It may be difficult to believe that anyone stays in these camps during night. There is shortage of vehicles and equipments like GPS, Camera traps etc.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair	✓		
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

***These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.**

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		AG audit Report	AG has observed that APOs do not fully cover all the works prescribed in TCP. State Government has delayed the submission of APO to NTCA repeatedly. In turn NTCA has sanctioned APO and released fund belatedly and there was always very little time to complete the works with the time limit. Many times even the budget released have remained unspent. Funds have not been asked for purchase of camera traps, weapons, training, research etc. The funds received from state and Central Government and the utilization is shown in the table below this Para;
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

**FUND RECEIVED FROM CENTRAL & STATE DURING LAST THREE YEARS
UNDER DAMPA TIGER RESERVE
(RS in lakhs)**

Sl. No.	Year	Opening Balance	Allocation of Fund			Expenditure			Closing Balance
			Central	State	Total	Central	State	Total	
1.	2015-16	4.286	187.98	20.884	213.15	153.9584	25.166	179.1244	34.03
2.	2016-17	34.03	301.55	26.05	361.63	268.464	26.05	294.514	67.11
3.	2017-18	67.11	299.05	23.924	390.084	215.316	23.924	306.35	

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor			Very little fund has been provided by State Government. The receipt and utilization for last three years are shown in the same table below the Para 3.3. State Government takes care of salary and allowances of permanent staff who are 11 in number, where as NTCA takes care of salary of all 170 daily wages Wildlife Guards.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor	✓	Discussion with in charge FD	No NGO provides any resource to Dampa Tiger Reserve.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair			
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor	✓	Discussion with in charge FD Page 26 of AG report	No officer and frontline staff are trained in Wildlife management. AG has also observed on page 26 of the report that the department did not formulate any training schedule nor did it seek any fund through APO for imparting training.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and and fair number of trained frontline staff posted in the TR.	Good			
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

**Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?*

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		AG report Discussion with persons working in the field.	As per the AG's remark on page 26 of the report under the head "Incentives and award" it is found that 36 staff were provided incentive and award worth Rs 0.90 lakhs, for outstanding work. Nature of the works are not brought on record, but it has to be for their contribution for works relating to wildlife conservation, which is a relevant management objective.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor			The management is involved in very little Eco development works and Eco tourism works. There is potential to find alternate livelihood option for villagers in these areas. AG has also made similar observation. However 170 Wildlife Guards are recruited from local communities, who are helpful in protecting forests and Wildlife in core area of the TR. Public participation in management is still to
Opportunistic public participation in some of the relevant aspects of TR management.	Fair	✓		
Systematic public participation in most of the relevant aspects of TR management.	Good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			take off.
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**The involvement of NGOs/ NGLs in population estimation may be taken into account)*

4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor			Communities have been doing jhum cultivation in buffer area of the TR. In certain areas like Rajivnagar, chakama settlers are demanding core area for jhum. Management has to handle it intelligently. Many places, there is complain for defacing the forest boundary and encroach core area. Here again, management cannot be soft. All these complaints can be settled when FD and some senior officers visit field. In addition written complaints are processed in the FD office as well as state headquarters.
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

**Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?*

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Discussion with staff and report from AG	The management is involved in very little Eco development works and Eco tourism works. There is potential to find alternate livelihood option for villagers in these areas. AG has also made similar observation. However 170 Wildlife Guards are recruited from local communities, who are helpful in protecting forests and Wildlife in core area of the TR.
Few livelihood issues are addressed by TR management.	Fair	✓		
Substantial livelihood issues are addressed by TR management.	Good			
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

**The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Discussion with staff	Presently there is no village in the core area and hence no village relocation is necessary in Dampa TR. Scam was committed in the only relocation of 'Andermanik' village in the past. Further villagers of 'Serhmun" village in the buffer of the TR are pressing for their relocation, Management is willing to consider it favourably.
Plans have been made but no implementation	Fair	✓		
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor	✓	Discussion with in charge FD and staff	Information on TR management is available in Forest Department web site. However no Brochures and Pamphlets are published by management.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good			
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor	✓	Discussion with in charge FD	Visitor services and facilities do not exist.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good			
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			

***Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor	✓	TCP AG's observation on page 27 of the report.	It is mentioned in the TCP that basic ecological information on flora and fauna of TR is not available because of absence of systematic research and further non-availability of infrastructure for research.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good			
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Discussion with staff	Inventory and maintenance schedule are adhoc. Works are carried out subject to availability of the fund.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair	✓		
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good			
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor	✓	Discussion with staff during field visit	Management has 38 pairs of camera, which are old and have not been maintained in the recent past. As a result laying of camera trap in the core area of TR is discontinued. All India tiger Estimation is commenced in all
Some threatened/ endangered species populations declining,	Fair			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

some are increasing, most others are stable.				tiger states of the country. The state of Mizoram has not even trained the front line staff to collect information relating to tiger signs, ungulate encounter and status of habitat. IG NTCA Sri D P Bankhwal is likely to take up the task of training to all field level personnel so that eight days field protocol is followed in all beats of the state. In the absence of any monitoring of threatened species and where protection of forests and wildlife is not given due importance, the only conclusion can be that threatened species are declining.
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor	✓	Discussion with persons in the field	No tiger has been captured in camera during last six-seven years. There is no evidence of presence of even adequate ungulates. There is no chance of tiger being in the reserve.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Field visit and discussion with the local forest personnel	Clearing the forests in buffer and burning for jhum cultivation is a standard practice in this hill state of north-east. All threats of TR is continuing.
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

**Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor			There is no tourism management undertaken by TR administration. I am not grading this criterion.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good			
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

***Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism**

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor		Field visit and interaction with Women self help group at Dampa Rengpui.	TR management has not done enough to win the heart of local communities. Eco Development works have become very slowly.
Some are supportive.	Fair	✓		
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

***There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.**

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	22.5	44.4%
2.	Planning	07	10	70	30	
3.	Inputs	05	10	50	25	
4.	Process	06	10	60	32.5	
5.	Outputs	04	10	40	12.5	
6.	Outcomes	04	10	40	15	
Total		31		310	137.5	

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	✓	Jhuming is prevalent in the state. Buffer areas of the TR are subjected to intensive clearing of tree growth, burning and cultivating the area. AG's report suggest that forest fire is not taken seriously by management.	Attempts must be made to discontinue the practice. Tribal communities residing in the villages of buffer areas must be engaged in alternative livelihood options. Forest protection measures in core area must be stepped up.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓	Some fruit bearing tree species are being planted for habitat improvement.	Illicit felling of trees must be prevented by the management.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

9. Buxa Tiger Reserve, West Bengal

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Tiger Conservation plan (TCP) of Buxa Tiger Reserve (BTR) 2016-17 to 2026-27. Page - 23	Buxa Tiger Reserve (BTR) is biologically rich and located at confluence of 3 major bio-geographic zones viz. Lower Gangetic plains, Central Himalayas and Brahmaputra valley. Significance of BTR in international context is to provide shelter for species in red listed IUCN status and appendices of CITES. Phipsoo Wildlife Sanctuary of Bhutan is situated along the northern boundary of BTR and is an international corridor of Elephant migration. The significance of BTR is also important as it provides protection for schedule-I wild animals of W(P)A, 1972. BTR is part of a large wildlife conservation landscape; on the east of which there are buffer area of Manas Tiger Reserve along with heavily populated human areas and on further east is Manas TR of Assam and Royal Manas National Park of Bhutan. The West of BTR has series of protected areas namely Jaldapara NP, Gorumara NP, Chapramari WLS, Neora-valley NP, Mahananda WLS, Senchal WLS & Singalila NP. Some of these of PA s are interspersed with Rfand human habitations. Among the major rivers coming from the Himalayas-Basra, Kaljani, Poro, Dima, Jainty, Rydak I, Rydak II & Sankosh pass through this TR which helps the life systems of communities residing down stream. The vegetation of BTR does help in stabilising these rivers and conserving moisture. Values are generally identified but not systematically assessed and monitored..
Values generally identified but not systematically assessed and monitored.	Fair	✓		
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good			

1.2 Are the threats to TR values well documented and assessed?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Tiger Conservation plan of Buxa Tiger Reserve (BTR) 2016-17 to 2026-27. Page: 65-73	Tiger Reserve has 34 Tea Gardens, 46 Revenue Villages and 37 Forest Villages – of which 15 of them in Core and 22 forest villages in Buffer of BTR. Further there are other revenue villages on the periphery of the Tiger Reserve. The following threats are identified and recorded in TCP – i) Hunting and poaching ii) Grazing iii) Disease to wild animals iv) Encroachment due to mining by four companies in the past, the matter is under litigation in High Court and SC v) Fuel-wood and firewood collection and smuggling of timber on an average 3000 m3 of timber was seized until 2012-13. However the corresponding seizure during 2014-15, 2015-
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good	✓		
All threats systematically identified and assessed.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>16,2016-17 was 1884.CMT,1787 CMT & 1548 CMT respectively.</p> <p>vi) Wildfires which attributed to Graziers, Pedestrians, Poachers and NTFP collectors.</p> <p>vii) Mining</p> <p>viii) Boulder collection.</p> <p>ix) Roads, Railways and Electric Transmission Lines passes through BTR</p> <p>x) Proposed multipurpose Sankosh – Tista canal.</p> <p>Most threats are systematically identified and periodically assessed.</p>
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***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference* ?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Page 65-73 List of which is annexed in Annexure-2B of TCP	There are 15 Forest villages in Core area in BTR having 1019 families.
The 'Core Area' has some human and biotic interference.	Fair	✓		
The 'Core Area' has little human and biotic interference.	Good			
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Perusal of records.	All the four statutory requirements - legal delineation and Notification of Core & Buffer, establishing Tiger Foundation, TCP and Constitution of State Level Steering Committee fulfilled. Further tripartite agreement has also been done. The SOPs relevant / applicable for BTR are being followed.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good	✓		
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good			

***Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.**

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		Tiger Conservation Plan of Buxa Tiger Reserve (BTR) 2016-17 to 2026-27.	Core and Buffer is under full administrative and financial control of the Field Director of TR.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

2. Planning

2.1 Status of Tiger Conservation Plan (TCP) +?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		F, No. 1-14/2011-NTCA(Part-1) of GOI	TR has a comprehensive and relevant TCP, duly approved by the NTCA
TCP is under preparation	Fair			
TR has a relevant TCP	Good			
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good	✓		

***The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.**

2.2 Does the TR safeguards the threatened biodiversity values*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Page 24-25 of TCP	Occasionally the instances of poaching of spotted deer, bison, elephant, barking deer, have been registered in BTR. Because of biotic pressure, poor prey base and lack of monitoring in the past, Tigers have gone missing in this reserve. Illicit felling of trees and converting into timber appears to be rampant in this reserve. Nearly 18 Cubic meter of timber is seized every year for last three years. Now the Tiger Reserve Management has stepped up protection and is planning to reintroduce spotted deer to start with. After the ungulate population is augmented the management is contemplating the re introduction of tigers as well.
TR safeguards a few threatened biodiversity values.	Fair	✓		
TR safeguards a large number of threatened biodiversity values.	Good			
TR safeguards all threatened biodiversity values.	Very good			

***Remarks need to elaborate on the kind of safeguards and how they work or are intended to work**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria ^{+D}				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Perusal of records.	The institution of JFMCs is in place. These committees participate in planning process. There is system of revenue sharing with JFMCs. Revenue sharing for 2016-17 in BTR is shown in a Table below this para. Further the list of stakeholder(s) who are involved in management practices is also provided in table below the para.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

^{+D}No. the result of participation must show in the field and not merely reported as a routine exercise.

JFM and Its Sustainability

No. & Members

Division	No. of JFMC presently formed	Number of members	No. of New JFMC proposed
BTR (East)	31	5161	2
BTR (West)	34	5105	-
Total	65	10266	2

Division	No. of AGM conducted
BTR(E)	31
BTR(W)	24
Total	55

Revenue share of 2016-17

Division/year	No. of JFMCs	No. of family	JFMC share@536/ family(in lakhs)	Welfare activity/JFMC @ 4020/family (in lakhs)
BTR(E)	31	5161	27.66	207.47
BTR(W)	34	5429	29.09	218.24
Total	65	10590	56.75	425.71

JFM & Impact Socio Economic

Division	No of SHG	No of members	Total amount with SHG
BTR E	252	-	-
BTR W	165	1733	6,45,327.00
Total	417	1733	6,45,327.00

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Records Related to participation by other stakeholders (Govt. Dept. and NGOs)

1. All India Tiger Population Monitoring Protocol (Phase - IV Protocol)-2017

S.No.	Name of Stakeholder
1	Cooch Behar Mountaineering Club
2	WWF-India Sundarbans Landscape
3	SHER, Kolkata
4	RMC- Alipurduar
5	News Kolkata
6	HNAF, Siliguri
7	Nandadevi Foundation
8	Aranayak, Assam
9	Green Heart Nature Club

2. All India synchronized Elephant Population Monitoring for North Bengal Landscape- 2017

SI No.	Name of Stakeholder
1	Dooars Photographic Association
2	Nature Mates Nature Club
3	Rovers & Mountaineers Club, Alipurduar
4	Alipurduar Nature Club
5	Nandadevi Foundation

3. 1st Annual Buxa Bird Festival 2016-17

SI No.	Name of Stakeholder
1	People for Animals, Alipurduar Jn.
2	Nandadevi Foundation, Alipurduar Court
3	Alipurduar Nature Club, Alipurduar
4	Rovers' & Mountaineers' Club, Alipurduar
5	Vasundhara Enviro-Welfare Society, Salsalabari
6	Samuktala People's Welfare, Samuktala
7	Nature & Trekkers' Club, Jalpaiguri
8	Himalayan Nature & Adventure Foundation (HNAF), Siliguri
9	Nature & Adventure Society (NAS), Odlabari
10	Green Level Welfare Society, Lataguri
11	Dooars Nature and snake Lovers' Organization, Dhupguri
12	Photographic Association of Cooch Behar
13	Third Eye, Sagardighi Square, Cooch Behar
14	Ashram Road Euro Club, Cooch Behar
15	Dooars Photographers' Association, Alipurduar Court

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Perusal of records & discussion with The FD/BTR	Habitat Improvement programme like grassland development, weed eradication, burning/cutting back older grass plantation, soil and moisture conservation, artificial water harvesting etc. are systematically planned and implemented. The details of some of these works are shown in table below this para.
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

**This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.*

A. Grass Plantations -

Grass Land Plantation from 2013 to 2017						
	Division					
		Name of Range	Name of Beat	Block & Compartment	Area in Hect.	Total
2013-14		SRD	SRD	SRD-4	3.0 ha	3.00
		JNT	JNT	JNT8	5.0 ha	5.00
						8.00
2014-15		SRD	SRD	DH-2	6.2ha	6.20
		SRD	SRD	SRD-5	5.0 ha	5.00
		JNT	JNT	JNT7	4.30 ha	4.30
		TOTAL				15.50
2015-16	BTRE	SRD	South Rydak Beat	DH-2	10	40
			Chipra Beat	SRD-7	10	
			Chipra Beat	DH-3	20	
			Marakhata Beat	MKT-2B	20	20
			Narathali Beat	NRT-1	10	10
			Narathali Beat	NRT-1	10	10
		Total :::				80
BD	Buxaduar	NRVK-9	5.0 ha	5.00		
Total				5.00		
2016-17		JNT	JNT	JNT-7	3.0 ha.	10.00
		JNT-7	JNT-7	JNT-7	7.0 ha.	
		JNT	JNT	JNT8	5.0 ha	5.00
		BD	Buxaduar	NRVK-9	3.0 ha	3.00
		SRD	SRD	SRD-5	18.0 ha	18.00
		SRD	SRD	SRD-7	7.0 h	7.00
		SRD	SRD	SRD-5	10.0 ha.	10.00
		SRD	SRD	SRD-5	5.0 ha.	5.00
TOTAL				58.00		
2017-18		SRD	Chipra & Marakhata		40.00	40.00

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

		TOTAL				126.50	
2013-14	BTRW	East Rajabhatkhawa	North Panbari	Pan-3	3.6 ha	3.6	
				East Nimati	NMT-3	10 ha	10
			TOTAL				13.6
2014-15			Nimati	East Nimati	NMT-3	5 ha	5
			TOTAL				5
2015-16			Nimati	East Nimati	NMT-3	5 ha	5
			TOTAL				5
2016-17			Nimati	East Nimati	NMT-3	20 ha	20
			Nimati	East Nimati	NMT-3	25 ha	25
			TOTAL				45
2017-18			Nimati	East Nimati	NMT-3	33 ha	33
			East Rajabhatkhawa	North Panbari	Pan-5	7 ha	7
			East Rajabhatkhawa	Sourth Panbari	Pan-6	5 ha	5
			West Rajabhatkhawa	NRVK	SRVK-2	15 ha	15
			TOTAL				60
			TOTAL				128.60

A. Weed eradication programme:

Year	BTR
2016-17	50 ha.

**B. Controlled burning/Cutback of old grass plantations for natural regeneration of grassland ::
(In Ha)**

Year	BTR
2012-13	LS
2013-14	LS
2014-15	100 Ha.
2015-16	120 Ha.
2016-17	200 Ha.

C. Soil and water conservation structures: (Bhutia Basti 100 mt, 22.5 mile)

D. Construction of Artificial water harvesting / recharging structures :

Artificial Waterholes	
BTR (E)	
Range	Compartments
Jainty	TGN-1, NRVK-2, NRVK-13, NRVK-5, JNT-9, JNT-6A
North Rydak	BHT-1, CRD-4, KTPF, Rahimbad RF
Hatipota	Chuniajhora-1, JNT-2B
Kumargram	KG-1, KG-2
Buxaduar	STB-3
BTR (W)	
WRVK	SRVK-2, SRVK-14
ERVK	PAN-3

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

E. Glades, salt licks, waterholes (natural) –existing and new ::

	Natural
BTR (E)	
Glades	NRVK- 13
Salt Licks	Hatinala- TGN-2 Guanala – TGN-2 Kalapani- PHK 2,3
Water holes	TGN-1, NRVK-13. JNT-9, Bhutanghat-1, NRVK-2, NRVK-5, Chuniajhora-1 & STB-3 , JNT-6A, SB-3A.
BTR (W)	
Glades	-
Salt Licks	Adma-2
Water holes	GDB-3, Adma-4,

F. Wetlands ::

	Location	Comptt.	Area (ha.)
BTR (E)			
1.	Narathali	NRT-2	5.00
2.	Phaskhawa	Phaskhawa-3	0.50
3.	Tashigaon/ Pokri Pahar	Tashigaon-2	0.50
4.	Santrabari/Adma Pokri	Santarabari-1	0.50
	TOTAL		6.50
BTR (W)			
1.	Adma Pukhri	Adma-3	0.50
2.	21 th Mile (East Damanpur Range)	Poro-3	2.00
3.	East Damanpur	Cheko-2	3.00
4.	Sikiajhora	Cheko-8	5.00
5.	Bilbari	DPO-6	2.50
6.	West Damanpur	Poro-12	3.00
	TOTAL		16.0
	TOTAL BTR		22.5

2.5 Does the TR has an effective Protection Strategy (PS)+ and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Tiger Conservation plan of Buxa Tiger Reserve (BTR) 2016-17 to 2026-27 & perusal of Records.	Buxa Tiger Reserve area is surrounded by 34 tea gardens and 46 revenue villages on Western and Southern boundaries. There are more than 79 mouzas within two kilometres from the boundary having population of around 2.55 lakh. In addition 37 forest villages are settled inside the reserve having around 18 thousand population. In the north it shares 65km boundary with Bhutan and in the East 22 km boundary with Assam. Buxa Tiger Reserve is the last remaining virgin forest of North Bengal comprising of valuable timber like Sal and its associates in addition to incomparable biodiversity and precious wildlife. In view of huge population sitting on
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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				<p>the fringe and having porous border with Bhutan and Assam and with BTR full of valuable timber and wildlife, the pressure on protecting such treasure is insurmountable.</p> <p>The management have protection strategy security plan for the protection of Forest and Wildlife, there are 24 Anti-poaching Camps, 11 river camps. There are 20 nos. four wheelers vehicles.</p> <p>The joint patrolling is also done in collaboration with JFMC. There is regular raids in suspected villages, Tea Gardens</p> <p>The status of offence cases booked during last three years is given in one of the table below.</p> <p>The security plans signifies protection monitoring protocols of BTR where the senior officers inspect the compartment and peruse the records in the beat and submit report to DD & FD in the given proforma. There is a protocol mentioned in the TCP as monsoon patrolling. There are 24 anti poaching camps where staff and casual labours stay for 24 hours. During their stay they also take up foot patrolling & patrolling on elephant back. As 1800 cum. of timber is being seized annually, special focus is required on the functioning of saw mills, venieer mills, and furniture shops.</p> <p>Patrolling in vehicle is carried out on metal roads and cast roads apart from patrolling on foot. There is 687 km. of patrolling paths for effective movement inside the forest. With this network of patrolling path, large proportion of areas is kept under surveillance. However management must cover the balance areas by constructing additional footpaths for surveillance.</p>
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

