

TRUMPET



Project Elephant Division



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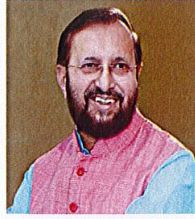
मंत्री
पर्यावरण, वन एवं जलवायु परिवर्तन,
सूचना एवं प्रसारण और
भारी उद्योग एवं लोक उद्यम
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MINISTER
ENVIRONMENT, FOREST & CLIMATE CHANGE,
INFORMATION & BROADCASTING AND
HEAVY INDUSTRIES & PUBLIC ENTERPRISES
GOVERNMENT OF INDIA

प्रकाश जावडेकर
Prakash Javadekar



MESSAGE

Elephants are among the most intelligent of the creatures with whom we share the planet. As a keystone species, the conservation of elephants ensures the conservation of several flora and fauna at various levels. Playing a critical role as ecosystem engineers, they help in maintaining the carbon sequestration of forests.

In spite of the various challenges like habitat loss, fragmentation, human-elephant conflict etc. India takes a lead in conserving the mega herbivore. India has now placed the Indian elephants in the Appendix I of the Convention of Migratory Species in February 2020 marking a historical Step in conserving species. This shall fulfil the natural migration of Indian elephant across India's borders and back safety and hereby promote conservation of this endangered species for our future generations.

This Newsletter covers the salient features in the elephant conservation regime adopted by the Government of India in protecting elephants. It also focuses on many of the conservation successes achieved in conservation of elephants through use of newer technology and involvement of stakeholders. I congratulate the Project Elephant Division and Elephants Cell team for bring out the First Edition of the Newsletter "Trumpet" and I hope that this will facilitate the dissemination of ongoing conservation practices adopted across the country in protecting the species.

Date: 28.09.2020


(Prakash Javadekar)

।। प्लास्टिक नहीं, कपड़ा सही ।।

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सत्यमेव जयते



बाबुल सुप्रियो

केन्द्रीय राज्य मंत्री

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
भारत सरकार

Message

Elephant conservation have been one of the remarkable achievements of our country. While Asian elephants are generally found in South East Asia and South Asia, India remains the most intact home of this magnificent animal. Currently India is home to about 30,000 wild elephants and the country is proud to hold the largest bastion of the largest mammal walking on the planet.

Even with global support for elephant conservation, their survival is threatened by habitat loss, fragmentation, poaching and several other anthropogenic pressures. Competing for the same resource the human – elephant conflict is on the rise. However, the people of India still revere elephants as the reincarnation of Lord Ganesha and invoke strong compassion in saving the large megaherbivore. In spite of the large population of India, the tolerance of people of living with elephants has not extinguished completely.

It is now imminent that for elephants and humans to live in co-existence policies must be designed to persuade people to change their attitudes, from intolerance to tolerance and from tolerance to acceptance. Government of India is working extensively in this direction by involving stakeholders from grass root to higher levels. India has also engaged in transboundary dialogues with neighbouring countries to ensure safe passage of elephants across international boundaries.

I congratulate the team of Project Elephant Division and Elephant Cell in bringing out the first edition of this Newsletter "Trumpet" showcasing success stories on elephant conservation. I wish all the success and hope that with the knowledge dissemination on successful conservation regime, the elephants will continue to trumpet across the Indian landscape.

Best Wishes,
Babul Supriyo

(Babul Supriyo)

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R P Gupta



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MESSAGE

Since time immemorial the elephant has been an integral part of Indian culture and heritage. It is regarded as a sacred animal and is considered the representation or the living incarnation of Ganesha, who is invoked before any other Gods. However, considering the threats faced by Asian elephants due to illegal poaching for meeting the high demands of ivory, tusks and other body parts, mostly from international market, elephants are listed in IUCN red data list as 'Endangered'.

Because of their large size, elephants have a huge impact on their environment and are considered as keystone species. The megaherbivore is known to be the engineers of the forest, helps in keeping a balance of the ecosystem. In order to provide highest degree of legal protection, Indian elephants have been listed under Schedule I of the Wildlife Protection Act, 1972.

There are serious challenges before all of us to ensure survival of elephants in wild and address complaints relating to cruelty to elephants in captivity. India, being home to more than 60% of global Asian elephant population, has immense responsibility for the survival of the species. We also have to address the human-elephant conflict interface in a manner which is beneficial to both.

The inception of the quarterly Newsletter "Trumpet" is a welcome step by this Ministry to bring together elephant conservationists and custodians from across the globe to share the knowledge pool in saving the elephants for the future generation.

[R P Gupta]

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SANJAY KUMAR



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MESSAGE

Once common throughout Africa and Asia, elephants have declined significantly during the 20th century. Though some populations are now stable and growing, poaching, human-elephant conflict, and habitat destruction continue to threaten the species. At present both African forest elephants and Asian elephants occur on only about 10% of their historical range and the species has dwindled to an extent that it has to be declared as an endangered species.

Elephants in Africa occur in 51 countries and the Asian elephants are distributed in 13 countries across South and South East Asia. Concerted efforts both by Governments and other stakeholders have now ensured that the Asian elephant population is growing steadily. Holding the largest stronghold of Asian elephants, the many risks and challenges faced towards conservation and protection of the species have been identified. The need to extend this knowledge to others also is acknowledged in not only conserving the species but also ensuring how conservation and development can go hand in hand. It is also critical in this regard to mitigate the effects of rising population which unfortunately is taking a very heavy toll on the lives and livelihoods of forest fringe population in certain pockets of the elephant migratory habitats.