List of Anti-Poacing Camps at Buxa Tiger Reserve:

Sl no		Name	Compartment	Beat	Range
1	East Division	Tiamari Antipoaching Camp	CRD-3	Timari	Tiamari
2		Chuniajhora Antipoaching Camp	Chunia-6B	Chuniajhora	Chuniajhora
3		26 th mile Antipoaching Chowki	Jainty-3	North Jainty	Jainty
4		25 th mile Antipoaching Chowki	Jainty-6	South Jainty	Jainty
5		PG Antipoaching Camp	Jainty 7 and 8	South Jainty	Jainty
6		Tashigaon Antipoaching Camp	Tashigaon-1	Phanskhowa	Jainty
7		Bhutia Busthy Antipoaching Camp	Phaskhawa-2a	Bhutiabasti	Jainty

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

8		Singijhora Anti-Poaching Camp	SRD-7	Chipra	South Rydak
9		Bagjhora Anti-Poaching Camp	SRD-3	South Rydak	South Rydak
10		Narathali Barobeel Watchtower	NRT-1	Narathali	South Rydak
11		28 mile Anti-Poaching Camp	NRVK-9	Buxa Road	Buxaduar
12	West Division	Shib Mandir Anti-Poaching Tower	SRVK 7	West rajabhatkhawa	West Rajabhatkhawa
13		23rd Mile Anti-Poaching Tower	SRVK 5	Central Rajabhatkhawa	West Rajabhatkhawa
14		23.5 th Mile Anti-Poaching Tower	SRVK 6	Central Rajabhatkhawa	West Rajabhatkhawa
15		25th Mile Anti-Poaching Tower	SRVK 2	North Rajabhatkawa	West Rajabhatkhawa
16		26.5 th Mile Anti-Poaching Tower	NRVK 11	North Rajabhatkhawa	West Rajabhatkhawa
17		22 nd Mile Anti-Poaching Camp	SRVK 11	South Rajabhatkhwa	East Damanpur
18		Garam-Dima Antipoaching Camp	Poro - 3	West Garam	West Damanpur
19		21 st Mile Anti-Poaching Camp	PAN-6	Panbari South	East Rajabhatkhawa
20		Nimati Grassland AntiPoaching Camp	NMT-3	East Nimati	Nimati
21		20th Mile Antipoaching Chowki	Cheko -3	Cheko	East Damanpur
22		21st Mile Antipoaching Chowki	Poro -1	West Poro	Nimati
23		30th mile Anti-Poaching Camp	RTG-3	Gangutia	Pana
24		Old 30th Mile Antipoaching Camp	RTG-5	Gangutia	Pana

Offence Report 2014-15

		BTR (E) (2014-15)		BTR (W) (2014-15)		BT R
A	No. of illicit felling of timber/firewood/NWF P/ unauthorized cattle grazing/poaching/ others	Vol. of Trees felled	No. of illicit felling : 1883	No. of illicit felling :	2305	41 88
		No. of Poaching Cases	: 7	4		11
B	No. of raids conducted (location specific)- successful/ unsuccessful		392 (Furniture Shop- 18 ; Mills- 34, Village- 274; TG area- 35; River camp- 31 LOCATIONS :- Barobhisa, Rampur, Ghoramara, Khoardanga, Marakata, Kartika T.E., Samuktala Road, South Rydak, North Rydak, Nurpur, Turturi, Kohinur T.E., Chuniajhora T.E. etc.	Village Raid:-540 and Train Raid:- 608, and T.G area-107 LOCATIONS:- Kalchini, Hamiltonganj, Garopara, Rajabhatkhawa, Alipurduar Jn. New Alipurduar. Bairiguri, Banchukamari, Tapsikhata, Alipurduar Town area, Garopara, Patkapara, Bhatpara, Chinchula, Acchapura, Madhu, Satali & Surrounding T.G.etc		93 2
C	No. of cases separately under IFA, 1927 and WL(P) Act, 1972		Under I.F.A. : 09 Under W.P.A : 07	Under I.F.A. : 27 Under W.P.A : 02		36 09

D. No. of POR/COR/ UDOR as per Classification of Offence:

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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	BTR (E)	BTR(W)	BTR		BTR (E)	BTR(W)	BTR
COR	179	102	281	Thella	92	141	233
POR	21	27+2 WL case	50	Cycle	416	944	1360
UDOR	847	1190	2037	Rikshaw van	26	10	36
No. of stump seized	1883	2305	4188	Saw	106		106
Village raid (no.)	274	540	814	Maruti Van	-	04	04
Train Raid (no.)	-	608	608	Canter	-	-	-
River camp raid (no.)	31	-	31	Eicher	-	-	-
Tea Garden raid (no)	35	107	142	Pickup Van	-	12	12
Recovery from river camp(m ³)	66.864	-	66.864	Truck	-	02	02
Timber seized from village raid(m ³)	318.473	609.206	927.679	Boat	-	-	-
Timber seized from train (m ³)	-	38.19	38.19	Axe	113	105	218
Timber seized from forest (m ³)	214.991	323.978	538.969	4 wheeler	3	15	18
Timber seized from TG area (m ³)	45.804	265.662	311.466	2 wheeler	-	02	02
TOTAL TIMBER SEIZED (m³)	646.132	1237.036	1883.168		-	-	-
			BTR (E)	BTR (W)	BTR		
E.	No. of persons arrested		15	32	47		
F.	No. of firing incidents by staff		376	203	579		
G.	No. of offenders killed/injured		Killed-Nil, Injured- 2	-	2		
H.	No. of forest staff killed/ injured/ assaulted		Assaulted 4 Nos.	-	4		
I.	Quantity of timber seized (in Cu. M)		647.307 m ³	1237.036	1884.343		
J.	Species and number of live Wildlife seized (Barking Deer-1, Tokey Gekko-1)		Hill Myna 62 nos. Tokay Gecko 8 nos.	-	70		
K.	No. and quantity of species wise wildlife articles seized		Elephant tusk 1 no. Barking deer Carcass 1 no.	0	2		
L.	Types and number of vehicles/vessels seized		Heavy 2, Medium 3, Light 4	35	44		
M.	i) No. of vehicles/vessels confiscated ii) No. of Vehicles sold through auction		Heavy 2, Medium 3, Light 4 -	0 0	9		
N.	No. of cattle seized/impounded (Buffaloo)		-	-	0		
O.	No. of Court Cases involving Timber		09	27	36		
P.	a) No. of Court Cases involving Saw Mill		-	-	-		
	b) No. of Court Cases involving others(specify) (WL)		7	2	9		
	c) Accused acquitted and case filed		15	-	15		
Q.	Case finalized Punishment awarded		5 3	-	5 3		
R.	Nos. Cases pending in High Court		19	-	19		
S.	Nos. Cases pending in Lower Courts (as on 31-03-14)		181	432	613		
T.	Nos. Cases pending before the authorized officer		-	65	65		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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U.	Legal Cell	-	1	1
V.	Nos., Incentives and Rewards including citations- No. of recipients, Kind of incentive/ award, Amount paid (in Rs.)	Being maintained at Range and Division level	13	13

Offence Report 2015-16

			BTR (E) (2015-16)	BTR (W) (2015-16)	BT R
A	No. of illicit felling of timber/firewood/NWF P/Unauthorized cattle grazing/poaching/ others	Vol. of Trees felled	No. of illicit felling : 810	No. of illicit felling : 1834	26 44
		No. of Poaching Cases	2 Nos.	2	4
B	No. of raids conducted (location specific)- successful/ unsuccessful		350 (Furniture Shop- 24 ; Mills- 14, Village- 235; TG area- 22; River camp- 53, Train- 2) LOCATIONS:- Barobisha, Rampur, Ghoramara, Khoardanga, Marakata, Kartika T.E., Samuktala Road, South Rydak, North Rydak, Nurpur, Turturi, Kohinur T.E., Chuniajhora T.E. etc.	Village Raid:-517 and Train Raid:- 711 and T.G area-98 LOCATIONS:- Kalchini, Hamiltonganj, Garopara, Rajabhatkhawa, Alipurduar Jn. New Alipurduar. Bairiguri, Banchukamari, Tapsikhata, Alipurduar Town area, Garopara, Patkapara, Bhatpara, Chinchula, Acchapura, Madhu, Satali & Surrounding T.G.etc	16 76
C	No. of cases separately under IFA, 1927 and WL(P) Act,1972		Under I.F.A. : 13 nos. Under W.P.A : 02 nos.	Under I.F.A. : 26 Under W.P.A : 02	39 04

D. No. of POR / COR / UDOR as per Classification of Offence:

	BTR (E)	BTR (W)	BTR		BTR (E)	BTR(W)	BTR
COR	237	107	344	Thella	72	146	218
POR	15	26+2 WL case	43	Cycle	470	754	1224
UDOR	862	1175	2037	Rikshaw van	4	2	6
No. of stump seized	1550	1834	3384	Saw	127	24	151
Village raid (no.)	235	517	752	Maruti Van	-	8	8
Train Raid (no.)	2	711	713	Canter	-	-	-
River camp raid (no.)	53	-	53	Eicher	-	-	-
Tea Garden raid (no)	22	98	120	Pickup Van	-	4	4
Recovery from river camp(m ³)	101.322	-	101.322	Truck	-	-	-
Timber seized from village raid(m ³)	316.776	509.404	826.16	Boat	-	-	-
Timber seized from train (m ³)	-	57.414	57.414	Axe	92	115	207
Timber seized from forest (m ³)	310.127	388.082	698.209	4 wheeler	3	12	15
Timber seized from TG area (m ³)	26.801	74.012	100.813	2 wheeler	2	-	2
Timber seized from mile (m ³)	3.114	-	3.114				
Total Timber Seized (m³)	758.14	1028.912	1787.052				

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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		BTR (E)	BTR (W)	BTR
E.	No. of persons arrested	18	25	43
F.	No. of firing incidents by staff	233 times (in self defense)	231	464
G.	No. of offenders killed/injured	Killed-Nil, Injured-Nil	-	-
H.	No. of forest staff killed/ injured/ assaulted	Assaulted-Nil	-	-
I.	Quantity of timber seized (in Cu. M)	758.14 m ³	1028.912 m ³	1787.052 m ³
J.	Species and number of live Wildlife seized (Barking Deer-1, Tokey Gekko-1)	Nil	Tokey Gekko-1	1
K.	No. and quantity of species wise wildlife articles seized	Nil	Tusk-3, Jaw-1(Elephant), Tortoise shull-1	5
L.	Types and number of vehicles/vessels seized	Heavy-Nil, Medium-3, Light-2	12	17
M.	i) No. of vehicles/vessels confiscated ii) No. of Vehicles sold through auction	Nil	Nil Nil	Nil
N.	No. of cattle seized/impounded (Buffaloo)	Nil	-	Nil
O.	No. of Court Cases involving Timber	13	26	39
P.	a) No. of Court Cases involving Saw Mill	-	-	-
	b) No. of Court Cases involving others(specify) (WL)	2	2	4
	c) Accused acquitted and case filed	15	-	15
Q.	Case finalized & Punishment awarded	Nil	-	Nil
R.	Nos. Cases pending in High Court	19	-	19
S.	Nos. Cases pending in Lower Courts (as on 31-03-15)	188	433	621
T.	Nos. Cases pending before the authorized officer	-	70	70
U.	Legal Cell	-	-	Nil
V.	Nos., Incentives and Rewards including citations- No. of recipients, Kind of incentive/ award, Amount paid (in Rs.)	Being maintained at Range and Division level	13	13

Offence Report 2016-17

			BTR (E) (2016-17)	BTR (W) (2016-17)	BT R
A	No. of illicit felling of timber/firewood/NWF P/ unauthorized cattle grazing/poaching/ others	Vol. of Trees felled	No. of illicit felling : 1053	No. of illicit felling : 1583	26 36
		No. of Poaching Cases	Nos. : 15	: 2	17
B	No. of raids conducted (location specific)- successful/ unsuccessful		445 (Mills-18 Nos ; Village-324Nos; TG area- 45; River camp-58) LOCATIONS:- Buxaduar, Jainty, Barobisha, Rampur, Ghoramara, Khoardanga, Marakata, Kartika T.E., Samuktala Road, South	Village Raid:-507 and Train Raid:-732 and T.G area-68 LOCATIONS:- Kalchini, Hamiltonganj, Garopara, Rajabhatkhawa, Alipurduar Jn. New Alipurduar. Bairiguri, Banchukamari, Majherdabri, Tapsikhata, Alipurduar Town area, Garopara, Patkapara, Bhatpara, Chinchula, Achapara,	17 52

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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			Rydak, North Rydak, Nurpur, Turturi, Kohinur T.E., Chunjahora T.E. etc.	Madhu, Satali & Chuapara TE, Mechpara TE, Radharani TE, Kholka, Dalsingpara Etc areas.	
C	No. of cases separately under IFA, 1927 and WL(P) Act,1972		Under I.F.A. : 12 nos. Under W.P.A : 15 nos.	Under I.F.A. : 18 Under W.P.A : 07	30 22

D. No. of POR / COR / UDOR as per Classification of Offence:

	BTR (E)	BTR (W)	BTR		BTR (E)	BTR(W)	BTR
COR	306	85	391	Thella	53	96	149
POR	27	18+7 WL case	52	Cycle	461	709	1170
UDOR	1053	1099	2152	Rikshaw van	2	1	3
No. of stump seized	1357	1583	2940	Saw	66	34	100
Village raid (no.)	324	507	831	Maruti Van	-	9	9
Train Raid (no.)	Nil	732	732	Canter	-	-	-
River camp raid (no.)	58	65	123	Eicher	-	-	-
Tea Garden raid (no)	45	83	128	Pickup Van	-	5	5
Recovery from river camp(m ³)	151.405	-	151.405	Truck	-	-	-
Timber seized from village raid(m ³)	351.9157	403.766	755.6817	Boat	-	-	-
Timber seized from train (m ³)	-	19.54	19.54	Axe	26	105	131
Timber seized from forest (m ³)	208.052	288.718	496.77	4 wheeler	10	14	24
Timber seized from TG area (m ³)	58.773	66.125	124.898	2 wheeler	8	-	8
Timber seized from mile (m ³)	-	-	-	3 wheeler	1	-	1
Total Timber Seized (m³)	770.1457	778.149	1548.295				
			BTR (E)	BTR (W)	BTR		
E.	No. of persons arrested		38	24	62		
F.	No. of firing incidents by staff		146 times (in self defense)	352	498		
G.	No. of offenders killed/injured		Killed-Nil, Injured-Nil	-	-		
H.	No. of forest staff killed/ injured/ assaulted		Assaulted-Nil	1.Sri Sanjoy Mahato, PDL, on 12.05.16 2. Sri Taraknath Roy, FG on 30.07.16	-		
I.	Quantity of timber seized (in Cu. M)		770.1457 m ³	778.149 m ³	1548.295 m ³		
J.	Species and number of live Wildlife seized		Tokey Gekko-8, Hill Myna Bird-1	Tokey-4, Gekko-1	14		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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K.	No. and quantity of species wise wildlife articles seized	Tokay Gecko-1no. Elephant jaw bone-7ps. Elephant tusk- 2nos.Leopard skin-1no. Spotted Deer horn memento-1no & Fresh meat of barking deer.	Elephant Tusk -3	15
L.	Types and number of vehicles/vessels seized	Heavy-3, Medium-8, Light-8	14	33
M.	i) No. of vehicles/vessels confiscated ii) No. of Vehicles sold through auction	Nil	Nil Nil	Nil
N.	No. of cattle seized/impounded (Buffaloo)	Nil	-	Nil
O.	No. of Court Cases involving Timber	10	18	28
P.	a) No. of Court Cases involving Saw Mill	Nil	-	-
	b) No. of Court Cases involving others(specify) (WL)	WL-15	7	22
	c) Accused acquitted and case filed	Case filed -25nos	-	25
Q.	Case finalized & Punishment awarded	Nil	-	Nil
R.	Nos. Cases pending in High Court	19	-	19
S.	Nos. Cases pending in Lower Courts (as on 31-03-17)	212	484	696
T.	Nos. Cases pending before the authorized officer	-	91	91
U.	Legal Cell	-	-	Nil
V.	Nos., Incentives and Rewards including citations- No. of recipients, Kind of incentive/ award, Amount paid (in Rs.)	Being maintained at Range and Division level	8	8

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Perusal of records & discussion with FD/BTR	Elephant, Wild boar, Gaur, Monkeys, and Bison damage agricultural crops in peripheral and forest villages. Maximum damage to the crops such as paddy, maize, millet, vegetables etc. takes place from Aug -Sep and Dec-Jan. Human death and injuries are also reported from TG and Fringe villages. This is mainly caused by elephant and leopards. Livestock killing is reported within BTR as well as outside of BTR. North Rydak, Buxaduar, Kumargram, South Rydak and Pana are the most affected ranges where killing of Cow, Bullock, Calf and Goats have taken place. Wild animals like elephant, leopard, wild boar etc. are also killed in the conflict. The elephant and leopards are killed by people in retaliation. Most cases of elephant death are due to electrocution. The statistics regarding death of wild elephant and human injury are shown in several paras below this table. TR management has been able to mitigate the conflict quickly. Crop compensation paid during last three years is also shown in one of the table below this para.
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good	✓		
TR has been effective in mitigating all human-wildlife conflicts.	Very good			

*The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Wildlife Killed - 2014-15

BTR (East)

Date	Range	Compartment	Species	Sex	Age (year)	Reason
22.04.14	S.Rydak	Sec 11, Rydak TG	Leopard	Male	4-5 years	Shock and starvation
22.04.14	Hatipota	Phaskhawa	Wild Boar	Male	Adult	Traumatic Shock
25.04.14	Kumargarm	NLS-1 of Newlands Beat	Wild Boar			Not determined as per Field Observation Report
25.04.14	Kumargarm	NLS-2 of Newlands Beat	Wild Boar			Do
21.08.14	Hatipota	SK-2 comptt of Chipra Beat	Asian Elephant	Female	4-5 years	Shock resulting from heavy endo-parasitic load
21.11.14	S.Rydak	SRD-5 of Chipra Beat	Asian Elephant	Male	18-20 years	Natural
21.11.14	S.Rydak	DH-2 comptt of SRD Beat	Asian Elephant	Male	14-15 years	Natural
25.11.14	Hatipota	Sec 26 of Chuniajhora TE	Leopard	Male		
18.12.14	S.Rydak	MKT-1 of comptt. of Marakhata Beat	Asian Elephant	Male	8-10 years	Suspected poaching case
18.12.14	Bholka	SB-3A comptt of Ghoramara Beat	Leopard	Male	4-5 years	Shock with internal haemorrhage
27.12.14	Hatipota	NRVK-5 comptt of Phaskhawa Beat	Spotted deer	Female	3-4 years	Stress during delivery
12.01.15	Hatipota	Sec 28 Chuniajhora TG	Leopard			Not ascertained
28.01.15	Jainty	SBH-1comptt of South Jainti Beat	Wild Boar	Male	5-6 years	Traumatic shock with extensive injury
20.02.15	Jainty	JNT-7B comptt of South Jainti Beat	Barking deer	Female	3-4 years	Piercing injury
12.03.15	Bholka	SB-3B comptt of Balapara Beat	Wild Pig	Male		Carcass as per Field Observation Report

BTR (W)

Date	Range	Compt./Location	Species	Sex	Age (years)	Reason
18.04.14	Nimati	Bhatkhawa T.E	Leopard	Male	Sub Adult	C.R.F. infighting
21.04.14	HTG	Chuapara T.G	Leopard	Male	10-12	Decomposed (old age)
26.04.14	HTG	Mechpara T.G	Leopard Cat	Female	3 months	C.R.F internal haemorrhage
01.07.14	HTG	Rly. Track point 137/8 to 137/9	Elephant	Female	25	Train accident
01.07.14	HTG	Rly. Track point 137/8 to 137/9	Elephant	Male	4	Train accident
10.07.14	HTG	Chuapara T.E	Fishing Cat	Male	2-3	Decomposed
02.08.14	WRVK	SRVK-3	Indian Gour	Female	3	Predated upon by a carnivore
17.08.14	Pana	RTG-3	Bison	Female	4-5	Snake bite (decomposed)
26.08.14	Pana	Bhatpara T.E	Elephant	Male	7-8	Drowning
18.09.14	Pana	RTG-4	Wild boar	Male	7-8	Fire and injury