The State forest departments and research institutes in India are experimenting new, innovative and cost effective ways which need to be collated and replicated across the country, particularly in the new areas where elephants are migrating. In this endeavour, we are looking forward to new ideas that on the one hand ensure that the population of elephants that are migrating to newer areas remain stable genetically and on the other hand there is least human-elephant conflict.

The Quarterly Newsletter "Trumpet" is an endeavour to bring forth various conservation approaches adopted to protect elephants in India. The newsletter will also tap the knowledge pool of experts outside India and conservation regime implemented in Protected Area authorities of other elephant range countries in the coming editions to help conserve Asian and African elephants.

India's commitment to save elephants is undeterred and Government of India is working shoulder to shoulder with all the stakeholders for cohesive steps to both save elephants and also on preventing and mitigating human-elephant conflicts.


(Dr. Sanjay Kumar)

Place: New Delhi
Date: 29.9.2020



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ADDITIONAL DIRECTOR GENERAL OF FOREST
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MINISTRY OF ENVIRONMENT, FOREST AND
CLIMATE CHANGE

Message

Elephant is a charismatic and majestic animal which has immense significance to the Indian society. The species has been revered by millions of Indians across the country for its social, cultural and religious significance. Elephants have been aptly given the title of National Heritage Animal and the mega herbivore also plays an important role in maintaining the ecosystem of the forests.

Asian elephants are found in 13 countries and India harbours nearly 30,000 elephants in the wild and over 2700 in captivity. Elephants are long ranging animals and often come in interface with humans leading to human – elephant conflict. This unfortunately has led to the death of an average of 500 humans and 100 elephants every year. It also entails damage to large chunk of crops which is grown by the poor villagers at the forest fringes which is matter of great concern for the Government of India.

Indian Government is actively working with the elephant range states to devise mitigation measures to control human-elephant conflict. In the last 5 years, the Ministry has unleashed a series of activities to mitigate human-elephant conflict. Ministry has declared new Elephant Reserves and identified Elephant Corridors to provide safe passage to the elephants. Ministry has formulated a number of committees for monitoring elephant conservation across the country. It has more than doubled funding elephant conservation in the country. An Elephant Cell has been established by the Ministry as a Technical wing of the Project Elephant Division in the lights of Tiger Cell set up in Wildlife Institute of India (WII). A huge step has been taken by the Government in getting the Indian elephant included in the Appendix I of the Convention on Migratory Species (CMS) which highlights its intent towards conservation of elephants in the international arena.

It is important that all of us should come together and work hand in hand to conserve the elephants in the face of various challenges they face for their survival.



(Soumitra Dasgupta)



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Elephant Conservation in India

Noyal Thomas, IGF & Director, Project Elephant

Indian Elephant (*Elephas maximus indicus*), is the most celebrated companion of the people of India, since time immemorial. They are both revered in the religion and mythologies, symbolising strength and wisdom.

India is harbouring about 60% of the Asian elephant population and about 20% of the captive elephants and the species has been placed as the Schedule I species under the Wildlife Protection Act, 1972 offering the highest protection. Project Elephant was launched in 1992 by Govt. of India for effective management and protection of elephants in order to ensure the survival of elephant population in the wild as well as in captivity. In 2010, the Indian elephant has been declared as National Heritage Animal by the Government of India with an aim to step up measures for their protection and conservation. As per the population estimation of 2017, India is home to 29964 elephants in the wild.

*Right Photo:
Photo credit:
Sandeep Das*



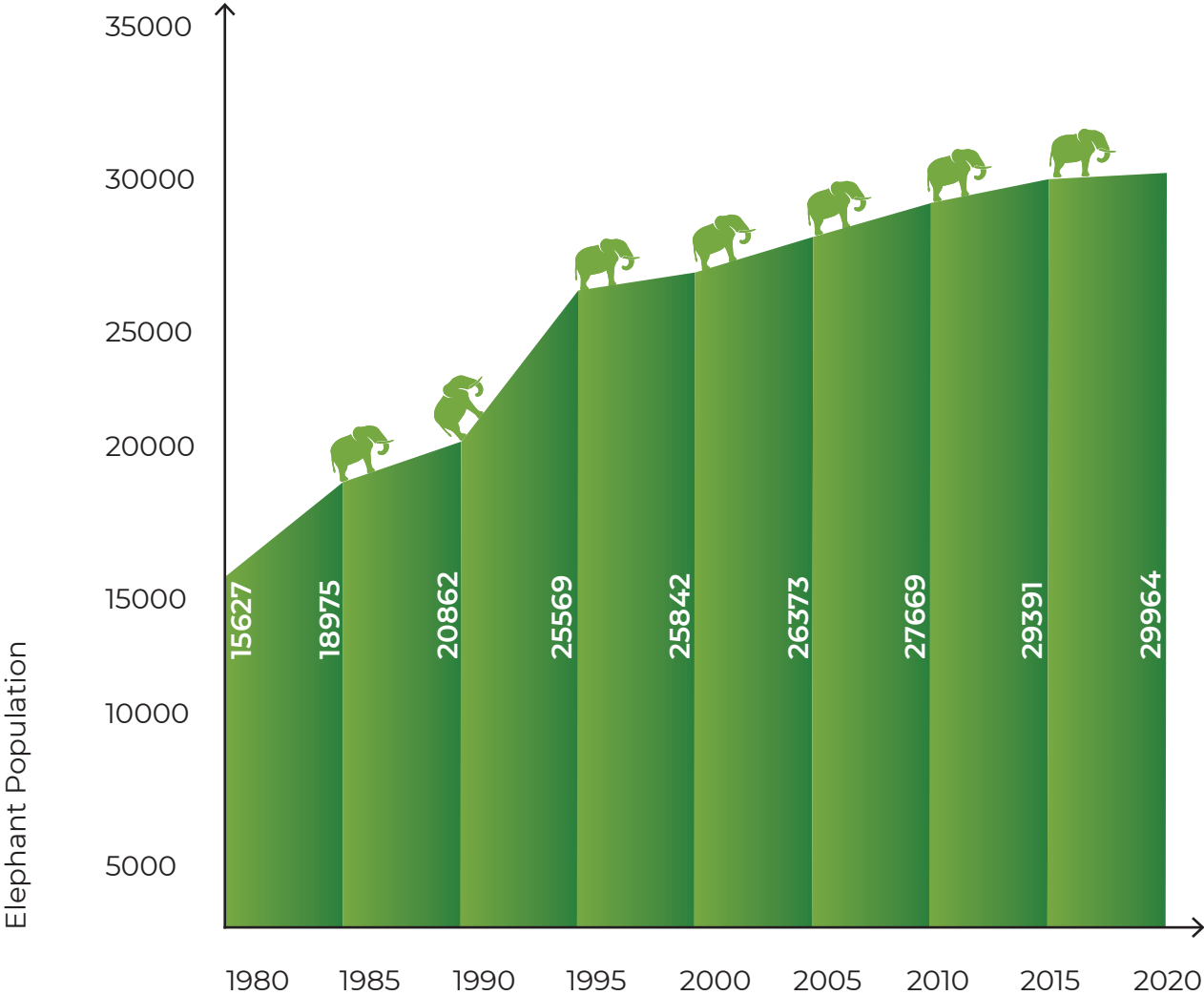
Challenges to conservation:

The threats to survival of elephants are manifold, of which human-elephant conflict is the most important conservation concern. Habitat degradation, fragmentation of habitats, expansion of human settlements and agricultural fields, linear infrastructure developments, anthropogenic pressures coupled with climate change has resulted in widespread loss of elephant habitat and reduced habitat connectivity. Every year, more than 500 humans and 100 elephants lose their lives due to human-elephant conflicts in the country.

It is very appropriate to highlight the fact that in spite of the various developmental programmes and loss of habitats in some parts of the country, India's elephant conservation model is one which is much acclaimed all over the world. Various legal and protection measures resulted in the stabilization of the elephant population in the country. Notification of Elephant Reserves has resulted in giving focused attention to the elephant conservation in the country. The various elephant Range states in the country have notified the Elephant Reserves to strengthen the conservation of elephants and at present the country has 30 Elephant Reserves spread over an area of 65000 sq.kms. To address the situation of rising human – elephant conflict, Ministry has issued the comprehensive guidelines on Human Elephant Conflict Mitigation in 2017 and has also constituted a Central Project Elephant Monitoring Committee to find out site specific methods of mitigating HEC. Government of India has also enhanced the ex-gratia compensation for the loss of human life from Rs. 2 lakhs to Rs. 5 lakhs for reducing the conflicts. Many states are giving much higher amounts as ex-gratia. The Captive Elephant Health and Welfare Committee constituted by the Ministry in 2019 addresses the health care and welfare aspects of captive elephants including that of creation of Elephant Rescue and Rehabilitation Centre in major elephant states.

An “Elephant Cell” has also been established by the Ministry in 2019 as a technical wing of the Project Elephant Division and is assisting the Project Elephant Division on the preparation of Strategic Action Plan for mitigation of HEC in the East-Central landscape; creation of database and conducting DNA profiling of captive elephants in India; preparation of the National Elephant Action Plan and also finalising the portal on human – elephant conflict management in India. Ministry has also finalised the “Protocol” on Transboundary Elephant Conservation between India and Bangladesh. This will ensure transboundary conservation of elephants in the North eastern elephant landscape.

Conservation of elephants is symbolising our connect with nature, our land and our common natural heritage. The rest of Asia and the world look upon India to take lead in conserving this magnificent species. The recent inclusion of Indian elephant in Appendix I of the Convention on Migratory Species in the 13th CoP in 2020, will further strengthen the transboundary conservation of Indian elephants in future. It is our obligation to save our National Heritage Animal and its habitats for the well being of our forest ecosystems and also for the betterment of the lives of our future generation.



Source:
Project Elephant Division





Photo:
A. J. T. Johnsingh

Mobile Technology for HEC Mitigation in Anamalai Hills, Tamil Nadu

M. Ananda Kumar, Ganesh Raghunathan,

Sreedhar Vijayakrishnan and

Vinod Krishnan, NCF

Understanding human-elephant interactions is critical for conservation of elephants outside Protected Areas. Conflict incidents frequently lead to use of reactive measures such as chasing elephants, capture and translocation, or retaliatory persecution, but these often fail to resolve conflicts on a sustained basis, empower communities to implement solutions, or help in conservation of elephants. In India, thousands of people and hundreds of elephants interact with each other on an everyday basis in many landscapes. Aspiring for inviolate spaces (exclusive zones) for people and elephants would not be possible as both protagonists are interconnected strongly over resources. The only way is to promote human-elephant coexistence in overlapping landscapes.