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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07.10.14	HTG	BHT-5	Elephant	Female	35	C.R.F resulting from acute colonic impaction
10.10.14	WRVK	Dima-2	Indian Bison	Male	20	Old age
16.11.14	EDPO	DPO-8	Gour	Male	-	Natural (Old age)
18.11.14	WDPO	NH-31C, Culvert No. 211/2	Leopard	Female	-	Run over by unknown vehicle
03.12.14	EDPO	Checko	Barking deer	Male	-	Poaching F.I.R lodged at Kalchini P.S
17.12.14	WDPO	West Garam Beat	Leopard	Female	4-5	Run over by unknown vehicle
21.12.14	HTG	Bhutri-2	Elephant	Female	19-20	C.R.F as a consequence of acute toxicity
22.12.14	Pana	RTG-9	Leopard Cub	-	2	Carcass being eaten by some bigger animal (Carnivore)
12.01.15	HTG	Mechpara T.G	Leopard Cat	Unidentified	Adult	Decomposed
14.01.15	WDPO	Poro-9	Jackal	-	-	Poaching/Hunting (Three person arrested)
23.01.15	Nimati	Nimtijhora T.E	Leopard	Female	4-5	C.R.F from traumatic shock with internal hemorrhage
20.02.15	ERVK	PAN-5	Elephant	Female	Adult	Infighting
25.02.15	Pana	RTG-7	Wild pig	Male	7	Fire and injury
06.03.15	EDPO	DPO-7	Gour	Male	20	Infighting injury in old age
10.03.15	Pana	RTG-10	Wild pig	Female	5	Natural
18.03.15	HTG	BHT-3	Wild boar	Female	Adult	Natural
20.03.15	Nimati	NMT-6	Elephant	Male	45	Poaching (fire arm injury)
23.03.15	EDPO	Checko-6	Elephant	Male	30	Poaching (fire arm injury)
25.03.15	Nimati	Uttar Patkapara	Barking deer	Male	Adult	C.R.F

Wildlife Killed (2015-16)

BTR (East)

Date	Range	Compartment	Species	Sex	Age (year)	Reason
11.04.15	Bholka	Rydak River-2 bank	Spotted Deer	Female	3-4 yrs	Cranial injury with shock from trauma
26.04.15	Kumargram	Kumargram FV	Spotted Deer	Male	4 yrs	Cardio-respiratory failure due to capture Myopathy
15.05.15	Kumargram	Kumargram Village	Barking deer	Male	3-4 yrs	Injury and stress
09.08.15	Bhalka	Kanthalata, Chotto Daldali	Common Leopard	Male	12-15 months	Cardio-respiratory failure with traumatic shock with internal haemorrhage
12.08.15	North Rydak	Rydak TG Section 24	Common Leopard	-	3 yrs	Unknown
12.08.15	North Rydak	KTPF Comtt.	Asian Elephant	Female	3-4 days	Cardio-respiratory failure due to trampling by other adult elephants
19.08.15	North Rydak	Rydak TG	Common Leopard	Female	2-3 yrs	Undetected due to decomposition of the carcass
06.10.15	North Rydak	Kartick TE (Near CRD-4 Comptt.	Common Leopard			Accident

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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07.10.15	North Rydak	Turturi TG	Elephant Calf			-
05.12.15	Bholka	SB-5 Comptt	Wild Boar	Male		-
08.12.15	Kumargram	NLS-1 Comptt.	Gour	Male	12-13 yrs	Traumatic shock resulting from extreme injury by metal arrow
29.12.15	Bholka	NB-4 Comptt.	Wild Elephant		10 yrs	Undetected due to decomposition of the carcass

BTR (West)

Date	Range	Compt./Location	Species	Sex	Age (years)	Reason
02.04.15	WRVK	Dima-1	Gour	Male	7-8 yrs	Infighting
08.04.15	ERVK	Pan-2	Elephant	Male	24-15 yrs	Decomposed (fire arm injury)
19.04.15	NMT	Labour Club, Hanuman Mandir	Barking Deer	-	-	Poaching
30.05.15	WRVK	SRVK-3	Indian Bison	Male	20-22 yrs	Infighting (injury in old age)
05.06.15	WDPO	NH-31C	Leopard	Female	3-4 yrs	Run over by unknown car
22.06.15	NMT	Atiabari TE	Leopard	Female	3 yrs	Fallen from Tree
05.07.15	HTG	Bharnabari TE	Elephant calf	Male	1 day	CRF cranial damage resulting from Pain & shock
07.07.15	HTG	Khokla busty	Elephant	Male	30 yrs	Electrocution
10.07.15	WRVK	RVK, Tea Estate	Leopard	Male	Adult	Decomposed
02.09.15	WRVK	Beside PWD BF Road	Leopard	Male	2 yrs	Run over by unknown vehicle
31.10.15	HTG	Mechpara TG	Leopard	Male	5-6 yrs	Infighting & accidentally getting trapped in a narrow trench of the TG
22.11.15	Pana	RTG-2	Barking Deer	Female	3-4 yrs	Dog bite injury
07.12.15	Pana	Raimatang TG	Leopard Cub	Female	8-9 months	Traumatic shock & internal haemorrhage with spinal fracture
09.12.15	WRVK	SRVK-15	Indian Bison	Male	12 yrs	Infighting
23.12.15	EDPO	DPO-7 (Rly. Pillar No. 162/6-7)	Elephant	Female	3 yrs	Accident on Railway Track
24.12.15	EDPO	-Do-	Elephant	Female	40 yrs	Accident on Railway Track
26.12.15	NMT	Poro-6	Bison	Male	7 yrs	Natural
06.01.16	NMT	NMT-6	Bison	Male	16-18 yrs	Infighting injury
29.01.16	Pana	Bhatpara TE	Leopard	Male	9-10 yrs	Decomposed
02.02.16	EDPO	CK-4	Barking Deer	Female	4 yrs	Poaching
15.02.16	WRVK	SRVK-7 (25th mile BF Road)	Barking Deer	Male	7-8 yrs	Run over by vehicle
11.03.16	WDPO	Poro-10 (NH-31C)	Barking Deer	Male	3-4 yrs	Run over by unknown vehicle
15.03.16	HTG	BNB-1	Leopard	Male	7-8 yrs	Trapped and try to poaching
15.03.16	EDPO	Cheko-9	Elephant Calf	Male	3-4 yrs	Natural
20.03.16	WRVK	SRVK-15	Barking Deer	Female	3-4 yrs	Injured
24.03.16	ERVK	Dhamsidab village	Spotted Deer	Male	4 yrs	Fallen from river bank to river
27.03.16	WRVK	SRVK-1	Spotted Deer	Male	4-5 yrs	Killed by Tiger

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Wildlife Killed 2016-17

BTR (East)

Date	Range	Compt./ Location	Species	Sex	Age (years)	Reason
11.7.16	KG	NLS-2	Bison			F.M.D.
14.7.16	KG	NLS-1	Bison			F.M.D.
07.04.17	SRD	SRD Beat	Barking Deer			
27.10.16	SRD	NRT-1 compartment, Narathali Beat	Elephant	Male		Natural
15.11.17	SRD	DH- 2 compartment, SRD Beat	Elephant	Male		Natural
14.03.17	SRD	SRD-7 compartment, Chipra Beat.	Elephant	Female		Natural
13.04.16	JNT	JNT-6 Comptt.	Bison			Natural
17.01.17	JNT	JNT-13 Comptt.	Wild Boar			Diseased
25.11.16	JNT	JNT- 7b Comptt.	Barking Deer			Poaching
11.07.16	NRD	CRD-5	Tusker Wild-Elephant	Male	10 Yrs	Poaching by Home Made Gun
06.01.17	HP	Chunia Line	Barking Deer			Poaching by Bamboo made arrow
20.12.16	BH	SB 5 Comptt, Barobisha Beat	Barking Deer (Muntiacus muntjac)	Male	Approx 4years	Not Known
23.01.17	BH	Boundary of SB 5 & 4 comptt of Barobisha & Ghoramara Beat	Indian Elephant	Female	Approx 45-50 years	Dyfpokia
06.3.17	BH	NBH 2 Comptt of Chengmari Beat	Indian Elephant	Female	Approx 45-50 Years	Dyfpokia

BTR (West)

Date	Range	Compt./ Location	Species	Sex	Age (years)	Reason
04.04.16	West Rvk.	SRVK-2	Civet Cat	Female	3 yrs.	Dashing by vehicle.
07.04.16	East DPO	SRVK-12	Piglet	Male	15 days.	Natural
09.06.16	HTG	Railway Track 136/8 to 136/9	Leopard	Male	3-4 yrs.	Run over by train.
27.06.16	West Rvk.	SRVK-9	Barking deer	Male	Adult	Killed by Leopard.
23.07.16	HTG	Trolley line, Kalchini Out Divn.	Python	Female	12-13 yrs.	Killed by someone.
31.07.16	West Rvk.	SRVK-1	Spotted deer	Female	Adult	Killed by Leopard.
05.08.17	West Rvk.	SRVK-7	Barking deer	Female	Adult	Killed by Leopard.
13.09.16	Pana	RTG-9	Wild boar	Female	4-5 yrs.	Preying upon by a wild carnivore.
16.09.16	HTG	GDB-3	Python	Male	3 yrs.	Killed by someone.
01.10.16	HTG	GDB-3	Chinese feral buzzed	Male	1-2 yrs.	Accidental case by the vehicle.
10.10.16	Nimati	Bangabari T.E.	Elephant (calf)	Male	2-2.5 yrs.	C.R.F. resulting from traumatic shock staying accidentally trapped for long hours in sternal recumbency.
06.11.16	Pana	RTG-7	Wild boar	Male	4-5 yrs.	Decomposed.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

12.11.16	Pana	RTG-6	Wild boar	Male	2-3 yrs.	Natural death
14.11.16	Pana	Pana-3	Wild boar	Male	5-6 yrs.	Natural death
30.11.16	Pana	RTG-4	Wild boar	Male	5-6 yrs.	Unknown
01.12.16	East DPO	DPO-8	Elephant	Male	1.5 – 2 yrs.	Injured and died.
02.12.16	Pana	RTG-5	Wild boar	Male	2-3 yrs.	Unknown
05.12.16	East DPO	DPO-8	Elephant	Female	5-6 yrs.	C.R.F. and shock resulting from excessive fluid loss (loose stool)
12.12.16	Pana	RTG-4	Wild boar	Male	4-5 yrs.	Unknown
14.12.16	Pana	Adma-4	Wild boar	Male	5-6 yrs.	Unknown
17.12.16	Nimati	Poro-1	Bison (Calf)	Male	25-30 yrs.	Internal haemorrhage & traumatic shock resulting from extensive injury caused by sharp pointed object.
27.12.16	HTG	BHT-1	Indian Gour	Female	12 yrs.	Natural death
29.12.16	Pana	RTG-5	Wild boar	Female	5-6 yrs.	C.R.F. as a result of infection (tentatively swine fever).
17.01.17	West DPO	Chapatali village	Leopard	Male	Adult	Killed and Hunted.
21.01.17	Nimati	Poro-1	Bison	Female	2-3 yrs.	C.R.F. with shock as a consequence of accidentally trapped in a narrow trench for log hours.
23.01.17	HTG	BB-1	Wild boar	Female	4 yrs.	Swine fever.
27.01.17	HTG	GDB-2	Wild boar	Female	4 yrs.	Swine fever.
29.01.17	HTG	GDB-1	Wild boar	Female	4 yrs.	Swine fever
06.02.17	HTG	BNB-3	Wild boar	Female	Adult	Swine fever
11.02.17	East DPO	DPO-8	Wild boar	Female	1.5 yrs.	C.R.F. infection (Swine fever).
12.02.17	Nimati	NMT-3	Bison	Female	Adult	Sink into water
15.02.17	East Rvk.	Pan-9	Wild boar	Female	Adult	Swine fever.
20.02.17	East DPO	DPO-8	Wild boar	Female	2 yrs.	Swine fever.
23.02.17	HTG	GDB-1	Wild boar	Male	Adult	Swine fever
02.03.17	East DPO	DPO-8	Leopard cat	Male	2 yrs.	Run over by unknown vehicle.
04.03.17	East DPO	Nonai river	Barking deer	Male	3 yrs.	C.R.F.
06.03.17	East DPO	DPO-8	Chinese ferret budger	Male	2 yrs.	C.R.F.
21.03.17	Nimati	Nimtjhora T.E.	Leopard	Male	Adult	Due to accident by the unknown vehicle at NH-31C.
27.03.17	Pana	Adma-2	Bison			Poaching/Hunting

Compensation paid against human Death/Injury,Cattle Lifting and Crop Damage in man-animal conflict (2016-17)

Human Death/Injury by elephant:

DESCRIPTION	BTR (E)	BTR (W)	TOTAL BTR
No. of Human being killed (Nos)	2 Nos.	7 Nos.	9 Nos.
Compensation paid (in ` lakh)	Nil	12.50	12.50
No. of human being injured (Nos)	2 Nos.	14 Nos.	16 Nos.
Expenditure on treatment (in ` lakh)	0.26	0.33	0.59

Depredation done by wild animal(s):

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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DESCRIPTION	BTR (East)	BTR(West)	Total BTR
By Elephant			
Crop damage (Bigha)	743.43	1111	1854.43
Compensation paid (` in lakh)	12.26	26.05	38.31
No. of Hut damaged	71	339	410
Compensation paid (` in lakh)	1.84	7.25	9.09
No. of livestock killed	37	68	105
Compensation paid (` in lakh)	0.33	0.68	1.01

Compensation paid against human Death/Injury,Cattle Lifting and Crop Damage in man-animal conflict (2014-15)

Human casualties by elephant:

	BTR (E)	BTR (W)	TOTAL BTR
No. of Human being killed (Nos)	4 Nos.	3 Nos.	7 Nos.
Compensation paid (in ` lakh)	2.00	3.00	5.00
No. of human being injured (Nos)	12 Nos.	6 Nos.	18 Nos.
Expenditure on treatment (in ` lakh)	Not paid	0.50	0.50

Depredation done of wild animal:

	BTR (East)	BTR(West)	Total BTR
By Elephant			
Crop damage (Bigha)	1814.05	2600	4414.05
Compensation paid (` in lakh)	14.52	13.03	27.55
No. of family effected	809	2080	2889
No. of Hut damaged	331	512	843
Compensation paid (` in lakh)	4.76	7.80	12.56
By wild life			
No. of livestock killed	434	143	577
Compensation paid (` in lakh)	2.25	1.83	4.08

Compensation paid against human Death/Injury,Cattle Lifting and Crop Damage in man-animal conflict (2015-16)

Human casualties by elephant:

	BTR (E)	BTR (W)	TOTAL BTR
No. of Human being killed (Nos)	5 Nos.	3 Nos.	8 Nos.
Compensation paid (in ` lakh)	11.00	9.50	20.50
No. of human being injured (Nos)	3 Nos.	5 Nos.	8 Nos.
Expenditure on treatment (in ` lakh)	0.0815	0.49	0.5715

Depredation done of wild animal:

	BTR (East)	BTR(West)	Total BTR
By Elephant			
Crop damage (Bigha)	510.07	866	1376.07
Compensation paid (` in lakh)	7.995	13.07	21.065
No. of Hut damaged	62	418	480
Compensation paid (` in lakh)	1.25	4.00	5.25

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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By wild life			
No. of livestock killed	100	65	165
Compensation paid (` in lakh)	0.78	0.52	1.30

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Discussion with FD, BTR.	There is a proposal to constitute the Buxa Biosphere Reserve comprising of Buxa Tiger Reserve and Jaldapara National Park. Both these PAs suitably address the concerns of Wildlife in these areas. However the entire larger landscape starting from Manas in the east and upto Darjeeling in West and Bhutan in the North have a number of protected areas where wildlife management is in focus. Areas in between the PAs are the Reserve Forests interspersed with several villages and are managed under working plans where the concern for wildlife conservation is shown but not the priority. Further there are areas under West Bengal Forest Development Corporation, a commercial organization for regeneration, extraction and marketing of timber .
Some limited attempts to integrate the TR into a network/ landscape.	Fair	✓		
TR is generally quite well integrated into a network/ landscape.	Good			
TR is fully integrated into a wider network/ landscape.	Very good			

*Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, personnel explicitly allocated but poorly supported for TR management.	Poor		Perusal of records.	Out of total sanction strength of 487, only 282 personnel are in position leaving a vacancy of 205 personnel. Out of these vacancies the vacancy of Forest Guard is 102. The State has not undertaken the recruitment of Forest Guard during last two decades. The last recruitment of Forester was carried out in 2010. However the state has taken strong steps to recruiting Forest Guard and Foresters recently. The process to recruit Forest Guard has begun and exam is scheduled to be held on 10 Sep'2017. The information on manpower is shown in the table below. However the existing staff have been deployed at locations where protection is priority.
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair	✓		
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good			

*This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Manpower related information

Designation	FD/BTR			BTR(East)			BTR(West)			Total BTR Circle			
	S.S	E.S	E.V	S.S	E.S	E.V	S.S	E.S	E.V	S.S	E.S	E.V	
FD	1	1	0							1	1	0	Regular staff
DFD				1	0	1	1	1	0	2	1	1	
ADFO	1	0	1	2	2	0	2	2	0	5	4	1	
AO	0	0	0	1	0	1	0	0	0	1	0	1	
ACF	0	0	0	0	0	0	0	0	0	0	0	0	
VO	0	1	0	0	0	0	0	0	0	0	1	0	
Forest Ranger	1	1	0	12	4	8	12	7	5	25	12	13	
DR/Fr	0	0	0	36	28	8	39	27	12	75	55	20	
Head Forest Guard	0	0	0	14	11	3	14	8	6	28	19	9	
Forest Guard	0	0	0	115	61	54	118	70	48	233	131	102	
Driver	1	1	0	4	2	2	4	1	3	9	4	5	
Bano Shramik	0	2	0	0	39	0	0	52	0	0	93	0	
Bano Mazdoor	0	0	0	0	0	0	0	1	0	0	1	0	
Mali	0	0	0	1	1	0	1	1	0	2	2	0	
G.C	0	0	0	0	0	0	2	1	1	2	1	1	
Parmanent Watcher	0	0	0	3	1	2	2	1	1	5	2	3	
Cleaner	0	0	0	0	0	0	1	1	0	1	1	0	
Orderly	3	2	1	11	10	1	11	10	1	25	22	3	
Mahut	0	0	0	2	2	0	1	0	1	3	2	1	
Sweeper	0	0	0	1	0	1	1	1	0	2	1	1	
Dakwala	1	0	1	4	1	3	3	0	3	8	1	7	
O.P	1	0	1	3	3	0	2	1	1	6	4	2	
B.C	0	0	0	5	3	2	5	3	2	10	6	4	
Darwan	0	0	0	1	0	1	0	0	0	1	0	1	
Head Clerk	1	1	0	1	1	0	1	1	0	3	3	0	
Accountant	0	0	0	1	0	1	1	0	1	2	0	2	
UDC	2	0	2	10	4	6	10	2	8	22	6	16	
C.T	3	0	3	6	1	5	6	2	4	15	3	12	
Typist	0	0	0	0	0	0	1	1	0	1	1	0	
TOTAL ::	15	9	9	234	174	99	238	194	97	487	377	205	
PDL		5		66			113				184		

S.S	Sanction Strength
E.S	Existing Strength
E.V	Existing Vacancy

Temporary Labour(s) for patrolling , River Camps & Anti-poaching Camps		
BTR East	BTR West	Total
86	95	181

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Perusal of records.	List of vehicles, equipments and building are shown below the para. These resources are adequate and well organized and it has been utilized for the achievement of the objectives.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good			
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good	✓		

**These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the 'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.*

List of Vehicles:-

Two Wheeler (Motor Cycle)	Four Wheeler
20	27

List of Arms:-

DBL	SBBL	.315 Rifle	.22 Rifle	Pump Action Arms	Dirtying Guns
143	3	29	5	6	1

Building Record of Different Ranges under BTR

BTR (East)		
Range	Name of Quarters	Numbers
Mobile (East)	Range Office	1
	Group "C" Qtr.	14
	Barrack	1
	Store room	1
	Garage	1
	Timber Store	1
	Water pump room	1
Jainty	Range office	1
	Group "C" Qtr.	25
	Shed	3
	Check Post	1
	FRH	1
	FRH Kitchen	1
	Driver Shed	2
	Godown	3
	Dormitory	1
	Barack	2
Group "D" Qtr.	2	
Kumargram	Range Office	1
	Group "C" Qtr.	31

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

	Group "D" Qtr.	2
	FRH	1
	Driver shed	1
	Meter room	1
	Pump House	2
	Watch Tower	1
	Store room	1
	A I Center	1
Bholka	Range Office	1
	Group "C" Qtr.	51
	Group "D" Qtr.	1
	A I Center	2
	FPF Barrack	1
	Metter room	1
	FRH	1
	Depot watch Tower	1
	Garage-out house	1
	Pump house	3
	Barrack	6
	Watching shed	3
	South Rydak	Range office
Group "C" Qtr.		45
Garage		1
Group "D" Barrack		5
Metter room		3
Pump house		3
Barrack		3
A I Centre		3
School Building		1
FRH		1
Driver shed		2
Godown		3

Range	Name of Quarters	Numbers
Buxaduar	Range office	1
	Group "C" Qtr.	12
Buxaduar	Barrack	3
Attached Forest Range	DFD Bungalow	1
	Office Building	1
	Group "C" Qtr.	2
	Group "D" Qtr.	1
North Rydak	Range office	1
	Group "C" Qtr.	14
	Group "D" Qtr.	15
	Barrack	3
	RT Room	1
	Pump house	1
	Electric Metter Room	1
	Check Post	1
Hatipota	Range office	1
	Group "C" Qtr.	8
	FRH	1

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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BTR (West)