Our long term research (2002-2020) on the Valparai plateau in the Anamalai hills, enabled us to understand elephants' use of fragmented habitats, their movements and conflict with people, and implement site specific conflict mitigation measures in collaboration with the Tamil Nadu Forest Department that help promote human-elephant coexistence.

Right: Aerial view of elephants in a tea estate.

*Photo:
Kalyan Varma*





The Valparai plateau in the Anamalai hills

The Anamalai hills in southern Western Ghats is a critical conservation area for elephants, holding the second largest Asian elephant population (*Elephas maximus*) across their range in India. The Valparai plateau, a of 220 km² landscape matrix dominated by tea and coffee plantations interspersed with rainforest fragments fall under the jurisdiction of the Anamalai Tiger Reserve in the Anamalai hills. The plantations are owned by six national and multinational companies supporting the livelihood of 70,000 people. The Valparai plateau with its undulating terrain and perennial water resources is surrounded by Tiger Reserves, Reserved Forests and wildlife sanctuaries in the states of Tamil Nadu and Kerala. The plateau has been historically used and continued to be used by elephants and forms a critical area for elephant movements across plantations into surrounding Protected Areas. Annually, the pla-

Top: Valparai plateau with rainforest fragments and tea..

Photo: Kalyan Varma

teau has been intensively used by 100-120 elephants which contiguous with elephant populations in the surrounding Protected Areas. The natural vegetation in the form of rainforest fragments and riverine patches, occupying less than one percent of the plateau, act as refuges for elephants. The juxtaposition of commercial plantations and natural vegetation with a human density of 455/km² in widely scattered habitations became the source for human-elephant conflict on the Valparai plateau.

The unique geographical position of the plateau with interspersing plantations, rainforest fragments, and residential places, it is inevitable for both humans and elephants to share resources.

Human-elephant conflict

The primary issue in human-elephant conflict is loss of human lives due to elephants besides damage to buildings which store food grains such as rice, sugar, salt, and lentils.

A. Human deaths due to elephants

Loss of life/injury due to elephant elicited fear, trauma, and anger in local people towards elephants in the Valparai region. Between 1994-2020, 47 people have lost their lives in direct encounters with elephants. Majority of fatal incidents occurred on roads when people walked between workplace and home. Though there were no patterns in the occurrence of deaths in relation to time of the day, but 30 of 47 cases (64%) occurred in a three month period between December and January, indicating a peak conflict period on the plateau. In 37 of 47 cases (64%) people were unaware of elephant presence and their movements in their surroundings in plantations.

B. Property damage by elephants

Unlike in many other landscapes, there is no crop damage by elephants but damage to buildings which store food grains such as ration shops, noon-meal centres, and residential places which has been a cause of concern on the Valparai plateau. Incidents of property damage by elephants varied annually ranging from 150 incidents in 2011 - 2012 to 68 damages in 2019-2020. A majority of property damages occurred between October and February, a period of high elephant movement on the plateau.

Dealing with human-elephant conflict on the Valparai plateau

Our long-term research identifies the need for a strong 'information network' to communicate about elephant presence and their movements to people as the accidental encounter is the main reason for loss of human life due to elephants. Secondly, to develop a positive attitude in local communities. Finally, to encourage community participation to prevent fatal encounters with elephants.

A. Implementation of early warning systems

The Nature Conservation Foundation (NCF) in collaboration with the Tamil Nadu Forest Department and plantation companies has established Elephant Information Network (EIN) and deployed early warning systems to mitigate human-elephant conflict. These systems are simple, adaptive, and participative to help increase safety for people and elephants and instil a sense of responsibility in the local communities for the positive management of human-elephant conflict. Our study focused on proactive conflict mitigating measures based on long-term scientific understanding of the needs of elephants and people, involving local communities to promote human-elephant coexistence in the Anamalais. The following steps have been implemented in this regard.

1. Use of Television network: Elephant locations received from daily tracking, informants from local communities, and Rapid Response Teams of the forest department is displayed as a 'text crawl or ticker' on a local cable TV channel every day to reach out to people as an early intimation. Currently, the cable channel reaches nearly 5,000 families on the Valparai plateau.

2. SMS service: Since 2011, bulk SMS service has been implemented to send out text messages alerts about elephant presence and their movements to peoples' mobile phones on a daily basis. An average of 2000 text messages/day is being sent in English and Tamil to people who reside within 2 km radius from daily elephant locations, covering 4500 families. These timely alerts helped subscribers to spread elephant presence as both protagonists are interconnected strongly over resources." alerts to others in their locality and encouraged people to take adequate precautions to avoid direct encounters with elephants and safeguard their property.

3. Installation of GSM-based alert beacons: Mobile operated LED-light alert beacons were installed in 35 strategic locations in plantations to signal the presence of elephants.

*Right:
Valparai-
Kalyan Varma*



These alert beacons are visible from a distance of 1 km and helpful for people who have not availed SMS alert service. These beacons are equipped with a SIM card and can be operated remotely from a registered mobile phone. At least two persons chosen by the community at each light locality, were involved in operating lights from their registered mobile phones, when elephants are noticed in the vicinity. During the past seven years, the local community involved in an average of 98% of light operations, indicating their active participation in human-elephant conflict management.

4. Voice call alerts over mobile phones: Information about the presence of elephants is disseminated using outbound voice call systems for people on their mobile phones. These voice recorded alerts are uploaded using a web-based interface are sent out in the form of an MP3# file. Approximately an average of 1500 voice alerts are being sent every day since its inception in 2015.