Range	Name of Quarters	Numbers
Attached Forest Range	DFD Bungalow	1
	ADFO Bungalow	2
	Group "C" Qtr.	29
	Group "D" Qtr.	11
West Rajabhatkhawa	Range office	1
	Group "C" Qtr.	12
	Group "D" Qtr.	32
	FRH	2
Pana	Range office	1
	Group "C" Qtr.	12
	Group "D" Qtr.	18
	FRH	1
	Barrack	1
Mobile (West)	Range office	1
	Group "C" Qtr.	3
	Group "D" Qtr.	20
Hamiltonganj	Range office	1
	Group "C" Qtr.	6
	Group "D" Qtr.	36
	FRH	
Nimati	Range office	1
	Group "C" Qtr.	7
	Group "D" Qtr.	28
	FRH	1
West Damampur	Range office	1
	Group "C" Qtr.	8
	Group "D" Qtr.	33
	FRH	1
	Garage	1
	Vehicle shed	1

Range	Name of Quarters	Numbers
East Rajabhatkhawa	Range office	1
	Group "C" Qtr.	7
	Group "D" Qtr.	17
	Barrack	4
East Damampur	Range office	1
	Group "C" Qtr.	4
	Group "D" Qtr.	38
	Watch Tower	1

Record Created for Assets (CSS PT) from 2015-16 & 2016-17

SI No.	Year	Item	Phy. Units
	2015-16	Desiltation of Narathali Beel	1 No.
		Removal of Water hyacinth from Narathali Bheel manually	LS
		For Creation of infrastuctur for Research & study at BTR the following is needed-	LS
		Building Office cum Laboratory & 2 group C quarters of Range Officer's Model	LS
		Office Infrastructure like Computer, Generator, Microscope, Centrifuse Office furniture, GPS, Camera etc	LS
		Solar light in anti poaching camps, Barracks	35 Units
		Procurement of GPS	10 Nos.
		Amenities for staff welfare provision of medicines, torches, raincoat, mosquito nets	LS

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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		Procurement of Binoculars	10 Nos.
		Procurement of trap Camera (Digital IR) & accessories	50 Nos.
		Procurement of Traps and cages	
		Preparation of earthen mounds in different glades, water bodies	LS
		Procurement of Tranquilizing equipment	LS
		Procurement of Vet. Medicine, equipments/accessories etc. for vet. Unit	LS
	2015-16	Installation/Repair of gates at entry point	
		Procurement of Arms & Ammunition	LS
		Repair/of Barrack for anti-poaching	4 nos
		Construction of Forest Guard Quarter	2 Nos.
		Repairing of Forest Guard Quarter	
		Construction of Beat Officer Quarter-cum-Residence	1 No.
		Maint./Procurement inflatable rubber boat for river patrolling	
		Maint./Procurement of Computer for office	
		Construction of Water storage structure	2 Nos.
		Installation of Deep Tube well in antipoaching camps	1 nos
		Electrification in remote Beat	
		Procurement of portable tent with accessories for hill camping & anti-poaching duties	6 nos
		Construction of Culvert/Cause way	
		Constructon of Boundary wall in beat location for protection & security	180 mt
		Maint./Dev. Of Conference room 10-15 seated with audio visual & library facilities	LS
		Visitors Waiting Room	LS
		Maintenance :-	LS
		a) Roads	80 km
		b) Patrolling Path	90 km
		c) Fire lines	55 km
		d) Fire watcher	LS
		e) Watch Towers, anti poaching camps/ barracks	LS
		F) Departmental vehicles including hiring & POL	LS
		g) Wages for watchers, patrolling & camp labourers	LS
		Repair of Barrack for Anti poaching	LS
		Repair of Forest Guard quarter	LS

	2015-16	Maintenance :-	LS
		a) Roads	70 km
		b) Departmental vehicles including hiring & POL	LS
		c) Fire lines	20 km
		d) R. T. Sets, walkie talkie including maintenance	LS
		e) Patrolling Path	60 km
		f) Pikhana	5 nos
		g) Watch Towers, anti poaching camps/ barracks	LS
		h) Energized Fencing	LS
		i) Buildings (Maintenance)	LS
		j) Wooden Bridges, culverts, etc.	LS
		Grassland creation by cut back & Burning	120 ha
		Water Hole Maintennace	10 Nos.
		Major/ Minor Works-Soil & Moisture Conservation Works	LS
		Artificial Waterholes, improvement of grassland water retention structure etc.	LS
		Removal of Water hyacinth from Narathali Bheel manually	LS
		Desiltation of water bodies	LS
		Repair of Barrack for Anti poaching	5 nos
		Repair of Forest Guard quarter	20 nos
		Maintenance and data collection for trap Camera	LS
	Maintenance/Repair of computer for office	6 nos	
	Maintenace/Construntion of overhead tanks in remote beats	3 nos	

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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		Maint./Dev. Of Conference room 10-15 seated with audio visual & library facilities	1 nos
		Procurement of Arms and ammunition to strengthen forest and wildlife protection	LS
		Establishment of Chowkis / Patrolling camps by way of installing Porta cabin or antipoaching tower including energized fencing, drinking water supply etc.	4 nos
		Procurement of Hardware.	LS
		Procurement of Software.	LS
		Procurement of trap to capture strayed animals	2 nos.
		Procurement of cage to capture strayed animals	LS
		Procurement of tranquilizing gun, darts, drugs. (all items will be in a drop down)	1 unit
		Creation of Grassland-100 ha	50 ha
	2016-17	Study tour for Officers and field staff in nearby TR areas	
		Supply of medicine	
		Supply of mosquito net to staff posted in interior areas	200 nos
		Maintenance of existing antipoaching camp 15 nos	15 nos
		Maintenance of existing RT set, walky-talkies	20 nos
		Cost of maintenance of existing road, patrolling path etc	30 km
		Maintenance of existing wooden bridge	10 nos
		Maintenance of kuccha roads, patrolling paths etc	30 km
		Upkeeping, cleaning and creation of fireline @ 15mds/km i.e. 1500m	100 km
		Construction of earthen pond inside forest	2 nos.
		Upkeeping, cleaning and creation of fireline @ 15mds/km i.e. 1500m	10 km
	2016-17	Construction of Gr D staff qtr	4 nos
		Conducting training for frontline staff	8 unit
		procurement of Torchlight for staff	100 nos
		Removal of gregarious plant growth from grasslands	50 ha
		Cut-burn of older grassland-200ha	200 ha
		Maintenance of DBBL gun	60 nos
		Procurement of camera for trapping (Cuddback attack)	20
		Reparing and maintenance of Existing rt network including battery etc.	20 nos
		Reparing and maintenance of existing road network	100 km

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Record of Assets Created from other sources from 2015-16 a& 2016-17

Division	Year	Range	Item	Unit
BTR (West)	2015-16	Divn. Office	Arms Ammunition	
		WRVK	Forest Guard Qtr.	1 No
			Anti poaching Camp	1 No
		All Range	Creation of Misc. Plt.	40 Hec
		All Range	Advance Work	50 hec
		EDPO	Boundary Wall at Depot	50 mtr
		EDPO	DPN	25 HEC
	2016-17	All Range	Creation of Water Body	8 Nos
		NIMATI	Energised Fencing	10 mtr
		Divn. Office	CC Camera	6 nos
		HTG	Water Pipe line	
		PANA	Hume Pipe Culvert	1 No
		All Range	Signage Board	7 nos
	Barrack for antipoaching	1 nos		
BTR(East)	2015-16	Hatipota Range	Toilet facility	
			Construction of Gr'D' qtr.	1 no.
		Bholka	Boundary wall	91.30 mtr.
	2016-17	South Rydak	Making forest road	9 km.
			Maintenance of staff qtr.	18 nos.
			Construction of Toilet facility	6 nos.
		North Rydak	Supply High-Low branch to school	50 nos.
		Buxaduar	Boaring tube well	1 no.
		South Rydak	Construction of staff qtr.	2 nos.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Perusal of records.	Funds received from NTCA and utilized during last three years are shown in table below Para 3.4 along with the details of state fund. NTCA funds for the current year are received recently.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.**

3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Verification of records	Funds are also received from State Plan funds. Funds under CAMPA is being provided from this year i.e.2017-18. Funds of State Government have been released timely in respect of some budget heads while there is delay in release of the fund from the remaining budget heads and funds. The budget amounts received & utilized from NTCA as well as state funds for last three years are shown in the table below this Para.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair	✓		
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good			
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

Year 2014-15

S I. N o.	Name of Schemes	BTR (Direction)			BTR (East)			BTR (West)			Total BTR Circle		
		Allotments	Expenditure	Balance	Allotments	Expenditure	Balance	Allotments	Expenditure	Balance	Allotments	Expenditure	Balance
1	CSS-Integrat	-		-	344500	344500	-	-	-	-	344500	344500	-

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

	ed Forest Protection												
2	CSS-Project Elephant	-	-	46000	460000	-	55500	54292	1207	10150	10029	12079	
3	CSS-Project Tiger	32000	29397	2602	11128	101064	1021	10856	96837	1172	22304	20084	22198
4	State Plan-(AP) & 11th Plan - 2406	-	-	0.00	14017	136902	3268	68887	64424	4462	20905	20132	77315
5	13th Finance Commission	-	-	0.00	39950	388423	1107	38900	38134	7660	78850	76976	18736
6	Non-Plan	16750	16732	1761	11254	112544	7	11254	11139	1150	24184	24067	11682
7	2225-Welfare of STS (FDA: Forest Village Development)	-	-	-	-	-	-	-	-	-	-	-	-
8	RKVY/S FDA (RIDF)	-	-	-	54400	433751	1102	37420	36027	1392	42860	40364	24951
9	JICA	-	-	-	-	-	-	-	-	-	-	-	-
10	CAMPA	-	-	-	-	-	-	-	-	-	-	-	-
	TOTAL	19950	19672	2778	41743	401737	1569	37186	35224	1961	80924	77365	35587

Year 2015-16

Sl. No.	Name of Schemes	BTR (Direction)			BTR (East)			BTR (West)			Total BTR Circle		
		Allotments	Expenditure	Balance	Allotments	Expenditure	Balance	Allotments	Expenditure	Balance	Allotments	Expenditure	Balance
1	CSS-Integrated Forest Management				30909	308736	360	30911	302354	6763	61821	611090	7123
2	CSS-				36500	336984	2801	37700	292488	8451	74200	629472	11252

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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	Project Elephant				0		6	0		2	0		8
3	CSS-Project Tiger	182000	187256	-5256	834000	8222563	117437	8326240	8131651	194589	16848240	16541470	306770
4	State Plan-(AP) & 11th Plan - 2406				9467750	8777175	690575	5364117	4858847	505270	14831867	13636022	1195845
5	13th Finance Commission						-			-	-	-	-
6	Non-Plan	7572000	7360795	211205	72526690	80865806	8339116	81279690	87459745	6180055	161378380	175686346	14307966
7	2225-Welfare of STS (FDA: Forest Village Development)			-			-			-	-	-	-
8	RKVY/SFDA (RIDF)			-	110249	110000	249			-	110249	110000	249
9	JICA			-			-			-	-	-	-
10	CAMPA			-			-			-	-	-	-
	TOTAL	7754000	7548051	205949	91118785	98621264	7502479	95656164	101045085	5388921	194528949	207214400	12685451

Year 2016-17

Sl. No.	Name of Schemes	BTR (Direction)			BTR (East)			BTR (West)			Total BTR Circle		
		Allotments	Expenditure	Balance	Allotments	Expenditure	Balance	Allotments	Expenditure	Balance	Allotments	Expenditure	Balance
1	CSS-Integrated Forest Management				740000	710568	29432	755000	646672	108328	1495000	1357240	137760
2	CSS-Project Elephant				1505000	1505000	0	3328000	3167865	160135	4833000	4672865	160135

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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3	CSS-Project Tiger	1603000	1563897	39103	20557380	20483073	74307	21442220	18531334	2910886	43602600	40578304	3024296
4	State Plan-(AP) & 11th Plan - 2406	1700000	1193186	506814	15423147	15165851	257296	20116815	18407939	1708876	37239962	34766976	2472986
5	13th Finance Commission						-			-	-	-	-
6	Non-Plan	15622750	9271481	6351269	103993740	89330747	14662993	103584290	104155037	570747	223200780	202757265	20443515
7	2225-Welfare of STS (FDA: Forest Village Development)			-			-			-	-	-	-
8	RKVY/SFDA (RIDF)			-	1608000	1604195	3805			-	1608000	1604195	3805
9	JICA			-			-			-	-	-	-
10	CAMPA			-			-			-	-	-	-
	TOTAL	18925750	12028564	6897186	143827267	128799434	15027833	149226325	144908847	4317478	311979342	285736845	26242497

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Perusal of records and discussion with FD/BTR.	NGOs provide resources to management. However the collaboration with NGOs are not well explored. Aranyak, Assam conducted training for staff on elephant census. Keyfalcon Solutions, Bangalore conducted training of staff of BTR for E-patrolling module. Traffic India is coordinating training for sniffer dogs & Dog Handlers at NCTD, Tekampur, MP. NGOs are invited for participation /assisting in Wildlife Population Monitoring excercises including Phase-IV Protocol
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Perusal of records and discussion with FD/BTR.	There is no staff who has received training in wildlife diploma, certificate course, vertical integration training etc. However several internal training programmes have been organized in TR for last three years. List of such training is provided in the para below.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

❖ Seminar/Workshop organized on wildlife management during 2014-15

Date	Location	Topic	Organized by	No. of participants
04-07-2014	Rajabhatkhawa, FRH	Elephant –Rail Conflict	CCF & FD, BTR	14
01-08-2014	NIC, Rajabhatkhawa	Green India Mission	Do	36
19.06.14	NIC, Rajabhatkhawa	Eco-Tourism and car safari	Deptt. Of Forests with JFMC Members	37
25.07.14	NIC, Rajabhatkhawa	Strengthening Wildlife law Enforcement and Conservation	Deptt. Of Forests with SSB	108
01.08.14	NIC, Rajabhatkhawa	Green India Mission	Deptt. Of Forests with NGO	26
07.09.14	NIC, Rajabhatkhawa	K.L.C.D.I one day stay holder consultation	HNAF-Siliguri and G.B.P.I.C.H.F.D Sikkim	35
16.09.14	NIC, Rajabhatkhawa	Forest Ranger Training	Deptt. Of Forests	37
24.11.14	NIC, Rajabhatkhawa	Vulture Conservation	Deptt. of Forest and BNHS, Pinjore	14
28.03.15	NIC, Rajabhatkhawa	Stripes of Tiger Estimation (Training)	BTR	19

❖ Seminar/Workshop organized on wildlife management during 2015-16

Date	Location	Topic	Organized by	No. of participants
03.07.15	Committee Room, DRM Office, APD Jn.	Meeting of SLC between Railways & Forest Dept. to avoid death of elephants due to train hits.	ADRM, APD Jn.	15
27.02.16	Bholka Range Office	Meeting about protection of wildlife against electrocution	Range Officer, Bholka Range, BTR (E)	6

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

19.03.16	Rajabhatkhawa	Training cum workshop on Man-animal conflict	DFD, BTR (E) Div.	13
18.05.15	NIC, Rajabhatkhawa	Workshop about BTR	NTCA, WLL, Deptt. of Forests, West Bengal & Assam	49
11.12.15	NIC, Rajabhatkhawa	Tiger Census	Deptt. of Forests with NGO	93
05.01.16	NIC, Rajabhatkhawa	Man-animal Conflict	Deptt. of Forests, FPC/EDC Members, Tea Garden	102
19.03.16	NIC, Rajabhatkhawa	Man-animal Conflict	Deptt. of Forests	52

Seminar/ Workshop organized on wildlife management during the year 2016-17

Date	Location	Topic	Organized by	No. of participants
27.05.16	Bholka Range Office	Meeting about protection of wildlife against electrocution	Range Officer, Bholka Range, BTR (E)	6
19.07.16	Rajabhatkhawa	Training cum workshop on Man-animal conflict	DFD, BTR (E) Div.	13
02.05.2016	NIC, Rajabhatkhawa	Meeting about Elephant Dossier.	Deptt. of Forests	31
22.09.2016	NIC, Rajabhatkhawa	State Level meeting with Forest Deptt. & Railway Deptt.	Deptt. of Forests	18
30.09.2016	NIC, Rajabhatkhawa	Training for Nature Guides Safari operators & Preparatory meeting of Buxa Bird Festival 2016	Deptt. of Forests with N.G.O & Guides.	79
03.10.2016	NIC, Rajabhatkhawa	Workshop on E-patrolling	Deptt. of Forests	41
05.10.2016	NIC, Rajabhatkhawa	Workshop on Standardization of Dung decay method on Elephant census.	Deptt. of Forests.	44
29.10.2016	NIC, Rajabhatkhawa	Workshop about Disaster Management	Deptt. of Forest, F.P.C./E.D.C. members.	57
15.12.2016	NIC, Rajabhatkhawa	Workshop cum training about All India Tiger Population Monitoring Protocol (Phase –IV Protocol)	Deptt. of Forests with N.G.O.	51
06.01.2017 to 08.01.2017	NIC, Rajabhatkhawa	Buxa Bird Festival - 2016-17	Deptt. of Forests with N.G.O.	47
03.03.2017	NIC, Rajabhatkhawa	Workshop cum training about Tiger Population Maintaining Phase–IV Protocol	Deptt. of Forests with N.G.O.	106
20.03.2017	NIC, Rajabhatkhawa	Co-ordination between Public Representatives, District Administration & Forest Deptt. In Alipurduar & Cooch Behar.	Deptt. of Forests with District Administration	31
21.03.2017	NIC, Rajabhatkhawa	Workshop about Elephant Population estimation–2017 for North Bengal Landscape.	Deptt. of Forests	71

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Discussion with FD, BTR	Purpose of deployment of staff is to provide protection to forest and wildlife in BTR and take care of habitat management. Thus their performance is totally linked to management objectives.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Discussion with FD, BTR	TR management has been regularly conducting public participation for education and awareness of masses which helps in achievement of management objectives. During wildlife week celebration school children and local youth are involved and are consulted to work out strategy for conservation of forest and wildlife. Recently on 20 th March, 2017 two meetings for public education and awareness were conducted involving Hob,ble MIC,Forests,Savadhipati, Local MLAs and Block level functionaries, JFMC members along with TR Officials had organized the event..
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

**The involvement of NGOs/ NGIs in population estimation may be taken into account)*

.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		Perusal of Records & Discussion with FD, BTR	Verbal and written complaints are received in ranges and also in the offices of FD and DDs. During the tour of FD, DDs and AFDs many verbal complaints are received and immediate action is taken to redress the greivences. Many a times the complaints are connected to wild-animal conflict cases and immediate action is
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and	Good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

responds effectively to most complaints.			taken by the concerned officer of the management to redress the grievances. Written complaints are always brought on record in a file and appropriate action as deemed appropriate is taken.
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good		

***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Perusal of Records & Discussion with FD, BTR	All forest villages in the BTR have JFMCs to whom the labour works in the plantations are entrusted. They are also engaged in eco-development activities like tailoring, boulder collection, and formation of Self Help Groups to manage Eco-tourism activities. The list of works where the members of the community are engaged are shown in the table below this Para.
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

***The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.**

JFM & Impact Socio Economic

Division	No of SHG	No of members	Total amount with SHG
BTR E	252	-	-
BTR W	165	1733	6,45,327.00
Total	417	1733	6,45,327.00

Highlights of - Eco-Development activities & Forest Village Development	<ul style="list-style-type: none"> ➤ Infrastructure Development through construction and maintenance of road, culvert, and drinking water supply. ➤ Construction of community hall ➤ Imparting Training on Jari, Weaving, Apiculture, Soft toy making, Improved agriculture practices, Improved cattle rearing, Vermicompost, Bag making, and training the Tourist Guides. ➤ Providing irrigation facilities through construction/ repair of Jampoi. ➤ Constructon of watch towers, culverts, ➤ Distribution nursery for providing seedlings to the local people and various Institutions. ➤ Construction/repair of hut for Forest Villagers. ➤ Distribution of furniture to schools. ➤ Distribution of Gas Connection with Oven to all JFMCs Members
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*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Perusal of records & Discussion with FD/BTR	There are 15 villages in the Core area of the BTR. The management has initiated dialogue with the family of community residing in Bhutiabasti, 28 th Mile, 29 th Mile village and Jayanti village on priority basis.
Plans have been made but no implementation	Fair	✓		
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

***Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.**

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Discussion with FD and perusal of records.	The management has exclusive website www.buxatigerreserve.com where in all information regarding TR management is available. Publicity materials like Poster, Pamphlets, Cap, T Shirt, Field Jacket etc. available for access to tourists. Information centers are available at Raja Bhat Khawa and also at Buxadwar. The tourists and public access the places and get required materials.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

General & Economic Significance:

Ecological Significance of the reserve is not measured but as seen the reserve is a huge source of sweet water, an important area for carbon sequestration. The gene pool of the reserve is ginormous needs an extensive study to explore its magnitude. The reserve has great attractions to the tourists & nature lover due to its hatful bio-diversity & charming landscape. Researchers have scope on extensive range of unexplored field like taxonomy, plant pathology, ethnology and other ecological parameters.