B. Rapid Response Teams and helpline from Tamil Nadu Forest Department The Anamalai Tiger Reserve has established Rapid Response Teams as a part of disaster management in the Valparai region. These teams are trained in tracking of elephants and crisis management techniques such as crowd control, alerting residents of elephants movements, and protection of property in tea and coffee estates. Emergency helpline number was established for people to seek help from the teams during critical times.

C. Proactive steps by the plantation companies

Tea and coffee companies have been conducting awareness programmes for the estate workers with the help of research organisations, deployed watchers to locate elephants, shifting of workforce from tea fields where elephants are located, and adoption of no elephant drive as a part of their management policy.

D. Public outreach programmes Awareness and sensitization programmes for estate workers and street plays helped communicate the importance of elephants and precautionary steps to be taken to minimize chance encounters between people and elephants. Regular interactions between Tamil Nadu Forest Department, plantation management, and scientific and conservation organisations enabled the rapid response teams to quickly act to the needs of people in conflict prone areas and enhanced safety to people's lives and their property on the plateau.

*Right:
Valparai-
Kalyan Varma*



Impacts of early warning systems on the occurrence of human-elephant conflict incidents

Human death incidents gradually declined from the average of three persons/year between 1994-2002 to an average of less than one person between 2017-2020. Over a long term, the average number of human death incidents remained one person per year for the past 15 years (2003-2020). This is the seventh consecutive year where accidental deaths due to elephants remained nil.

Proactive steps involving stakeholders aided by early warning systems have created a win-win situation for elephants and people as property damage by elephants continued to be less than 50% for the past several years as compared to 2011 (150 damages).

Valparai plateau is one of few places where human-elephant conflict has been minimal and a model landscape for many other interface areas of people and elephants in India.

The study suggests a shift from reactive measures of 'problem-animal approach' to a pro-active 'problem-location approach' with sustained participation by stakeholders which could pave the way for coexistence in modified landscapes.

Photo Credits: M. Ananda Kumar

Penning the Diary

Successful Restraint & Translocation

of Problem Elephants to Mitigate

HEC in West Bengal

Subrata Pal Chowdhury, Technical Assistant, West Bengal FD

f the 680 elephants present in West Bengal, around 488 elephants occur in Darjeeling, Kalimpong Jalpaiguri and Alipurduar districts in North Bengal (Lower Gangetic Plains (07B)), spread across 3051 Sq. Km. Around 194 elephants are found in Purulia, Paschim Midnapur, Jhargram and Bankura districts in South Bengal (Deccan Peninsula-Chota Nagpur (06B)), over a range of 22,487 Sq. Km. Elephant population has increased in West Bengal from about 150 in 1978 to 682 in 2017.

Although human – elephant conflict was prevalent in North Bengal for a long time, the problem started in South Bengal by end of December 1987 when 35-50 elephants migrated from Dalma hills of Jamshedpur, Jharkhand (earlier Bihar) to adjoining Midnapore district. Though there was no true elephant habitat in those areas, visiting wild elephants preferred to stay on foraging on cultivated crops in the villages. They used large forest patches with abundant water sources as refuges.

Many calves born in West Bengal over last three decades have probably become adults or sub-adults and have become residents of the area. They seem to have extensive knowledge of their home range, availability of food and water. The elephants have developed adaptations to occur in human dominated areas, which during last few decades had resulted in large scale human-elephant conflict (HEC). HEC besides being a key elephant conservation concern is also a major socio-economic and political issue.

Population Dynamics of Elephants in West Bengal

CENSUS Year	North Bengal	South Bengal Migratory	South Bengal Residential	Total
1989	175	*Nos. Not Available	4	179
1993	186	*Nos. Not Available	3	189
1997	250+	*Nos. Not Available	6	256+
2000	292	35	10	337 Census started in South Bengal
2005	320	96	17	433
2007	350+	96	25	471+
2010	529	93	25	647+
2014	590+	No estimation about 125 Migratory elephants & about 40residential		590+ 165= about 755+ elephant
2017	488	Migratory + Residential 194		682

* Estimated more than 80 migratory elephants in South Bengal

Records of loss of human life, property and crops in West Bengal for last 15 years are given below.

Human Elephant Conflict in West Bengal

Year	Person killed (no.)	Person injured (no.)	Comp paid for human life & injury	Crop damage (Ha.)	Comp paid for crop damage	Hut damage (No.)	Comp paid for hut damage	Total Comp paid in Lakh Rs.
2004-05	72	118	11.71	3089.385	11.71	11.71	4.23	27.19
2005-06	85	87	27.41	3764.248	27.41	27.41	19.32	128.93
2006-07	64	188	32.88	3555.959	32.88	32.88	16.22	88.62
2007-08	70	211	47.80	3323.00	47.80	47.80	26.23	145.74
2008-09	67	242	75.70	3358.23	75.70	75.70	37.65	256.49
2009-10	87	355	92.70	3546.20	92.70	92.70	44.46	286.76
2010-11	96	396	112.60	4830.54	112.60	112.60	59.99	418.11
2011-12	67	171	55.93	5284.95	55.93	55.93	45.93	316.29
2012-13	69	119	63.31	5872.458	63.31	63.31	60.37	473.73
2013-14	67	114	77.19	8940.672	77.19	77.19	75.14	489.87
2014-15	89	102	105.41	8340.039	105.41	105.41	89.35	580.96
2015-16	112	95	228.00	5100.693	228.00	228.00	105.84	705.78
2016-17	84	57	152.34	4788.466	152.34	152.34	112.12	958.46
2017-18	66	98	144.44	4613.067	144.44	144.44	117.12	1114.37
2018-19	80	81	194.14	3771.142	194.14	194.14	149.23	852.96

Driving of problem elephants to larger habitat patches is widely practiced in West Bengal to tackle elephants in human use areas. Immobilization and translocations are undertaken only in case of acute conflict situations involving human fatalities or in situations where safely driving elephants is not possible. Adult and sub-adult bulls are found to be responsible for conflicts in about 77% cases.