The income from tourism activity is Rs. 70.88 lakh during the financial year 2015-16 & income from supplying boulder and river bazree to other Government Departments is Rs. 88.27 lakh. This amount is primarily used for forest protection & development of forest dwellers. Total person days generated is around 1.1 lakh during the financial year 2015-16.



BUXA TIGER RESERVE

The Bio-diversity Hotspot



Thank you

For further detail:

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THE BACKGROUND



BUXA forest was declared as **Tiger Reserve** on **16th February, 1983** and became the **15th Tiger Reserve** of the Country. The reserve is situated in Alipurdhar District of the state of West Bengal.

The Tiger reserve is located in the foot hills of the Himalaya, which used to be an unoccupied wasteland. Those forests came under British rule in the year 1865 and the first reservations were made in 1879 and the process continued till 1940.

The area of the Tiger reserve is 760.87 sq. km. The area includes Buxa National Park, Buxa Wildlife Sanctuary (Core Area) & rest is reserve Forest (Buffer Area).

Buxa National Park- 117.23 sq. km &
Buxa Wildlife Sanctuary- 273.35 sq. km.
Core Area- Total area of National Park & Sanctuary- 390.58 sq. km.
Buffer Area- 370.29 sq. km. which is Reserve Forest.

During September, 2015 proposal was sent to Government of West Bengal for realignment of Core area. The proposed core and buffer area is 41765 Sq. km & 34332 sq. km. respectively.

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Tiger Conservation plan of Buxa Tiger Reserve (BTR) 2016-17 to 2026-27. & Perusal of Records	1. The guidelines for tourism are promulgated by National Tiger Conservation Authority (NTCA) in October 2012, after approval of Supreme Court which allows only visitation right in designated tourism Zone in core area. The tourism area in the core should not increase 20% of total core or the existing area under tourism, whichever is less. The guidelines prohibit the construction of any tourist infrastructure in core area. In spite of this, West Bengal Tourism Development Corporation has constructed tourists' lodges at Jayanti, within core area. The Tiger Reserve is already disturbed. If we add further disturbance, we should forget about reintroduction of tigers in the Reserve. The Tiger Reserve should be inviolate as per the requirement of section 38V of Wildlife (Protection) Act 1972. On the basis of a complaint by Subhash Dutta, Kolkata Bench of NGT has ordered demolition of these structures.
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are conscientiously maintained, regularly upgraded and monitored for visitor satisfaction	Very good			
				There are two NICs one each at Rajabhatkhawa, Buxaduar where people visit the place and gate information about the Tiger Reserve. 19.8 % of the Core area has been ear marked for tourism. Tourists are

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

			<p>taken for safari on three different routes, which are described in the table below the para. Some of the other popular places are –</p> <ol style="list-style-type: none"> <u>Jainty Bazaar</u> - The Jainty River and its surrounding hills present a breath taking scenic beauty. The tourists visit Jainty both as day visitor and as halting camp. <u>Buxa Duar</u> - The ruins of Buxa Fort is major tourist attraction. The fort is about 3 Kms from the nearest road head. The trekking to fort passes through hills and is full of scenic beauty. <u>Rajabhatkhawa</u> - The place is popular among tourists. The Nature Interpretation centres, Rescue centre, Vulture Breeding Centre, Forestry Training Centre are major attractions. <u>Poru South Eco Park</u> - The place is very popular centre for picnicking, family gathering, boating and enjoying the natural beauty of Forests. The spot is located on the bank of Poru River. <u>Trek to Jainty Pokhri</u> - This small wetland on high altitude is home to several species of fish and turtles. The trek passes through beautiful forest. <u>Sikiajhora</u> - The place is on bank of a stream. Number birds visited the area every year. The place is already a popular spot for pick nicking. <u>Narathali Beel</u>- There is a natural wetland. Every year thousand of winter birds visit the area. <u>Garam - Dima Observation Spot</u> - The watch tower on the bank of Dima River and vast overlooking Grassland along with a very good view of Buxa Forest, Buxa & Bhutan Hills makes this spot picturesque. <p>The stay facilities are also available in some places. The list of places along with the tariffs charges are also shown in tables below the para. In addition to this various home stay facilities are available. Some Eco-tourism plans are in pipeline and State Eco-Tourism Bouard has approved one such plan on “Eco-tourism in Rydak Forest”. The overview of the plan is as follows</p> <p>Overview of Rydak Forests: Rydak Forest is a 53 sq km Terai forest zone under ‘buffer’ areas of Buxa Tiger Reserve, located in Alipuduar district of West Bengal, South of hilly area of Bhutan. It is the eastern most extension of extreme biodiverse North-East India & represents highly endemic Indo-Malayan region. The fragile "Terai-Eco System" constitutes a part of this Reserve. The main species found are Asian elephant, Tiger, Leopard, Gaur, Wild Boar, Sambar, Malyan Giant Squirrel, Chital, Clouded Leopard, Antelope and Snakes including the regal Python are found here. Numerous species of birds and innumerable butterflies add colour to the forest. The Raidak River which flow through the forest</p>
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				<p>and Narathali Lake are home to migratory and endemic birds. There are Pied Hornbill, migratory Goosander, Redstarts, Wagtails, Spot-bullied Duck, migratory Common Teal, Black stork, Large Whistling Teal, Northern Pintail and Ferruginous Pochards.</p> <p>Components of Tourism at Rydak :</p> <ol style="list-style-type: none"> 1. Jungle Safari 2. Elephant Safari 3. River Rafting in Raidak 4. Birding at Narathali lake 5. Chipra "Ethnic" Forest Village 6. Canopy walk & Tree house at Chipra/Raidak Forest 7. Visit to surrounding Tea Gardens <p>During 2013 to 2015 the Eco-development cottages at Jainty (6 nos.) were completed. Forest department constructed the Eco-cottages and handed over to West Bengal Tourism Development Corporation (WBTDC). This was in contravention of NTCA tourism guidelines and</p>
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**Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.*

Identified Safari routes in Core Tourism Zone

Route	Details of route	Distance-
Route 1	23 mile temple- 25 th mile tower, 26.5 tower, 28 th tower, Dima, 30 th Mile Tower, Shiakri road, Rajabhatkhawa	30 km
Route 3	Jainti-Sangai, NRVK 13, Bala, Jainti River-B basty, Chunia Tower	30 km
Route 4	Jainto-Tashigaon tower, Pokhri, Mahakal	9 km

BTR (West)

Location	Accommodation	Suites	No. of beds (Single bed)	Rate per suit (in `)
Rajabhatkhawa	Main Rest House	2	4	1500
	Leo House	2	4	600
Nimati	Forest Rest House	2	4	900
Ban Mayuri	Eco Lodge	2	4	800
	Dormitory	2	8	200
Raimatang	Forest Rest House	2	4	900
Rangamati	Forest Rest House	3	6	900
Rajabhatkhawa	Dormitory	1	2	600
For Officers on duty under all circumstances for all the Forest Rest House				100

BTR (East)

Location	Accommodation	Suites	No. of beds (Single bed)	Reservation authorities
Jainty	Jainty -II	3	10	Deputy Field

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Buxaduar	Forest Rest House	2	4	Director, Buxa Tiger Reserve (East) Division
	Buxaduar Dormitory	2	16	
Hatipota	Forest Rest House	3	4	
Rydak	Forest Rest House	2	4	
Silbunglow	Forest Rest House	2	4	
Kumargram	Forest Rest House	2	3	

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Perusal of records.	The findings of the research are taken as feedback and are also utilized to improve the management. The list of research work done during last 4 years are shown in the below mentioned table.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

Records Related to Research		
Year: 2013-14		
Sl No.	Agency	Research Work
1	Ecology and Fisheries Division , Department of Zoology, University of Calcutta	Research work inside the National Parks/Wildlife Sanctuary/ Reserve Forests in West Bengal.
2	Sri Raj K. Mahtoliya, IFS	Research Work in Wildlife Sanctuary, Jaldapara National parks and Buxa Tiger Reserve.
3	National centre for biological Sciences (NCBS)	Research work on insect bio-diversity servings in Buxa Tiger Reserve.
4	National Bureau of Agriculturally Important Microorganisms (NBAIM)	Collection of Soil samples from Buxa Tiger Reserve.
5	Sri Bimal Roy	Woman JFM participation in the joint Forest Management of Buxa Tiger Reserve.
6	Sciences & Engineering Research Board (DST), Department of Forestry , Uttar Banga Krishi Vishwavidyalaya	Carban Sequestering status of Forests, Tea garden and agro-ecosystems and other plant base land use system in Terai zone of West Bengal.

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Year: 2014-15		
7	Botanical Survey of India (BSI)	Study on Flora an plant specimen.
8	National Institute of Virology (NIV) & Indian Council of Medical Research.	Multisite epidemiological and virological survey on "Nipah" Virus.
9	Department of Zoology, University of Calcutta, Kolkata	Diversity and Dynamics of Fish and macro-invertebrates of Teesta River and its tributaries in West Bengal.
10	Zoological Survey of India , Kolkata	Studies on Fauna in areas of West Bengal.
11	Regional Director (Eastern Region) Archaeological Survey of India , Kolkata	Exploration works in Buxa Forests and Jayanti Forests at Buxa Tiger Reserve.
12	Apterygota Section, Zoological Survey of India, Kolkata	Collembolan Fauna of Duars Region of Northern West Bengal.
Year: 2016-17		
13	Uttar Bang Krishi Vishwavidyalaya, Pundibari, Coochbehar.	Collection of 150 Soil samples from different forests of North Bengal.
14	Nature, Environment & Wildlife Society (NEWS)	Collaborative Scientific Study on impact of Teak monoculture in North Bengal.
15	Department of Agricultural Bio-Technology., IRDM faculty centre, Ramkrishna Mission Vivekananda University Narendrapur, Kolkata.	Exploration of Spiders (Arachnida: Araneae) of Eastern Himalaya.
16	Elephant Research and Conservation Division, Aranyak, Guwahati.	Research Work on Asian Elephant and Indian Gaur in North Bengal.
17	Department of Geography, Presidency University, Kolkata.	Riverbed configuration and Analysis of Riverbed elevation of Jayanti River Basin at Jainty.
Year: 2017-18		
18	Forest Survey of India, Eastern Zone, government of India, Ministry of environment, Forests & CC, Kolkata.	Survey/ Field Survey of Asian elephants as seed dispersers at Buxa Tiger Reserve.
19	National Centre for Biological Sciences, Tata Institute of Fundamental Research, Bangalore	Survey/ Field Survey of Asian elephants as seed dispersers at Buxa Tiger Reserve.
20	Uttar Banga Krishi Vishwavidyalaya, Pundibari, Coochbehar.	Biophysical parameters monitoring and assessment of Forests using GISAT (Geostationary Information Satellite) at Buxa Tiger Reserve.

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Perusal of records and discussion with FD, BTR	For the maintenance of infrastructure like roads, building and vehicles a proper schedule is available. Depending upon the availability of fund, the maintenance works are prioritized and implemented. However there is inadequacy of fund for maintenance of infrastructure / asserts.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Perusal of documents.	Two consecutive elephant census in December 2014 and March 2017 reveals that the Elephant population in North Bengal has come down from 590 to 548. Estimation of other ungulate population has not been carried out over time scale and hence it becomes difficult to conclude whether the population is stable or declining. Estimation of herbivores suggest that their population density in TR is low.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair	✓		
Several threatened/ endangered species populations increasing, most others are stable.	Good			
All threatened/ endangered species populations either increasing or stable.	Very good			

*This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.

Prey Base Density at Buxa Tiger Reserve (Phase IV Protocol 2015-16)

Name of Wild Animal	Density(per sq km)	% Co-efficient of Variation	% Standard Error
Barking Deer	3.3366	17.16	±0.57255
Chital	7.1056	52.81	±3.7524
Sambhar	2.7862	71.54	±1.9934
Hog Deer	0.39185	97.97	±0.3838
Indian Gaur	2.4931	54.35	±1.3551

Prey Base Density at Buxa Tiger Reserve (Phase IV Protocol 2014-15)

Name of Wild Animal	Density(per sq km)	Estimated Population
Barking Deer	6.260	4765
Chital	2.467	1878
Sambhar	1.017	774
Hog Deer	1.060	807
Indian Gaur	0.306	234

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor	✓	All India Tiger Population Estimation- 2010 &	All India Tiger Population Estimation in 2010 has shown the tiger number in TR was estimated as 12. as per the assessment by CCMB, Hyderabad based on DNA Scat
Population of tiger is showing a declining trend and the reason is	Fair			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

identified and options to reverse are in place			2014.	Analysis (which was not accepted by NTCA) while 2014 estimated tiger number was 3 nos. Even management has been doing annual Phase IV monitoring involving Camera Traps, which has not produced any Photographic evidence. Thus there is a declining trend in Tiger population.
Population of tiger is showing a stable trend but below carrying capacity	Good			
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

****This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.***

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor	✓	Perusal of records.	Threats to TR are continued unabated. There are villages in the Core as well as the Buffer of TR The management contemplating to relocate four villages (Bhutiabasti, 28 th Mile, 29 th Mile and Jayanti village) from the Core. Since the relocation has to be voluntary, the negotiation is taking some time. Timber smuggling is going on unabated. All threats are continued.
Some threats to the TR have abated, others continue their presence	Fair			
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

****Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?***

6.4 Is visitor management* appropriate?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		Discussion with FD, BTR	TR management deals with Safari visit along the approved designated routes. Local vehicle owners have got themselves registered for taking the visitors on these routes. Each vehicle is provided the services of a guide who is registered with TR. The number of vehicle is also restricted as per the carrying capacity of the area.. Tiger management strictly monitors the safari visits.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good	✓		
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

****Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism***

6.5 Are local communities supportive of TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			The local communities are largely supporting

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Some are supportive.	Fair	✓	Discussion with FD/BTR & perusal of documents.	of TR management. However there always some miscreants who indulge in illegal activities.
Most locals are supportive of TR management.	Good			
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	35	66.41%
2.	Planning	07	10	70	50	
3.	Inputs	05	10	50	32.5	
4.	Process	06	10	60	42.5	
5.	Outputs	04	10	40	30	
6.	Outcomes	05	10	50	22.5	
Total		32		320	212.5	

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor		Efforts to protect the forests and Wildlife are a positive step for Carbon sequestration. But the management is involved in burning grassland every four to five years. As it is a necessary step for biodiversity conservation and there is very little grassland in the TR, it may not be proper to stop it. However forest fire is rampant in TR which must be checked.	Protection should be stepped up so that forest fire, encroachment and illicit cutting of trees are kept in check.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/ Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor		Smuggling of timber, firewood is rampant, which should be checked. TR is highly disturbed and many a times illicit activities remains unchecked.	Tea estate owners should also be roped in protection.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

10. Sundarban Tiger Reserve, West Bengal

1. Context

1.1 Are the values of the TR well documented, assessed and monitored?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Values not systematically documented, assessed and monitored.	Poor		Para 1,3 of Tiger Conservation Plan (TCP)	Sundarban Tiger Reserve (STR) is located in the Southern-most part of the state West Bengal in the districts North and South 24-Parganas. It lies between latitude 21°31' & 22°31' North and Longitude 88°10' & 89°51' East. STR bounded by fringe villages along the northern boundary, Bay of Bengal on the South, territorial division South 24-Pargana on the West and Bangladesh on the east separated by Raimangal, Kalindi and Harinbhnga rivers. The values of the TR as enumerated in the TCP are listed below; a. It is one of the first nine tiger reserves declared under Project Tiger scheme in the year 1973. b. National Park area of the reserve is a Natural "World Heritage Property" of UNESCO declared in the year 1985. c. It is a part of global recognized Sundarban Biosphere Reserve declared in the year 1989. d. It constitutes over 60% of the total mangrove forest area in the entire county and has 90% of the total Indian mangrove species. e. It is the only tiger reserve containing mangrove landscape of the country. f. Besides tiger, STR is a home of a large number of endangered and globally threatened species like Fishing Cat (<i>Felis viverrina</i>), Estuarine Crocodile (<i>Crocodyles porosus</i>), Gangetic Dolphin (<i>Platanista gangetica</i>), Irrawady Dolphin (<i>Oracella brevirostris</i>), King Cobra (<i>Ophiophagus hannah</i>), Water Monitor Lizard (<i>Varanus salvator</i>). g. It harbours significant population of River Terrapin (<i>Batagar baska</i>) and provides the nesting ground of Olive Ridley Turtle (<i>Lepidochelys olivacea</i>), Green Sea Turtle (<i>Chelonia mydas</i>) and Hawksbill Turtle (<i>Eretmochelys imbricata</i>). h. It is called as kingfishers' paradise as out of 12 species found in India 8 is found here. i. The mangrove forests act as a natural shelter belt and protect the hinterland from natural calamities. A close network of rivers, channels and creeks intersects the whole area, which has resulted in formation of innumerable islands. The main rivers of the Reserve are Kalindi, Raimangal, Harinbhanga, Jhilla, Kapura, Gomdi, Bidya, Matla, Gosaba & Gona.
Values generally identified but not systematically assessed and monitored.	Fair			
Most values systematically identified, assessed and monitored.	Good			
All values systematically identified, assessed and monitored.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

1.2 Are the threats to TR values well documented and assessed*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats not systematically documented or assessed.	Poor		Subheading 2.4 of Approved TCP(2012-13 to 2016-17) and revised and submitted TCP Of 2017-22 , PMP, Sensitivity Map. E-PMP Sites.	There are many threats both to the ecosystem and the fauna inhabiting the area. 1. Destruction of habitat. 2. Poaching of major animals. 3. The area is very close to Kolkata which is a major port may be used for smuggling of wild articles 4. The adjacent international border with Bangladesh is very porous. 5. Destruction of habitat by upstream effluents, soil erosion also poses serious threat to the area. 6. Destruction of seeds of various fish in the process of catching tiger prawn seeds is also one of the major threats, which shall have an adverse effect in maintenance of ecological balance in the area on account of elimination of different species of fauna. 7. Climate change and rising of sea level. 8. Cyclonic surges and storms.
Threats generally identified but not systematically assessed.	Fair			
Most threats systematically identified and assessed.	Good			
All threats systematically identified and assessed.	Very good	✓		

***This assessment should be based on number, nature and extent of threats**

1.3 Is the 'Core Area' of TR free from human and biotic interference*?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
The 'Core Area' has extensive human and biotic interference.	Poor		Para 3.4 of TCP	The Tiger Reserve comprises of Sajnakhali Wildlife Sanctuary, Sundarban National Park and Reserve Forests of Basheerhat Range bordering Bangladesh. There are no villages in any of the islands of the TR. However there is presence of people in some of the islands of Sajnakhali Wildlife Sanctuary and Reserve Forests in Basheerhat Range for tourism, fishing, crab collection, firewood collection etc. These activities are generally regulated, but sometimes they are carried on illegally. The core area i.e. Sundarban National Park area has very little human and biotic interference.
The 'Core Area' has some human and biotic interference.	Fair			
The 'Core Area' has little human and biotic interference.	Good	✓		
The 'Core Area' has no human and biotic interference.	Very good			

***This assessment should be based on existence and the efforts made by TR management to address issues related to human settlements/ villages inside the core area; livestock grazing, cultivation, encroachments etc, resource extraction/ livelihood dependence of local communities and should reflect the overall interference due to all the above factors.**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

1.4 Has the TR complied with the four Statutory* Requirements (SR) along with Tripartite MoU and all (seven) Standard Operation Procedures (SOP)?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
None of the four SR, no compliance of Tripartite MoU and seven SOPs met	Poor		Discussion with FD and verification of records.	All four statutory requirements are complied. Seven SOPs of NTCA relating to human tiger conflict, tiger mortality, disposal of carcasses, tiger cubs etc are also complied.
Two of the four SR, 50% conditions of the Tripartite MoU and SOPs complied	Fair			
Three of the four SR, 75% conditions of the Tri-partite MoU and SOPs complied	Good			
All four SR, 100% conditions of the Tripartite MoU and SOPs complied	Very good	✓		

+Statutory requirements are (1) Legal delineation and notification of Core and Buffer Areas; (2) Establishment of Tiger Conservation Foundation; (3) Development of a Tiger Conservation Plan; and (4) Constitution of a State-level Steering Committee under the Chairmanship of the Chief Minister. TA refers agreement between Field Director, State Government and NTCA. The 7 SOPs are on (i) Straying of Tiger in human dominated landscape, (ii) Tiger Mortality and (iii) Disposal of Carcasses, (iv) Dealing with orphaned/abandoned tiger cubs and old injured/tigers, (v) Active Management towards rehabilitation of tigers from source areas at the landscape level, (vi) Dealing with tiger depredation on livestock and (vii) Interstate Coordination for Interstate TR. Interstate SOP (SOP No. vii) may not applicable to all tiger reserves and the team needs to assess accordingly.