West Bengal has a long history of immobilization and relocation of problem bulls or declared “Rogues”. A total of 18 identified “problem” bulls were restrained with immobilizing drugs and translocated in 16 instances from 1988 to 2020 in West Bengal in an attempt to save both elephant and human lives and properties and mitigate HEC. The first transboundary translocation in India was done in 2004, when two tusked elephants strayed from West Bengal to Bangladesh. West Bengal FD immobilized both the tusked elephants and successfully brought them back to India and released them in North Bengal.

*Below: Immobilized
tusked elephants*





Pic: Local People with elephants



*Top:
Allowed to eat at
night*

*bottom: Both
sedated & sleeping
ready to lift*

*Photo Credits:
West Bengal FD*

Case Study: Restraint and relocation of two tuskers from Howrah district to Purulia District on 12-13 February, 2019

A sub-adult Maljuria (friendly males) pair crossed the boundary of the Rupnarayan Forest Division of West Medinipore district on 10 th February, 2019 through Khirpai and Khanakul of Hooghly district and on 11.02.2019 and were found inside a bamboo thicket in the non-forested human habitation of Uttar Bhatora, a thickly populated island village of Amta block-II under Joypur PS of Howrah district.

Upon receipt of information all concerned administrative authorities were alerted and Divisional Forest officers of Paschim Medinipore division, Sri R.N. Saha, Rupnarayan Division, Sri Arnab Sengupta, Kharagpur Division, Sri A. Mukherjee and Howrah Division, Sri S. Sarkar arrived at the spot with their driving parties and teams for chemically immobilizing the elephants. Two other Immobilizing teams from Bankura (North) and Bardhaman Divisions were also called for support as directed by the Chief Conservator of Forests, Western Circle, Sri S. S. Dey.

Driving parties were engaged and after several attempts, maljuria pair was successfully driven to Khanakul in Hooghly district crossing the Mundeswari river but then the pair turned towards Jhikira Gram Panchayat area, Amta-II Block of Howrah, approached Siaguri Bridge & Rampur Canal then suddenly disappeared in the darkness of night.

In the early morning on 12.02.2019 both the elephants were spotted in the crop fields of Koley Para, area of Manikpir Village under Jagatballvpur PS and Jagatballvpur Block of Howrah district, about 20-25 Km from Kolkata. The Manikpir village was thickly populated; packed with closely built houses and huts and crisscrossed with canals, ponds and plantations with narrow passages inaccessible to four wheelers. Hundreds of people gathered to see the elephants and more thronged in with bicycles and two wheelers. The elephants were terrified of the crowd and moved into the village ruling out any possibility of driving them.

Sri Ravi Kant Sinha, PCCF (Wildlife) & Chief Wildlife Warden, West Bengal assigned the responsibility of immediate relocation of the elephants. Technical team comprising of Sri Subrat Pal Chowdhury and Sri Sujoy Sarkar, Dy.Ranger/Forester from the Wildlife Headquarter



*Top:
Arrival of JCB for
lifting.*

*Bottom:
Lifting started by
JCB.*

*Photo Credits:
West Bengal FD*

and veterinarian rushed to the spot and joined the other three immobilizing teams who had been tracking the elephants. Management of crowd and media was a challenging task as elephants were terrified and were charging people getting close to them.

Ultimately both the tuskers of nearly the same age and around 8 feet were darted with sedatives inside a banana grove at about 2.15 PM in standing sedation. After sedation, the team restrained and tethered both the elephants with chains and strong ropes to trees. To transport the immobilized elephants the local commercial LPT trucks and a Hydra crane were arranged. As the truck could not be brought to the site of restraint due to narrow passages inside village, the possibility of walking the elephants to the truck was explored. Local people extended their help, however after a few steps the tuskers squatted and lied sedated on the ground.

Veterinary doctors from the Block Animal Resource Development Department provided veterinary care and decided to let the elephants sleep and rest. Additional dosage of sedatives were administered at night and physiological parameters were periodically monitored as it was not possible to transport the elephants to the trucks in the dark. Flood lights with generator were arranged at night and local Police Force and Civil Administration provided all necessary support. In the morning, two JCBs were hired and by 8.15 AM on 13.02.2019, a 1.5 Km. temporary road was made to reach the elephants. Two tractors fitted with large trolley were brought close to the elephants. The tuskers were tied and heavy duty belts were passed underneath their body and within an hour each elephant were placed on separate tractor trollies with the help of the JCBs.

The Hydra crane and trucks were kept ready near the state highway for loading and transportation of elephants. Tractors reached the locations within 45 minutes and the elephants were lifted by hydra crane and loaded on the truck at 10.45 AM from Jagatballavpur, Howrah and driven to Bandwan, Purulia near Jharkhand border, a distance of about 375 Km. Both the elephants were kept under sedation in lateral recumbency without any problem for nearly 10 hours to reach the release site inside a forest patch at about 8.30 PM on 13.02.2019.

Unloading ramps were already made, so elephants were again mildly sedated and taken out of the trucks with help of JCB. All chains and ropes were removed and vehicles were taken out of the location. The elephants regained their senses within 2hr.30mins and moved deep into the forests. After two days the larger tusker moved to Jharkhand forests and the other roamed about another couple of days at Bandwan forests then followed its companion.



Top:
Loading on Tractor
Trolley.



Bottom:
Tractor through
village

Photo Credits:
West Bengal FD

Towards a Secured Elephant Landscape

*Securing the Thirunelli- Kudrakote Elephant Corridor,
Kerala*

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1. IUCN SSC Asian Elephant Specialist Group 2. Wildlife Trust of India

Introduction

Strategies for conservation of elephants in India should aim at wildlife areas beyond protected areas and adopt a landscape approach. India has about 110,000 Km² of elephant habitat but a large proportion of the current range of elephants lies outside the protected areas. Only 28% of the 32 existing and proposed Elephant Reserves are under Protected Area. The growing human population and developmental activities has placed a great strain on the habitat of the elephant with people and elephants struggling to share the same space. Encounters have become increasingly frequent, and increasingly violent with over 450-500 human deaths every year due to elephants and 100 elephants are killed as a result of confrontations. To prevent this situation from escalating further and for long-term conservation of the species, it is important to adopt a landscape approach and work towards securing the corridors traditionally used by elephants to ensure their free movement across the landscape. The Elephant Task Force 2010 also strongly recommended the landscape level conservation and that the corridors be legally protected and secured.

The Thirunelli-Kudrakote corridor in the Brahmagiri-Nilgiri Eastern Ghats landscape is located at the border of Karnataka and Kerala.

*Right:
Elephants at
Thirunelli Kudra-
kote Corridor
Kerala
@Shajan MA*



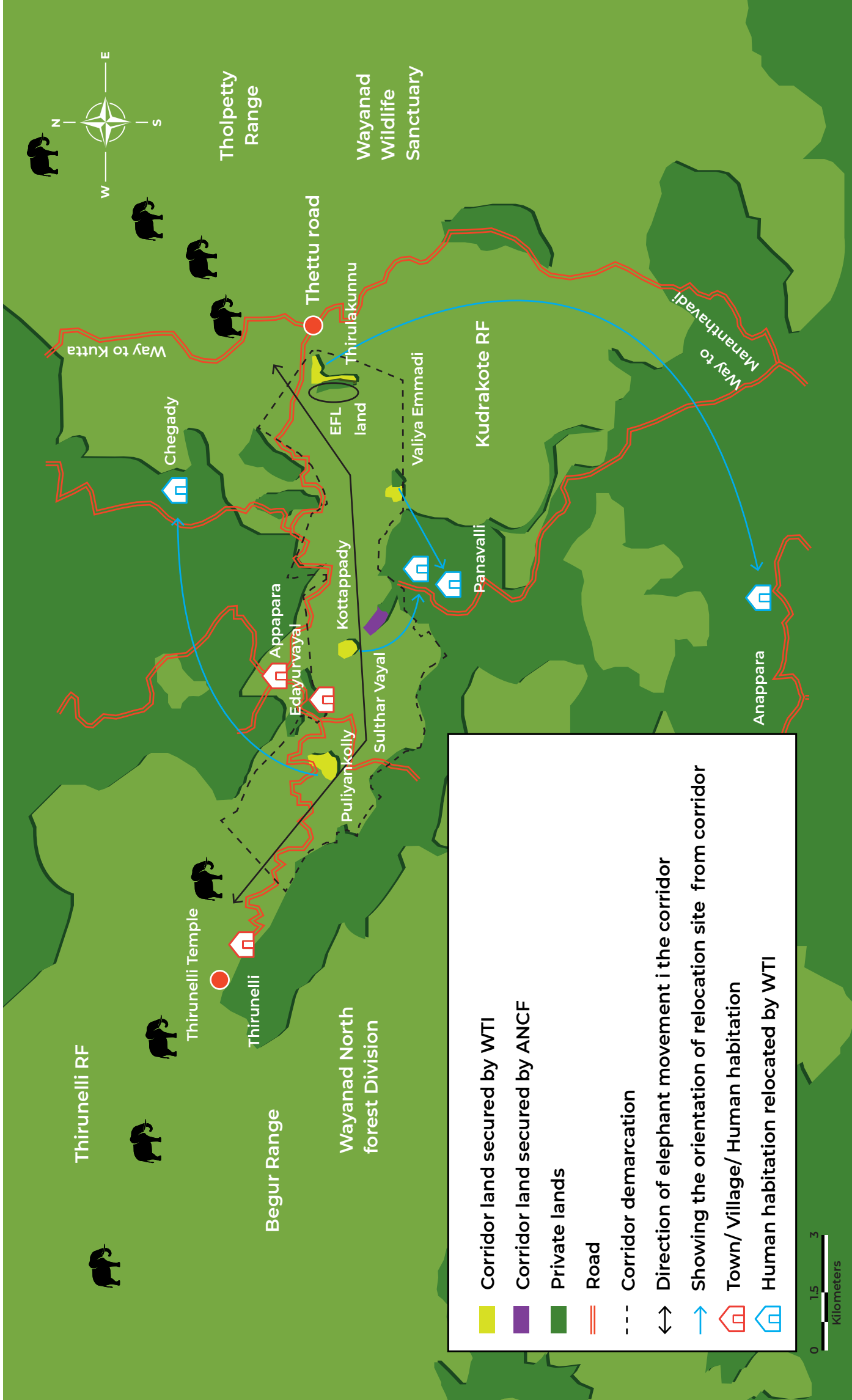
The corridor connects the Brahmagiri Wildlife Sanctuary of Karnataka with Wayanad Wildlife Sanctuary of Kerala through the forests of the Wayanad North Forest Division further leading to Nagarahole National Park and Bandipur National Park. It is one of the 28 elephant corridors identified in South India that are essential for the movement of the large pachyderms between protected areas. The Brahmagiri-Nilgiri-Eastern Ghats sub-population is estimated to host over 6500 elephants.