1.5 Is the 'Core' and 'Buffer' of the Tiger Reserve under unified management of Field Director?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Management of Core and Buffer of the TR are under different management	Poor		Verification of records in FD office.	Core and Buffer is under full administrative and financial control of the Field Director of TR.
Management of Core is under Field Director of TR but Buffer is under partial control	Fair			
Management of Core and Buffer is under full administrative control of the Field Director of TR	Good			
Management of Core and Buffer is under full administrative and financial control of the Field Director of TR	Very Good	✓		

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

2. Planning

2.1 Status of Tiger Conservation Plan (TCP)+?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No TCP in place.	Poor		Verification of records in the office of FD	TR has TCP for five years which expired in 2016-17. This Plan was approved by NTCA vide F.NO.-1-14/2011 NTCA. TCP for the period 2017-18 to 2022-23 has been sent to NTCA for approval. Vide PCCF, WB office letter no. 579(3)/SBR/C-211/13 dated 31.08.17
TCP is under preparation	Fair			
TR has a relevant TCP	Good	✓		
TR has a comprehensive and relevant TCP, duly approved by the NTCA	Very good			

*The scientific content and the participatory processes used in preparation of the TCP will be taken into account in assessing the quality of TCP.

2.2 Does the TR safeguards the threatened biodiversity values+?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR does not safeguard the threatened biodiversity values.	Poor		Discussion with FD and verification of records	Sundarban Tiger Reserve is a compact block of mangrove forests spread over an area of 2585 sq km. There are no habitations within the forest area. The fringe areas of the Tiger Reserve were once upon a time forested but during the course of time these were cleared for human habitations. Post-independence period, this area witnessed an influx of population due to migration from both within and outside the country. Currently, protection of forest and wildlife is the topmost priority of the management. However the threat of poaching and other illegal activities is a major challenge for management. As a strong system of protection is in place, TR safeguards a large number of threatened biodiversity values.
TR safeguards a few threatened biodiversity values.	Fair			
TR safeguards a large number of threatened biodiversity values.	Good	✓		
TR safeguards all threatened biodiversity values.	Very good			

*Remarks need to elaborate on the kind of safeguards and how they work or are intended to work

2.3 Are stakeholders given an opportunity to participate in planning process?

Assessment criteria+				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little, if any opportunity for stakeholder participation in planning.	Poor		Micro plan, JFMC meeting register BLLC/.RLLC Meeting register, STCFT executive body meeting register.	The institution of JFMCs is in place & they participate in planning process. Regular meeting are held with stake-holders such as fisher men, boat owners, tour operators, NGOs. JFMC members etc.
Stakeholders participate in some planning.	Fair			
Stakeholders participate in most planning processes.	Good	✓		
Stakeholders routinely and systematically participate in all planning processes.	Very good			

*The result of participation must show in the field and not merely reported as a routine exercise.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

2.4 Are habitat management programmes systematically planned, relevant and monitored, and contribute effectively to Tiger and other endangered species conservation?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Habitat management programmes are entirely adhoc.	Poor		Para 7.1.2.2.2 of TCP	Habitat management programs are taken up as per the prescriptions in TCP. Specific strategy is identified for following works; 1. Protection Management 2. Water Management 3. Waste Management 4. Pollution Management 5. Soil Moisture Conservation 6. Prey Base Management 7. Regulation of Tourist
Limited planning and monitoring programmes are in place for habitat management.	Fair			
Habitat management programmes are generally planned and monitored.	Good	✓		
Habitat management programmes are thoroughly planned and monitored.	Very good			

**This assessment should be primarily based on habitat management programmes in relation to habitats for species that are threatened (IUCN categories), are habitat specialists, subjected to seasonal movements, wide ranging with emphasis on the breeding and rearing habitat and may include factors such as food, water, shelter (all connotations). Habitat structure, composition, unique patches of vegetation and sensitive sites, sources of water and their distribution are integral. Corridors within buffer zone are critically important. For example, all riparian habitats. Have these been addressed? Is their a planning process in place? The management practices dealing with invasive species such as Lantana sp., Mikania sp. etc. would be examined.*

2.5 Does the TR has an effective Protection Strategy (PS)* and Security Plan and Security Audit (SA) in place?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR has little or no PS and SA.	Poor		Verification of records and visit to anti-poaching camps	Sundarban Tiger Reserve faces a number of challenges in the form of poaching, illicit felling, illegal fishing, illegal crab collection and honey collection. The TR has 23 stationary camps and seven floating camps for apprehending and preventing culprits in connection with the aforesaid illegal activities. Security Plan is in place but Security audit has yet not taken place. The following checks and balances are exercised by the management to ensure protection of habitats and wildlife; 1. Regular meeting with personnel manning protection camps and analysis of the outcome data of E-PMP, PMP report and other offence report are carried out fortnightly. Accordingly the protection strategy is decided. 2. Through PMP there is a system of thorough Security Analysis and effective Protection strategy. Security Audit is due and will be done shortly by the concerned authority/team.
TR has an adhoc PS and SA.	Fair			
TR has a generally relevant PS and SA but is not very effective.	Good	✓		
TR has a comprehensive and very effective PS and SA.	Very good			

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

				The list of Anti-poaching camps and offence data etc are shown in tables below this Para
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***This assessment takes inter-alia into account the nature of threats, the number and location of patrolling camps and foot and mobile patrolling, needs that relate to available manpower, terrain difficulties, practicability of area coverage, readiness to contain specific threats with necessary support and facilities. The constitution and functioning of Special Tiger Protection Force (STPF), Number of offences reported, arrests made, prosecution initiated and conviction achieved will be taken into account.**

Details of Camps:

Land-based Camps			Floating Camps/ Check-Posts		
Sl.No.	Location	Range	No.	Location	Range
1	ya	li Wild Life Sanctuary Range	1		t Range
2	ji				
4					
5	akhali				
6					
7		t Range	3	Pirkhali	li Wild Life Sanctuary Range
8	ali				
9	uri-Harinbhanga				
9					
10					
11	agar		7	Banaraj (Moving Patrolling Camp)	NP East Range
12					NP West Range
13	H.Q.	H.Q Range			
14	Chamta	National Park (East)			
15	Bagmara				
16	Gosaba H.Q.				
17	Sonakhali				
18	Chandkhali				
19	Haldibari	Park (West)			
20	Netidhopani				
21	Bidya				
22	Kendo				
23	Rampura	Mobile Range			

One State Armed Police Camp is posted at Jhila under Bashirhat Range headquarters. It also functions as a Special Strike Force and assists the field staffs in patrolling, raids and tiger rescue operations.

- **State Armed Police Force Camp established in the year: 2000**
- **No. of State Armed Police personnel posted:5+1**
- **Rank of highest ranked officer posted in the Camp: Head Constable**

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Two BSF camps have been established at Khatuajhuri and Bagna camps under Bashirhat Range. They along with the field staff carry out joint patrolling operations besides performing their day to day duties.

- **No. of BSF personnel posted:6+1 (Khatuajhuri) and 9+1(Bagna Camp)**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Name of highest ranked officer posted in the Camp: Sub-Inspector

The details of Forest offences from 2010-11 to 2016-17 is shown in vertical columns in below mentioned table.

1.	POR (in Nos.)	16	6	6	1	3	6	2
2.	COR (in Nos.)	1957	2221	2499	2577	3080	3050	2872
3.	UDOR (in Nos.)	72	81	58	Nil	13	20	20
4.	No. of Persons Arrested	90	18	36	8	2	20	7
5.	Incidences of Firing by Staff (in Round)	NIL	NIL	17	NIL	NIL	5 round	NIL
6.	No. of Offender Died	NIL	NIL	NIL	NIL	NIL	NIL	NIL
7.	No. of Offender Injured	NIL	NIL	NIL	NIL	NIL	NIL	NIL
8.	No. of Forest Staff Killed	NIL	NIL	NIL	NIL	NIL	NIL	NIL
9	No. of Forest Staff Injured/Assaulted	NIL	NIL	NIL	NIL	1	NIL	NIL
10.	Total Compensation Realised (in Rs.)	8,63,690.00	10,92,700.00	17,12,860.00	19,65,450.00	24,66,230.00	23,00,350.00	22,15,630.00
11	Quantity of Timber Seized (Sawn & Log)	NIL	225 quintals of fuel wood	35 quintals of fuel wood	1.8263 M ³ Timber + 52.811 M ³ Firewood	1.725m ³	4.073 m ³	73.165 m ³
12	No. of Vehicle Seized	8 (Cycle Van)	1 no cycle van	2 (Van rickshaw)	NIL	NIL	Nil	NIL
13	No. of Dingi Seized	22	37	16	7	10	7 Nos	12
14	No. of Mechanised Boat / Troller Seized	37	4	3	3	NIL	9Nos	5
15	No. of Cattle Seized	218	52	NIL	NIL	NIL	45	22

2.6 Has the TR been effective in the mitigation of human-wildlife conflicts?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Human-wildlife conflicts are significant but poorly addressed.	Poor		Discussion with FD, Verification of records and field visit	The major issue in managing Human- Tiger conflict in STR is the straying of tiger into fringe villages and rescue of the same without causing any harm on either side. It is worth mentioning here that STR's only north – western boundary has an interface with 25 fringe villages which are densely populated with human and livestock. Many times it becomes possible for the staff and local villagers to drive the tiger back to the
TR has been able to mitigate few human-wildlife conflicts.	Fair			
TR has been able to mitigate many human-wildlife conflicts.	Good			
TR has been effective in mitigating all human-wildlife conflicts.	Very good	✓		

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

				<p>forest by using drums, crackers, fire etc. Sometimes tiger also goes back to the forest on its own. These straying incidents are termed as "Temporary Straying", where in case of any repeated phenomenon, trap cage with live bait is being used to trap the tiger and then relocate the same in their wilderness.</p> <p>In Permanent Straying, the tiger takes refuge in a cattle shed or inside any village hut, when tranquilization is the only resort to rescue the animal.</p> <p>Tigers in Sundarban stray into the neighboring villages because they are situated in the reclaimed forest land and in some places the boundary between the forest and agricultural land is even not distinct. Some villages have small patches of mangrove forests and the tiger gets into these forests.</p> <p>Fencing the boundaries of the vulnerable forest areas by vegetative cover i.e. Ceriops-excoecaria combination and mechanical methods by nylon net fencing using Avicennia posts/ bamboo posts along the forest fringe have been found to be very effective for last ten years. Both these fencings last about three years. Ceriops –excoecaria fencing is not encouraged presently because it requires cutting of vegetation. Now, nylon net fencing with Bamboo posts is mostly practiced which is planned to be further improvised with RCC. Recent observations reveal that tiger starts negotiating the 8ft high fence by jumping over the same. Use of RCC and bamboo post can also help to erect the fencing at a height of 10 – 12 ft. The normal mesh size remains 4" X 4" to avoid any strangulation of wild animal like deer. Presently 90 km of forest fringes out of total 96 km has already been fenced and the further action has also highlighted in budget phase wise, including maintenance.</p> <p>The incidences of tiger straying are minimized. Except some fishing related offences, no poaching of tiger is reported after 2008.</p> <p>The figure of Human death/injury by tiger/Crocodile is given below.</p>
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*** The assessment will take into account the number of incidences reported and payment of compensation made and its timeliness**

NYLON NET FENCING:

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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Fencing checking Protocol: A Fencing Register will be kept in each station and records will be kept in accordance to the parameters given below:

Sl.No.	Rank	Frequency	Remarks
1	Concerned Forest Guard	Daily	He will take at least one concerned FPC/EDC Member & both will jointly sign in Fencing checking Register.
2	Concerned Beat Officer	Weekly once	He will take the Joint Convenor of concerned FPC/EDC Member & both will jointly sign in Fencing checking Register.
3	Concerned Range Officer	Once in 15 days	He will take the Concerned Forest Guard or Beat Officer along with and will report to DFD/STR in detail as well as will mention in fencing checking Register.
4	Asstt. Field Director/STR	Once in a month	They will check the fencing in the field to verify that the same has been maintained properly.
5	Dy. Field Director/STR	Once in six weeks	He will check the fencing in the field to verify that the same has been maintained properly.

Parameters for fence checking:

The total length of Nylon Net fencing has to be checked as proposed on following parameters:

- Height of Nylon Net fencing maintained (***The height should be of 10 ft minimum; (in case of new fencing) and 8.0ft (in case of old fencing)***)
 - Height of Khal guard to be maintained at least 5 ft above from the highest tidal level estimated for 'Kotal' period.
 - Condition of nylon rope of the net (***if the net found brittle, immediately it should be changed after bringing it to due notice to the concerned authority)***)
 - Condition of the posts of the fencing (***if found rotting at the base, to be changed immediately after bringing it to due notice to the concerned authority)***)
 - Condition of the runner (***the tensile strength to be checked) GI runners to be used.***)
 - Condition of khal guard (***if sagging noticed, to be repaired immediately)***)
 - Monitoring frequency (***as proposed)***)
- 'Reverse funnel 'made** by nylon-net fences at khal mouth should be maintained with at least 50mt. side wing.
- Fencing posts will be changed from 'Bain' to 'Goran' to bamboo in phases depending on availability of the same.

Graphical description of Tiger straying incidence in Sundarban Tiger Reserve in last 14 years:

No of tiger straying	22	17	4	8	14	14	21	27	17	12	2	2	1	0

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Co-relation of Tiger Straying with the length of nylon net fence year wise:

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Length of NF(KM)	58.5	69.5	85	85	85	90	96
No of straying	27	19	12	2	2	1	0

Report Regarding Tiger and Crocodile Victims at STR:

Year	Tiger		Crocodile		Compensation paid(Rs.)
	Human Killed	Human Injured	Human Killed	Human Injured	
2010-11	6	0	0	0	-
2011-12	3	0	0	0	1,00,000.00
2012-13	8	0	0	2	4,00,000.00
2013-14	7	0	0	0	
2014-15	14	1	1	3	3,00,000.00
2015-16	10	0	0	0	
2016-17	9	0	0	0	2,50,000.00

2.7 Is the TR integrated into a wider ecological network/ landscape following the principles of the ecosystem approach?

Assessment criteria ⁺				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
TR not integrated into a wider network/ landscape.	Poor		Verification of records and visit to camps in Basheerhat Range	STR has unique land scope with network of land and innumerable water channel. Problems in corridor and vulnerable parts are identified. The common boundaries of STR and 24 Parganas division are regularly joint patrolled by the staff of both these units. As per protocol set by Indo Bangladesh bilateral agreement, the proper steps are taken and follow up action is discussed in various working group meetings. As per guidelines of Ministry of Home affairs, GOI. BSF, COAST GURD and POLICE FORCE meet their counterpart of Bangladesh on international border. NTCA has moved to Ministry of Home Affairs for providing a slot in the said meeting for Wildlife Managers of the two countries to discuss Wildlife related crimes across the border. This has yet not been formally accepted.
Some limited attempts to integrate the TR into a network/ landscape.	Fair			
TR is generally quite well integrated into a network/ landscape.	Good	✓		
TR is fully integrated into a wider network/ landscape.	Very good			

***Assessment needs to consider the scope of opportunities on the landscape scale that exist. Consider whether any attempts have been made and what are these? Have all the important corridors been identified? What actions are**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

planned/implemented for their security? Have the Forest Working Plans and Forest Development Corporation Plans within the identified landscapes taken cognizance of such new requirement? These should have been reflected in TCPs. Is there is any effort to rationalize landuse around TR? Is any effort being made to plan and use 'Smart Green Infrastructure'?

3. Inputs

3.1 Are personnel adequate, well organized and deployed with access to adequate resources in the Tiger Reserve (TR)*?

Assessment criteria					
Condition	Category* (Tick ✓)	Reference document(s)	Remarks		
Few, personnel explicitly allocated but poorly supported for TR management.	Poor	Verification of records in FD office	More than 50% staff position is vacant. Among the existing strength, 61 out of 106 frontline staff are more than 50 years old. If they were recruited regularly, the age distribution would have been normal.		
Some personnel explicitly allocated for TR management but not adequately supported and systematically linked to management objectives.	Fair				✓
Some personnel with fair support explicitly allocated towards achievement of specific TR management objectives.	Good				
Adequate personnel appropriately supported and explicitly allocated towards achievement of specific TR management objectives.	Very good				

***This assessment should inter-alia be based on number of personnel allocated for attainment of TR objectives at the Range, Round, Beat and Patrolling camps levels or as relevant to the needs (sanctioned posts vis- a- vis existing personnel and needs beyond the sanctioned strengths. It is possible that posts have last been sanctioned several years back that do not now account for the current needs)**

EXISTING SANCTIONED STAFF STRENGTH AS ON 31.03.2017:

Sl. No.	CATEGORY OF POST	Sanctioned Strength	Existing	Vacant	Audited Against	Existing G.O. No.
1.	CCF & FD	1	1	-	-	PCCF, WB's O.O. No.20-Misc/2001 dt. 18.05.2001
2.	DFD	1	1	-	-	-do-
3.	AFD	2	2	-	-	1234-For, dt. 27.2.1974
4.	Research Officer	1	-	1	-	11343-For, dt. 21.12.1976
5.	Lab. Asstt.	1	-	1	-	4253-For, dt. 10.7.1978
6.	Veterinary Officer	1	1	-	-	1130-For/11B-22/88, dt.14.2.1991
7.	Head Clerk	1	1	-	-	PCCF/WB WB's O.O No. 31-51PMC/08, dt. 19.8.08
8.	Accountant	1	1	-	-	PCCF, WB's Letter No.11062/ PMC/2E-212, dt. 15.09.97
9	UDC	6	3	3	-	-do-
10.	PA	1	1	-	-	
11.	Clerk-cum-Typist	7	2	5	-	-do-
12.	Typist	1	-	1	-	5295-For/11B-41/80-I, dt. 21.7.84
13.	Forest Ranger	11	7	4	-	PCCF, WB's O.O. No. 20-Misc/2001, dt. 18.05.2001

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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14.	DR/Fr.	24	23	1	-	-do-
15.	Head Forest Guard	8	2	6	-	-do-
16.	Forest Guard	100	45	55	-	-do-
17.	Majhi	21	06	15	-	CCF/WB's O.O. No. 45/S, dt. 24.9.1975
18.	Boatman	54	19	35	-	4192-For, dt. 19.9.1981
19.	Forest Watcher	1	-	1	-	769-For, dt. 9.2.1974
20.	Sweeper	1	1	-	-	5295-For/11B-41/80-I, dt. 21.7.1984
21.	Mali	1	1	-	-	769-For, dt. 9.2.1974
22.	Driver	2	-	2	-	8815-For, dt. 20.9.1976
23.	Chowkidar	2	1	1	-	769-For, dt. 9.2.1974
24.	Zamadar	2	-	2	-	769-For, dt. 9.2.1974
25.	Peon	4	4	-	1*	*Audited against PCCF, WB. G.O. No. 760-For, dt. 9.2.1974 & 5295-For/11B-41-80-I, dt. 21.7.1984
26.	Orderly	8	7	1	-	769-For, dt. 9.2.1974 & 5926-For, dt. 2.9.1977 & 2661-For, dt. 27.4.1974
27.	BanaShramik	18	-	-	-	G.O. No. 1539-FOR/N/4E-61/ 91, dt. 07.05.1997
28.	Engine Driver	5	3	2	-	1170-For, dt. 17.12.76 & 4128-For, dt. 19.7.1980
29.	Sareng	3	2	1	-	4128-For, dt. 17.09.80 & 4192-For, dt. 19.09.1981
30.	Sukhani	2	-	2	-	1170-For, dt. 17.12.76 & 4128-For, dt. 19.07.1980
31.	OMG	3	1	2	-	do-
32.	Laskar	8	1	7	-	-do-
	TOTAL	284	136	148	1	Existing strength includes 18 Nos. Banashramik

The Age Class of Front line/Non-Ministerial Staff:

Sl No.	Age Group (Years)	No. of Staff
1	18-35	8
2	35-50	37
3	>50	61
	Total	106

3.2 Are resources (vehicle, equipment, building etc.) adequate, well organized and managed with desired access?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Few, if any, resources explicitly allocated for TR management.	Poor		Annual Report	List of vehicles, equipments and building are shown below this Para. These resources are adequate and well organized and it has been utilized for the achievement of the objectives.
Some resources explicitly allocated for TR management but not systematically linked to management objectives.	Fair			
Some resources explicitly allocated towards achievement of specific TR management objectives.	Good	✓		
Adequate resources explicitly allocated towards achievement of specific TR management objectives.	Very good			

*These form a variety of resources. These may be segregated into immovable (structures) and movable categories and each further may be considered under the essential and desirable categories. It is best to start with what are the minimum needs to attain each objective, what is available and manner of use/deployment. The proportions of the

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

'essentials' and 'desirables' along the importance gradient of objectives would serve as pointers for score categories. Specific remarks would be vitally important.

List of Infrastructure and Assets

Staff Quarters:

Category	No.	Location
ROs Quarter	5	SWLS-1, BHT-1, NP(W)-1, RPP-1, ET-1 .
VOs Quarter	1	SWLS-1.
DR/FRs Quarter	9	SWLS-3, BHT.-3, NP(W)-1 , RPP-1 , ET-1.
Twin DR/FRs Building (Pucca)	3	BHT.-1
Twin FGs Quarter (Pucca)	2	NP(W)-2.
Other Staff Quarter	2	ET-2 (wooden).
Boatmans' Barrack	2	SWLS-1, RPP-1.
Staff Barrack	24	SWLS-7, BHT.-11, NP(E)-6, RPP-2, NP(W)-1
Twin Staff Barrack (Pucca)	12	SWLS-7, NP(W)-4, RPP-1,
Twin Staff Barrack (Wooden)	4	BHT.-3, RPP-1.

Other structures:

Category	No.	Location
Officers' Rest Rooms	4	SWLS-3 (MIC), NP(E)-1,
Subordinates' Rest House	3	SWLS-1, NP(E)-1,, BHT-1
Research Range Office	1	Hqr.-1.
Office Shed (Wooden)	7	SWLS-1, BHT.-3, NP(W)-1, RPP-1, ET-1.
Veterinary Clinic	1	SWLS-1.
Mangrove Interpretation Centre	1	ET-1.
Cage trail	1	BHT.-1.
Canopy Walk	1	Dobanki
Tourist Shed & Ticket Counter	6	SWLS-2, NP(E)-1, ET-1. BHT-3
Two Unit Toilet (for tourists)	10	SWLS-2, BHT.-3, NP(W)-2, ET-3.
Watch Tower	10	SWLS-3, BHT.-3, NP(W)-2, NP(E)-2
Laboratory	1	H.Q.-1.
Honey Godown	3	SWLS-1, BHT.-1, H.Q.-1.
Store House (Wooden)	3	SWLS-1, NP(W)-1, RPP-1.
Pump and Generator Room	13	SWLS-3 BHT.-3, NP(W)-2, NP(E)-2, ET-3.
Dock Shed	3	SWLS-1, NP(W)-1, NP(E)-1.
RCC Water Reservoir	1	SWLS-1.
Common Kitchen for Staff	11	SWLS-4, BHT-3, NP(E)-2, NP(W)-3.
Post-Mortem Unit	1	SWLS-1.

Communication:

Category	No.	Location
Bridge	3	BHT.-1 (wooden), NP(W)-2
Culvert	1	NP(E)-1.
Jetty:		
• Concrete	25	SWLS-9, BHT.-8, NP(W)-6, NP(E)-6, RPP-1.

Vehicles:

Category	No.	Location
Maruti Gypsy (Petrol)	1	H.Q.-1. (U/S)

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Jeep (Diesel)	1	H.Q.-1.(U/S)
Motor Cycle	6	NP(E)-2,BHT-1,SWLS-2,H.Q.-1. (5 U/S)
Catamaran	1	SWLS-1.(U/S)
Mechanised boat	4	SWLS-2, NP(E)-1, ET-1. (4 U/S)
Mechanised dingi	11	SWLS-4, BHT.-2, NP(W)-3, NP(E)-2,
Speed boat	14	SWLS-5, BHT.3, NP(E)-2, NP(W)-4 (10U/S)
Launch	4	SWLS-1, H.Q.2. (1 U/S), NPE -1
Accommodation Boat	5	SWLS-2, BHT.-2, NP(E)-1(U/S)
UAV/Drone with Still & Video Cameras	2	SWLS-1 and BHT -1

RT Sets:

Category	No.	Location
Fixed Set	60	SWLS-12, BHT.11, NP(W)-10, NP(E)-11, H.Q.-10, RPP-2, FD/STR-1, M.L.BANASOVA-1, MV DEBRAJ-1, MV BHARATLAXMI-1, (15 U/S)
Fixed Set (different frequency)	6	H.Q.-6 (5 U/S)
High-frequency Set	4	SWLS-1, NP(W)-1, H.Q.-2(2 U/S)
Walkie-Talkie	78	SWLS-18, BHT.-20, NP(W)-15, NP(E)-9,H.Q.-14, ML BANASHOBA-1, MV DEBRAJ-1, (24 U/S)
Walkie-Talkie (different frequency)	9	Hqr.-For communication with 24-Parganas (South) Division. (6 U/S)
RT Tower	2	NP(E)2.

3.3 Are financial resources other than those of the State linked to priority actions and are funds adequate, released timely and utilized?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Verification of records	Funds are received from Central and State Government. The amount received and utilized in past few years is shown in the table below this Para.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

*Obtain details of funds released by NTCA and their utilization by TR in the last 3 years and indicate them under 'Remarks'. This should also include Tiger Conservation Foundation. Further comment on the problems associated with fund allocations and their utilization too.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Details of Fund Utilised of CSS PT, CMM, ESBR & WET LAND in last 3 years:
SCHEME WISE ALLOTMENT RECEIVED & EXP. FROM 2014-15 TO 2016-17

Sl. No.	Scheme	Year	Share State/Central	Fund Received (in Rs.)	Expenditure (in Rs.)	Balance (in Rs.)
1	Project Tiger	2014-15	Central	39117250.00	36135381.00	2981869.00
2	do	2014-15	State	10000000.00	9986725.00	13275.00
TOTAL				49117250.00	46122106.00	2995144.00
1	do	2015-16	Central	28175520.00	25593890.00	2581630.00
2	do	2015-16	State	20426500.00	17980396.00	2446104.00
TOTAL				48602020.00	43574286.00	5027734.00
1	do	2016-17	Central	32925770.00	32161778.00	763992.00
2	do	2016-17	State	36353300.00	24190375	12162925.00
TOTAL				69279070.00	56352153.00	12926917.00
1	Conservation and Management of Sundarban Mangrove (CMM)	2014-15	Nil	Nil	Nil	Nil
TOTAL				Nil		
1	-do-	2015-16	Central Share	1100000.00	1100000	0.00
TOTAL				1100000.00	1100000	0.00
1	-do-	2016-17	Central Share	5392800.00	5392800.00	0.00
2	-do-	2016-17	State Share	3595200.00	3288553.00	306647.00
TOTAL				8988000.00	8681353.00	306647.00
1	Conservation and Management of Sundarban Biosphere Reserve (ESBR)	2014-15	Nil	Nil	Nil	Nil
TOTAL				Nil		
1	-do-	2015-16	Central Share	1500000.00	1500000.00	0.00
TOTAL				1500000.00	1500000	0.00
1	-do-	2016-17	Central Share	1950000.00	389253.00	1560747.00
2	-do-	2016-17	State Share	1300000.00	877747.00	422253.00
TOTAL				3250000.00	1267000.00	1983000.00

Sl. No.	Scheme	Year	Share State/Central	Fund Received (in Rs.)	Expenditure (in Rs.)	Balance (in Rs.)
1	Conservation and Management of Sundarban Wet Land (WET LAND)	2014-15	Nil	Nil	Nil	Nil
TOTAL				Nil		
1	-do-	2015-16	Central Share & State Share (50:50) ratio	3750000.00	3599467.00	150533.00
1	-do-	2016-17	Nil	Nil	Nil	Nil

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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3.4 Are financial resources from the State linked to priority action and funds adequate, timely released and utilized for the management of Tiger Reserve?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Resource allocation is adhoc, funds are inadequate and seldom released in time and not utilized.	Poor		Verification of Annual reports	Budget allocation of state linked schemes (SP & RIDF) and Central schemes are sufficient as per approved APO. Government of West Bengal has imposed restriction on timing for utilization of funds. Sometimes it becomes a bottleneck and the management has to seek further approval for utilizing the fund beyond the timeline. The release and utilization for last three years is shown in the table below this Para.
Some specific allocation for management of priority action. Funds are inadequate and there is some delay in release, partially utilized.	Fair			
Comprehensive planning and allocation that meets the most important objectives. Generally funds released with not much delay and mostly utilized.	Good	✓		
Comprehensive planning and allocation of resources for attainment of most objectives. Funds generally released on-time and are fully utilized.	Very good			

***Obtain details of funds released by State and their utilization by TR in the last 3 years and indicate them under 'Remarks'. Also comment on the problems associated with fund allocation and their utilization.**

SCHEME WISE ALLOTMENT RECEIVED & EXP. FROM 2014-15 TO 2016-17						
Scheme	Year	Share State/Central	Fund Received (in Rs.)	Expenditure (in Rs.)	Balance (in Rs.)	
RIDF	2014-15	State Share	Nil	Nil	Nil	
RIDF	2015-16	State Share	Nil	Nil	Nil	
T O T A L			0.00	0.00	0.00	
RIDF	2016-17	State Share	20000000.00	12847636.00	7152364.00	
T O T A L			20000000.00	12847636.00	7152364.00	
Scheme	Year	Share State/Central	Fund Received (in Rs.)	Expenditure (in Rs.)	Balance (in Rs.)	
State Plan	2014-15	State Share	7318200.00	3189313.00	4128887.00	
T O T A L			7318200.00	3189313.00	4128887.00	
State Plan	2015-16	State Share	8987500.00	8970371.00	17129.00	
T O T A L			8987500.00	8970371.00	17129.00	
State Plan	2016-17	State Share	10369845.00	10281337.00	88508.00	
T O T A L			10369845.00	10281337.00	88508.00	

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

3.5 What level of resources are provided by NGOs?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
NGOs contribute nothing for the management of the TR.	Poor		Discussion with FD and verification of records	NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored. WWF helped in providing Camera Traps, training & analysis on Camera Trapping data. Traffic India is coordinating training for sniffer dogs. Formation of Nature Club collaborative efforts have been taken up for awareness generation. Volunteers from various NGOs took part in various wildlife estimation exercise.
NGOs make some contribution to management of the TR but opportunities for collaboration are not systematically explored.	Fair	✓		
NGOs contributions are systematically sought and negotiated for the management of some TR level activities.	Good			
NGOs contributions are systematically sought and negotiated for the management of many TR level activities.	Very good			

4. Process

4.1 Does the TR have manpower resources trained in wildlife conservation for effective TR management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No trained officers and frontline staff in the TR.	Poor		Annual Reports and training schedule in TCP	No staff have received wildlife diploma course. However certificate course and vertical integration training is imparted to some persons. Many internal training have been organized in TR for last three years. The details are provided in the tables below this Para.
Some trained officers and few trained frontline staff, posted in the TR.	Fair			
All trained officers and and fair number of trained frontline staff posted in the TR.	Good	✓		
All trained officers and most of the trained frontline staff is posted in the TR.	Very good			

*Indicate % of trained staff in various categories such as Diploma, Certificate Course, Vertical Integration training, MoEFCC sponsored trainings in wildlife management etc. The number and thematic areas of the 'Internal Training' programmes organized in the TR in the last 3 years may be taken into account. Has the TR prepared a 'Staff Development Plan'? Is it being implemented?

Details of Training/ Workshop in last 3 years:

Date	Venue	Subject	Organised by	Participants
24-04-15	MIC of Sajnekhali	Forest and Wild Life Protection and Micro Plan	STR in presence of Respected DFD , AFDs / STR	Staff -Officers
				32 Nos.
15-08-15	MIC of Sajnekhali	Staff Training in connection with Wild Life Crime Control.	Wild Life Crime Control Bureau	Staff -Officers
				39 Nos.
15-08-15	MIC of Sajnekhali	Staff Training in connection with	STR in presence of Respected AFDs/STR	Staff -Officers

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

		Herbivorous Estimation and Oil Spill		28 Nos.
16-09-15	MIC of Sajnekhali	Tranquilising Training of Staff	STR in presence of Respected MIC of Forests, MLA, Director / SBR, FD, DFD, AFDs/STR	Staff -Officers 16 Nos.
29-10-15	MIC of Sajnekhali	"E" Patrolling Training of Staff	STR in presence of Respected FD, DFD, AFDs/STR	Staff -Officers 30 Nos.
06-01-16	MIC of Sajnekhali	Camera Trapping Training of Staff	STR in presence of Respected CWLW/WB, Joint Director/SBR, FD, DFD, AFDs / STR.	Staff -Officers 22 Nos.
08-01-16	MIC of Sajnekhali	"E" Patrolling Training of Staff	STR in presence of AFD / STR	Staff -Officers 11 Nos.
February,2016	MIC of Sajnekhali	Capacity building and expertise training including spoken English & basic ornithology	STR in presence of FD, DFD, AFDs / STR by experts	Tour Guides 30Nos
Jan-March,2016	Various JFMC Areas	Capacity building training of JFMC members – viz. Mushroom farming, Gotary, Piggery, Japanese 'Koel' farming, Poultry etc.	By experts	250 nos JFMC members
Jan-March,2016	MIC of Sajnekhali and moving watercraft	Nature Interpretation, Mangrove Eco-System Study	By field officers, NGOs	150 school children including teachers of fringe forest area
5.7.16	Sajnekhali MIC	Tranquilisation Training	SBR	Frontline staff of SBR = 26 nos
10.11.16	Sajnekhali MIC	Camera Trapping Exercise	STR	FD, DFD & AFDs /STR and Front line staff. Total = 24 nos
26.12.16	Sajnekhali MIC	Legal Workshop	STR	ACJM, South 24 Parganas District, AFD/STR and Front Line Staff = 17 nos
08.03.17	Sajnekhali MIC	E-patrolling and Smart Patrolling Exercise	STR	AFD/STR, Technicians from 'Key Falcon Solution' and frontline staff of STR = 24 nos
20.03.17-25.03.17	Various Jungle Areas of Sajnekhali WLS Range	Radio Collaring Exercise	STR & WII	Dr Jhala from WII, FD, DFD & AFDs STR and frontline staff. = 30 persons

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Nov-Dec,2015	WII & Ranthabhor NP	Vertical Integration Training on TR management	WII	AFD/STR
JULY,2017	Dehradun	Utilization of High Resolution Remote Sensing Data	WII and UNESCO C2C	AFD/STR
October,2017	Tuthikuran	Effective management evaluation in Natural World Heritage Site	WII and UNESCO C2C	AFD/STR
December,2017	Dehradun	MSTriPES	WII and NTCA	Research Officer

4.2 Is TR staff management performance linked to achievement of management objectives?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No linkage between staff management performance and management objectives.	Poor		Discussion with FD	Purpose of deployment of staff is to provide protection of forest and wildlife in STR, thus the performance most staff is totally linked to management objectives. To encourage the staff, best performers are honored by management periodically.
Some linkage between staff management performance and management objectives, but not consistently or systematically assessed.	Fair			
Management performance for most staff is directly linked to achievement of relevant management objectives.	Good	✓		
Management performance of all staff is directly linked to achievement of relevant management objectives.	Very good			

4.3 Is there effective public participation in TR management* and does it show in making a difference?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no public participation in TR management.	Poor		Discussion with FD	TR management has been regularly conducting functions with the public participation for education and awareness of masses which helps in achieving success in conservation. School children, local youth and public are involved in education and awareness for conservation. Such programs are held during Wildlife week celebration. Recently in the year 2017, two meetings for public education and awareness were conducted involving Forest Minister, Savadhipati, Local MLAs, other local public representatives and Block level functionaries, JFMC members. The functions held in this regard are listed in the table below this Para.
Opportunistic public participation in some of the relevant aspects of TR management.	Fair			
Systematic public participation in most of the relevant aspects of TR management.	Good	✓		
Comprehensive and systematic public participation in all important and relevant aspects of TR management.	Very good			

*The involvement of NGOs/ NGIs in population estimation may be taken into account)

Awareness/ Protection meetings

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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4.4 Is there a responsive system for handling complaints and comments* about TR management?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Ad-hoc approach to handling complaints.	Poor		RTI files and tourists feedback forms	Written complaints are generally received in ranges and also at the level of FD & DD. These complaints are dealt during the tour of FD and DD. Complaints received during the tours are immediately addressed. Most complaints are related to Fishing cases. Immediate action is taken by the concerned officer to redress the grievances. Written complaints are always brought on record in a file and appropriate action as deemed fit is taken. 20 RTI queries have been answered as per rule in last 3 years,
Complaints handling system operational but not responsive to individual issues and with limited follow up.	Fair			
Coordinated system logs and responds effectively to most complaints.	Good	✓		
All complaints systematically logged in coordinated system and timely response provided with minimal repeat complaints.	Very good			

***Does the TR maintains 'Suggestions Register'? What actions are taken to deal with suggestions?**

4.5 Does TR management addresses the livelihood issues* of resource dependent communities, especially of women?

Sl. No.	Date	Location	Topic	Organized By	No. of Participants
1	05-08-15	At Dulki JFMC Area	Awareness Camp	Juktibadi Sanskritik Sanstha	350 to 400 Nos. (Approx)
2	05-08-15	At Sonagaon JFMC Area	Awareness Camp	Juktibadi Sanskritik Sanstha	300 to 400 Nos. (Approx)
3	18-03-16	At Lahiripur Chargheri JFMC Area	Awareness Camp	Juktibadi Sanskritik Sanstha	450 to 500 Nos. (Approx)
4	18-03-16	At (Anpur) Jemspur JFMC Area	Awareness Camp	Juktibadi Sanskritik Sanstha	450 to 500 Nos. (Approx)
5	6.5.16	MIC, Sajnekhali	Protection meeting	STR	FD, DFD and AFDs STR and front line staff. Total = 34 nos
6	29.09.16	MIC, Sajnekhali	S.T.C.F.T Meeting	STR	FD, DFD and AFDs STR, Front line staff, and 6 nos Committee members.
7	29.09.16	MIC, Sajnekhali	Protection meeting	STR	FD, DFD and AFDs STR and front line staff. Total = 17 nos
6	21.02.17	MIC, Sajnekhali	Fishing BLC Issuing	SBR	Director/SBR, FD, DFD and AFDs STR and front line staff. Total = 21 nos
<p>* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10</p> <p style="text-align: center;">::989::</p>					

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No livelihood issues are addressed by TR management.	Poor		Chapter No-8 of TCP, Annual Reports, Honey collection Documents, JFMC Register, Input distribution register, SHG Register,	<p>Infrastructure in the villages is poorly developed. Electricity is absent in most of the villages, there is lack of potable water, schools and public health centre in many areas. Only kutchra roads exist in villages and only means of transport are private mechanized boats.</p> <p>Agriculture is rain-fed monoculture with the principle crop being 'aman' (June –October) rice followed by 'boro' (December-mid March) and little bit of 'aus' (mid March- may) rice or vegetable cultivation. Most of the households keep livestock mainly cows, goats and poultry. During the agriculture lean season people enter the forests for poaching (deer and wild boar), illicit felling of timber and firewood, fishing, honey and crab collection etc.</p> <p>A lot of people in the eastern and western fringes are engaged in the business of tiger prawn seed collection. This collection started in the eighties with the introduction of the highly profitable brackish water prawn fisheries with most of the produce being exported</p> <p>Overall, there is a very high level of natural resource dependency among the people.</p> <p>The Tiger Reserve has been carrying out eco development activities.</p> <p>The following activities are taken up as part of the eco development initiative:</p> <ol style="list-style-type: none"> 1. Construction of water harvesting structure 2. Deep tube well 3. Pisciculture and crab culture 4. Agriculture related initiatives 5. Capacity Building 6. Self-help group 7. Infrastructure Related Activities 8. Awareness Generation 9. Ecologically compatible land use pattern. <p>Fishing and Tourist activities are permissible in some area of STR and 255 revenue ios shared with JFMC villagers.</p> <p>70% village roads are made by STR.</p> <p>Health camps are conducted as welfare measure.</p> <p>Apart from that NTFP collection for last 6 years, Veterinary camps are organized in JFMC areas, which are shown in tables below this Para.</p>
Few livelihood issues are addressed by TR management.	Fair			
Substantial livelihood issues are addressed by TR management.	Good	✓		
Livelihood issues of resource dependent communities especially of women are addressed effectively by TR managers.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

+The number of man-days generated in the last 3 years may be taken into account. Are funds received from District Agencies and other sources? Provide details of funds received in last 3 years.

NON-TIMBER FOREST PRODUCE (WILD HONEY COLLECTION):

Year	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Crude Honey Collection in Kg	14,300	18,025	24,750	20,950	47,412	33,515	19,050
Total Permit In use	136	94	82	98	160	91	82
Total Man Involvement	929	681	613	735	1155	979	604

Medical Camps Organised at STR:

- Health Camps During 15-16:

Sl.No.	J.F.M.C.	No. of Camp	No. of Patients treated			Total No. of Patients treated
			Male	Female	Child	
1	Samsernagar	51	726	598	190	1514
2	Bali Nature Club	52	667	990	262	1919
3	Anpur Rajatjubilée	51	1265	1568	170	3003
4	Sonagaon	1	49	63	25	137
5	Dulki	2	73	129	42	244
6	Jamespur Anpur	1	78	76	21	175
7	Dayapur	1	66	36	15	117
8	Kumirmari	6	618	729	242	1589
9	Kalidaspur	3	211	270	122	603
10	Hentalbari	2	104	147	92	343
11	Kalitala Bazar	2	323	136	51	510
12	Chhotamollakhali	1	112	83	30	225
13	Duttar	1	52	53	24	129
14	Satjelia	1	25	41	105	171

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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15	Kakmari	1	101	93	37	231
16	Gobindapur	1	86	87	46	219
GRAND TOTAL		177	4556	5099	1474	11129

• **Health Camps During 16-17:**

Sl.No.	J.F.M.C.	No. of Camp	No. of Patients treated			Total No. of Patients treated	Remark
			Male	Female	Child		
1.	Samshernagar	26	473	583	130	1186	
2.	Bali Nature Club	25	361	437	107	905	
3.	Annpur Rajat Jubilee	26	716	853	71	1640	
4.	Jamespur-Annpur					96	
5.	Kumirmari, Budhbarer Bazar					137	
6.	Kumirmari, Adibashi Para					100	
7.	Saatjelia, Imlibari					143	
8.	Kumirmari, Budhbarer Bazar		122	65	20	207	Eye Check-up Camp
9.	Hental Bari		91	80	36	207	Eye Check-up Camp
10.	Dulki		46	56	23	125	Eye Check-up Camp
11.	Dulki		53	56	19	128	Eye Check-up Camp
12.	Kalitala Bazar, Kalitala		86	21	10	117	Eye Check-up Camp
13.	Budhbarer Bazar, Bhruliapara		102	78	21	201	Eye Check-up Camp
GRAND TOTAL			2,050	2,229	437	4,716	

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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4.6 Has the TR planned and implemented the voluntary 'Village Relocation' from the Core/ Critical Tiger Habitat (CTH)?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No planning and no implementation	Poor		Discussion with FD	Not human habitation in STR. Therefore question of village relocation dose not arise. This criterion is not being graded.
Plans have been made but no implementation	Fair			
Plans have been made and some implementation is in progress	Good			
Plans have been made and are being actively implemented/ no human habitation in the CTH	Very good			

**Assessment will look into the village relocation planning process including availability of manpower, financial resources and NGO support, if any. Is there a mechanism to address the complaints received in respect of relocation process? Effort must be made to assess post-relocation success or otherwise.*

5. Output

5.1 Is adequate information on TR management publicly available?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no information on TR management publicly available.	Poor		Discussion with FD and perusal of records	The management has exclusive website www.sundarbantigerreservetigerreserve.org.in where in all information regarding TR management is available. Publicity materials like Poster, Pamphlets, etc. are also available for access to tourists. At the Website of Sundarban Biosphere Reserve as well as Forest Department, informations regarding Sundarban TR are also provided.
Publicly available information is general and has limited relevance to management accountability and the condition of public assets.	Fair			
Publicly available information provides detailed insight into major management issues and condition of public assets.	Good	✓		
Comprehensive reports are routinely available in public domain on management and condition of public assets.	Very good			

5.2 Are visitor services and facilities appropriate and adequate?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Visitor services and facilities do not exist.	Poor		Para 7.1.2.2.6 of TCP Tourists feedback	Tourism is one of the upcoming industries in the area. Over the years there has been an exponential rise in the number of people visiting the TR. This has resulted in the mushrooming of tourist lodges, shops selling edible items, handicrafts etc. A number of local people have found employment in the tourist lodges and hotels which have come up in the area. Several local boat owners are using the boats to ferry people coming from outside to different tourist places within the Tiger Reserve. Thus, there are a number of issues related to tourism like improper disposal
Visitor services and facilities are very basic.	Fair			
Visitor services and facilities are monitored from time to time and are fairly effective.	Good	✓		
Visitor services and facilities are	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

<p>conscientiously maintained, regularly upgraded and monitored for visitor satisfaction</p>				<p>of garbage, oil pollution, sound pollution crowding at tourist spots, which is to be addressed at the earliest. Infrastructure like roads, electricity, drinking water, jetties also has to be developed additionally to cater to increased need of tourism.</p> <p>Eco-tourism in STR is confined to entire Basirhat Range, part of SWLS Range and NPW Range (Netidhopani-1 Compartment) in area totaling up to 911.96 sq. km. Tourist permit is issued from Canning, Gosaba, Sajnekhali, Sonakhali, Bagna and Kolkata. Approximately 2 lakh tourists including foreign visitors visit here annually. 6 sites namely Sajnekhali, Sudhandyakhali, Dobanki, Netidhopani, Jhingekhali & Burirdabri are opened for tourism. Except Dobanki, the remaining sites have watch towers. Canopy Walking at Dobanki & Cage Trail at Burirdabri are important attractions.</p> <p>Strategies :-</p> <ol style="list-style-type: none"> 1. Determination of carrying capacity of tourists: As per NTCA guidelines, revised calculated carrying capacity of tourists in STR is approx. 5200 per day. 2. New site-development proposals are being moved. 3. New Interpretation Centre to be developed on eastern side of the Reserve with all modern visitor facilities. 4. Improvement of good collection of audio-visual medium on wild. 5. Selling of newsletter, brochure, local handicrafts, honey, publicity material etc. 6. Sensitisation school childrens' by arranging visit to Sundarban for them. 7. Developing more trained guides. 8. Improvement of existing visitor system. 9. Publication of newsletter, pamphlets, leaflets, brochures <p>Well managed MIC, Tourist toilet, Rest Shed , Mangrove Parks, Display boards, Watch tower, well trained Eco-guide, Waste disposal chamber etc are available in STR. Tourist routs are found well defined outside the core area. Tiger reserve does not have any arrangements for stay or vehicles for visitors</p> <p>The tables below the Para show the number of visitors coming here and the revenue realized from STR.</p>
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****Include the existence and quality of visitor and interpretation centers, including skills and capabilities of personnel manning these, TR related publications, films, videos; arrangements of stay (including places serving refreshments and food owned and managed by TR), watch towers and hides including safety factors, vehicles assigned for visitors including riding elephants, if any and their deployment, drinking water, rest rooms, garbage disposal, attended and self guided services in the field, visitor feed back on the quality of wilderness experience.***

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

Tourist Inflow and collected Conservation Fees :

TOTAL CONSERVATION FUND RAISED FROM ECO-TOURISM:

YEA R	No. of Tourists (per entry point) [including Crew Member]												TOTAL
	Indian						Foreigner						
	Canning (Hqr. Range)	Sonakhali [NP(E) Range]	Sajnekhali(ET Range)	Basirhat Range	Gosaba Range	Total	Canning (Hqr. Range)	Sonakhali [NP(E) Range]	Sajnekhali(ET Range)	Basirhat Range	Gosaba Range	Total	
2012-13	6242	31253	90956	11081	0	1,39,532	102	96	3255	8	0	3,461	1,42,993
2013-14	2811	30945	95398	24965	0	1,54,119	123	157	3316	42	0	3,638	1,57,757
2014-15	1964	31894	121387	15226	0	1,70,471	156	129	3479	21	0	3785	1,74,256
2015-16	939	27553	136703	17231	0	1,82,426	74	56	3322	14	0	3466	1,85,892
2016-17	253	12,064	164648	22990	0	1,99,955	50	50	3376	11	0	3487	2,03,442

Year	Tourism Revenue					Total Revenue
	(in Rs.)					
	Canning, Hqr. Range (for Boat/Launch License)	Sonakhali, NP(E) Range	Gosaba NP(E) Range	Sajnekhali Eco-tourism Range	Basirhat Range	
2005-06	7,47,365.00	2,57,705.00	0	12,74,461.00	1,53,635.00	24,33,166.00
2006-07	6,65,170.00	3,56,045.00	0	17,80,235.00	1,77,535.00	29,78,985.00
2007-08	9,94,006.00	4,36,860.00	0	18,02,470.00	1,16,902.00	33,50,238.00
2008-09	8,07,945.00	6,86,625.00	0	25,71,320.00	73,425.00	41,39,315.00
2009-10	5,15,145.00	5,30,345.00	2,53,295.00	20,25,895.00	1,08,170.00	34,32,850.00
2010-11	2,41,934.00	9,65,130.00	2,18,685.00	22,78,905.00	1,09,400.00	38,14,054.00
2011-12	5,10,085.00	19,86,715.00	3,19,009.00	51,95,290.00	3,49,785.00	83,60,884.00
2012-13	5,71,590.00	27,03,545.00	0	77,67,004.00	7,30,000.00	1,17,72,139.00
2013-14	3,23,890.00	32,03,800.00	0	95,15,090.00	10,32,790.00	1,40,75,570.00
2014-15	3,51,660.00	34,16,300.00	0	1,30,19,060.00	15,00,680.00	1,82,87,700.00

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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2015-16	2,16,120.00	31,60,730.00	0	1,46,29,050.00	14,95,560.00	1,95,01,460.00
2016-17	1,47,180.00	12,83,550.00	0	1,72,67,010.00	19,29,200.00	2,06,26,940.00

5.3 Are research/ monitoring related trends systematically evaluated and routinely reported and used to improve management?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Little or no systematic evaluation or routine reporting of trends.	Poor		Para 3.5 and Appendix 12 of TCP Discussion with FD	The Sundarban mangrove eco-system provides conditions for collection of uninterrupted research data for interdisciplinary research programs involving natural and social sciences. The zones of lesser interference provide scope for monitoring the changes in both physical as well as biological components.
Some evaluation and reporting undertaken but neither systematic nor routine.	Fair			
Systematic evaluation following phase IV guidelines and routine reporting of trends undertaken.	Good	✓		
Systematic evaluation following phase IV guidelines and comprehensive reporting of trends undertaken and attempts made at course corrections as relevant.	Very good			
				<p>WWF assists Forest Department in routine phase IV monitoring using Camera traps.</p> <p>However, research is one of the weak areas of the Sundarban Tiger Reserve;</p> <p>Strategies for Research Activities:</p> <ul style="list-style-type: none"> (i) The Research Range should be started full-fledged. (ii) Estimation of tiger densities, dispersal and ranging pattern. (iii) Estimation of prey species, especially spotted deer or wild boar. (iv) Spatial distribution of 'Sundari' (Heritiera fomes) with special reference to the salinity regime. (v) Tiger straying in fringe villages. (vi) Impact of eco-development activities in villages. (vii) Impact of eco-tourism. (viii) Study on salinity, effect of global warming etc. The list of research work done during last few years are shown below this Para.

***Not all TRs attract projects and researchers and with exceptions, little research takes place on the TRs own steam because of systemic limitations. However, monitoring of some critical issues is expected e.g. population of tiger, co-predators and prey with insights into their demography and distribution (some opportunistic sampling by sightings, signs and spatial distribution during assessment would be extremely useful in terms of expert impression and as a pulse), monitoring incidence of livestock grazing, fires, weeds, sources of water, a variety of illegal activities typically associated with the reserve, wildlife health (e.g. epidemics, immunization of livestock) regeneration and change in vegetation, visitors and their activities, offence cases, ex-gratia payments etc. Efforts must be made to assess the planning and implementation of Phase-IV monitoring protocols and the success of implementation of M-STRIPES (wherever applicable). Are the 'Sykes and Horill' monitoring plots maintained and data analyzed?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

LIST OF RESEARCH CONDUCTED IN SUNDARBAN TIGER RESERVE

Sl. No.	Research Project	Organization	Year
1	Studies on selected families of Hymenoptera of Sundarban Biosphere Reserve	Zoological Survey of India	2015
2	Study of Creek Systems and shoreline changes of Western Sundarban	Geological Survey of India	2015
3	A pilot study on Ecology of Goliath heron in the inter-tidal landscape of Sundarban	Nature Environment & Wildlife Society	2016
4	Ethnographic Research on marginalized people in Sundarban in relation to their livelihood and sociology	Department of Anthropology, London School of Economics	2017
5	Sawfishes in the Sundarban	M.Sc. Dissertation project by Ms. Poriyankar Chakraborty	2017
6	Integrated approach to prioritize tiger habitat management interventions and establish linkages with the community for integrated conservation and development in Indian Sundarbans	WWF	2017
7	Prey base estimation methodology development	WWF	2017
8	Rationalizing BLC and fishery stock assessment in permissible areas of Sundarban Biosphere Reserve	WWF	2017

5.4 Is there a systematic maintenance schedule and funds in place for management of infrastructure/assets?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
No systematic inventory or maintenance schedule.	Poor		Discussion with FD	For the maintenance of infrastructure like roads, building and vehicles a proper schedule is available the depending upon the availability of fund the maintenance work are prioritized and implemented.
Inventory maintenance is adhoc and so is the maintenance schedule.	Fair			
Systematic inventory provides the basis for maintenance schedule but funds are inadequate.	Good	✓		
Systematic inventory provides the basis for maintenance schedule and adequate funds are made available.	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

6. Outcomes

6.1 Are populations of threatened species declining, stable or increasing?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Populations of key threatened/ endangered species are declining.	Poor		Discussion with FD	The last two years camera trapping data shows a very good number of lesser cats, wild pig and , spotted deer in STR. However, the population of these species is yet to be estimated. In regular monitoring data all the threatened species sighting data and indirect evidences are recorded which indicates the presence throughout the tiger Reserve In the absence of regular estimation, it can only be said that the population of threatened species is stable.
Some threatened/ endangered species populations declining, some are increasing, most others are stable.	Fair			
Several threatened/ endangered species populations increasing, most others are stable.	Good	✓		
All threatened/ endangered species populations either increasing or stable.	Very good			

**This needs to practically relate to the natural ecosystem potential rather than being driven merely by numbers and visibility. The assessment score may be elaborated under remarks.*

6.2 Is the population of tigers showing a declining, stable or increasing trend?

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Population of tiger is showing a declining trend	Poor		All India Tiger Estimation Demography of Tiger captures in STR Status of Tiger of phase IV of 2015-16 and 2016-17	TR management has been doing Phase IV monitoring involving Camera Traps with help of WII & WWF Photographic evidence which shows a increasing and stable trend in Tiger population.
Population of tiger is showing a declining trend and the reason is identified and options to reverse are in place	Fair			
Population of tiger is showing a stable trend but below carrying capacity	Good	✓		
Population of tiger is stable at carrying capacity or showing an increasing trend and surrounding landscape, core area addresses tiger dispersal appropriately	Very good			

**This assessment should be based in the context of available population estimate (2014-15) and the outcomes of the currently ongoing Phase-IV analyses.*

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

Demography of Tiger Individuals in Sundarbans

Sl No.	Forest Division/Range	Tiger Individuals							
		Male	Female	Cub	Unidentifiable Sex	Recaptured Adult Individuals from previous session	New Adult Individuals Captured	Total Adult Individuals	
1	National Park (East) Range	4	11	0	1	11	5	16	
2	National Park (West) Range	5	9	0	5	14	5	19	
3	Basirhat Range	4	7	4	4	9	6	15	
4	Sajnekhali Wildlife Sanctuary	1	11	0	3	9	6	15	
5	24 Parganas (South) Forest Division	8	15	0	1	14	10	24	
	Total	22	53	4	14	57	32		
	Cumulative total Individuals (Note: Cubs were excluded from the total count)							87 (Two individuals captured n Basrhat Range were recaptured in Sajnekhali Wildlife Sanctuary)	

6.3 Have the threats* to the TR being reduced/ minimized? Or is there an increase?

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Threats to the TR have not abated but have enhanced.	Poor		Discussion with FD	Sundarban area has historically been prone to natural calamities like cyclones, tidal surges, earthquakes etc. Prominent among these, have been a huge surge in the Bay of Bengal in the year 1688 which took a toll of more than 60 thousand people in Sagar Island. In 1737, a severe cyclonic storm with wind speed 250 km/hr along with tidal thrust or surges of 13.0 m from Mean Sea Level (MSL) and severe earthquake fully destroyed the human habitat and mangrove forest. Post independence, the most disastrous cyclonic storm in this region was the one that occurred on 13 th Nov, 1970 which caused thousands of deaths in Sundarban. The cyclone on 29 th November, 1988 also had wind speed of 250 km/hr and had caused wide spread damage. The latest cyclone to wreak havoc in Sundarban was
Some threats to the TR have abated, others continue their presence	Fair	✓		
Most threats to the TR have abated. The few remaining are vigorously being addressed	Good			
All threats to the TR have been effectively contained and an efficient system is in place to deal with any emerging situation	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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				<p>'AILA' which swept across Sundarban on 25th May, 2009 leaving thousands of people homeless and lakhs of hectares of farmland inundated, thousands of cattle were dead.</p> <p>The climate change is also responsible for more and more cyclones in Bay of Bengal. In fact over past decades, the intensity of cyclones as well as frequency is on the increase.</p> <p>Improving Infrastructural Facilities in the Camps as preparedness for cyclone:</p> <ul style="list-style-type: none"> • Presence of an elevated area like roof tops for staff to take shelter in case of tidal surge and rise of water in the camps. • Sufficient number of search lights and batteries to be provided in each camp. • Sufficient number of life jackets and tarpaulins to be provided in each camp. • Lofts created for storing of important documents, arms etc. • First aid boxes to be provided at each camp. • Speed boats to be provided at all camp locations. • Spare water storage tanks to be provided at all camp locations • Height tube wells raised water pumps and generators placed elevated platforms • Brick pitching/bamboo piling of earthen embankment depending on fund position. • All buildings to have piling work in the foundation to increase the stability and longevity of the structure. <p>Intrusions from across the international border of Bangladesh, illegal fishing, crab collection, honey collection, poaching of wild animals etc are some of the potential threats which can inflict damage to habitat and wild animals. The statistics of poaching, conflict with tigers etc indicate that the management is alert and threats are under control.</p>
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***Does the TR has a Disaster Risk Management Plan to deal with existing as well as emerging threats?**

*** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10**

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6.4 *Is visitor management* appropriate?*

Assessment criteria				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Tourism management is entirely adhoc.	Poor		Visit to TR and discussion with FD	The management of visitor is quite appropriate. TR management deals with safari visit along the designated route. Local private owner of Boats take the visitors for safari visit with trained guide. Tiger Reserve management monitors the safari visits. In core area only one camp are open for limited tourists. All the tourism activities are taken up as per NTCA Guideline.
Tourism management and monitoring programmes are described in plan but poorly implemented.	Fair			
Tourism management plan is good and well monitored.	Good	✓		
Tourism management plan is good and well monitored with innovative ways of engaging and educating tourists.	Very good			

**Visitor management followed NTCA guidelines of evaluation of carrying capacity for tourism*

6.5 *Are local communities supportive of TR management?*

Assessment criteria*				
Condition	Category*	(Tick ✓)	Reference document(s)	Remarks
Local communities are hostile.	Poor			The JMFCs are educated to provide assistance to Forest Department in apprehending culprits committing forest offence etc. 25% revenue realized from tourism is evenly distributed among the JFM Committees, which in turn attracts them for support. The local communities are largely supportive of TR management. The local villagers help TR management in rescue of strayed or injured wild animals.
Some are supportive.	Fair			
Most locals are supportive of TR management.	Good	✓		
All local communities supportive of TR management.	Very good			

**There could be many reasons for disenchantment. It could be real because of managerial neglect or the managerial efforts could be appropriate but there could be local elements/organizations who would like to keep the disaffection simmering for their own ulterior motives. Likewise, success could be entirely because of the efforts of managers or they might be fortunate in striking partnerships with credible NGOs. Assessment may take the prevailing causes into account.*

** Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10*

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7. MEE Score Card*

Framework Element Number	Framework Element Name	Number of Criteria (a)	Maximum Mark per question (b)	Total (a x b)	Marks obtained for the Element	Overall MEE Score and % age
1.	Context	05	10	50	47.5	76.6%
2.	Planning	07	10	70	55	
3.	Inputs	05	10	50	32.5	
4.	Process	05	10	50	35	
5.	Outputs	04	10	40	32.5	
6.	Outcomes	05	10	50	35	
Total		31		310	237.5	

*Efforts will be made by the NTCA-WII-MEE Team to address the issue of assigning 'differential' weightages to the 32 Assessment Criteria including 'normalization'.

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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Assessment Criteria for addressing issues relating to Climate Change & Carbon capture in the Tiger Reserves (TRs)

1. *Additional Criteria on Climate Change: Is the TR being consciously managed to adapt to climate change?*

Condition	Category*	(Tick ✓)	Comment/Explanation	Next Steps
There have been no efforts to consider adaptation to climate change in management	Poor	✓	Climate change has severe impact in this landscape. Bay of Bengal is increasingly becoming prone to cyclone. 48 out of 102 islands of Sundarbans are occupied by people. Management is presently making efforts to see that conservation of flora and fauna takes the precedence and further climate change is halted..	Disturbance in the area due to tourism, and controlling illegal cutting of trees, fishing, crab collection is the key to conservation. If the forests and wildlife are protected climate change can be halted.
Some initial thought has taken place about likely impacts of climate change, but this has yet to be translated into management plans	Fair			
Detailed plans have been drawn up about how to adapt management to predicted climate change, but these have yet to be translated into active management.	Good			
Detailed plans have been drawn up about how to adapt management to predicted climate change, and these are already being implemented	Very good			

2. *Additional Criteria on Climate Change: Is the TR being consciously managed to prevent carbon loss and to encourage further carbon capture?*

Condition	Category*	(Tick ✓)	Comment/Explanation	Next Steps
Carbon storage and carbon dioxide capture have not been considered in management of the TR	Poor	✓	Research is going on related issues supply, quantification and estimation of carbon sink is to be studied well, The management does not take up extraction of trees from the mangroves.	Although the management is making efforts to control illegal felling of trees, yet the same is to be stepped up to prevent any further damage.
Carbon storage and carbon dioxide capture have been considered in general terms, but has not yet been significantly reflected in management	Fair			
There are active measures in place to reduce carbon loss from the TR, but no conscious measures to increase carbon dioxide capture	Good			
There are active measures in place both to reduce carbon loss from the TR and to increase carbon dioxide capture	Very good			

* Score: Poor: 2.5; Fair: 5; Good: 7.5; Very Good: 10

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