1. Top:
Thirulakun-
nu_new_house for
local communities
@WTI

2. Bottom:
Elephant & calf at
Thirunelli Kudra-
kote elephant cor-
ridor @Ramith@
WTI

3. (Right)
Map showing the
Thirunelli- Kudra-
kote corridor,
Kerala @ WTI



Process of securing the corridor

Recognising the importance of the Thirunelli-Kudrakote corridor, the Wildlife Trust of India embarked upon the project of securing this corridor in the year 2005-06 in collaboration with the Kerala Forest Department and local communities and financial support from the Elephant Family, IUCN Netherlands and World Land Trust.

The wildlife movement through the corridor was hindered by human settlement (five villages with 37 families) within the corridor that considerably reduced the effective width of the corridor and increased human-elephant conflict. Apart from securing the corridor, the project also aimed to reduce the high human-wildlife conflict which was inevitable in the corridor given that this is a frequently used area by wildlife and human beings alike.

The key strategy for securing the corridor was to voluntarily acquire land owned by the villagers either by payment of the agreed value (in the case of non-tribal or non-Below Poverty Line (BPL) family) or by providing suitable alternate land and resettlement package (for BPL families or tribals). Another key aspect of the project design was in assisting the relocated families to strengthen their livelihoods and ensuring that government benefits reach the families.

One of the main approach for securing of the corridor was constant consultations with villagers on issues affecting their lives (human-wildlife conflict, lack of educating of children, lack of facilities such as electricity, clean water, road connectivity, etc.) and how could we work towards improving those aspects. The possibility of relocating to an alternate place as a means to minimise conflict and secure the corridor emerged from the villagers and the process was initiated only after everyone in that community understood the issues and agreed to voluntarily relocate. The project also ensured that all laws related to relocation of people was consulted and adhered to including the Land Acquisition Act, 1894 (*now known as The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013*). Since the majority of land in this corridor belonged to a tribal community, there was a restriction on selling land directly – instead it had to be in exchange for alternative plots of land. Relevant permissions were obtained from the office of the District Collector of Wayanad district along with a written consent of the villagers who had agreed to relocate.

The final decision to go ahead with a specific relocation package and plan was taken strictly on the basis of 'Prior Informed Consent' of the families concerned. A needs assessment survey was completed

using a participatory process to determine the needs of the community/area, based on the principle that communities should ideally be relocated as a whole, and social ties should not be affected by the process of relocation. This is to ensure that after relocation, their social and cultural identities are safeguarded.

The needs were then prioritised through a participatory process to identify the schemes available to meet specific social and/or economic needs, the costs and impacts associated with these strategies, and to identify the optimum strategy based on the financial resources available. Based on the above needs, the relocation package was prepared, which in most cases followed a 'land for land' strategy. In cases where the land holding was too small, a reasonable minimum extent of land was provided for each family.

A secured landscape for wildlife and people

The families were provided with land for housing in an area not far from the forest with the added benefit of access to facilities like schools, healthcare systems, transport links, and better livelihood opportunities.

Each family was provided with an equal area of dry land for housing and wet land for agriculture activities that they owned, as well as a house with a toilet, common wells, electricity and solar power fence at the relocation site. Care was taken to ensure that the agricultural land provided to the villagers had good irrigation facilities.

A total of 25.3 acres of land were purchased from 37 families in four corridor villages (Thirulakunnu, Valiya Emmadi, Kottapady and Puli-yankolly) by Wildlife Trust of India (WTI), although they physically occupied over 50 acres of land. In addition to this, partner NGO, Asian Nature Conservation Foundation (ANCF), had purchased 12 acres of land from the Sulthar Vayal village. The villagers were relocated across different time periods- Thirulakunnu was relocated in 2006,

Valiya Emmadi in 2009, Kottapady in 2010 and Puli-yankolly in 2011.

Human-wildlife conflict was a major problem when the families lived inside the corridor. Post-relocation, the HEC has reduced greatly with over 90% of the relocated families agreeing that the new location had almost no attacks on the villagers or their property by wildlife, except for stray incidents of depredation by wild boar and elephants.

The secured land has been handed over to the Kerala Forest Department that has been accorded legal protection as part of the Wayanad wildlife sanctuary and Wayanad North Forest Division in a gazette notification issued by the Kerala Forest Department in 2015.

The corridor is being monitored to understand the forest condition, anthropogenic pressures and the impact of securing the corridor on wild animal movement. Information was collected regarding extent of corridor usage by elephants pre and post securement, vegetation types and biotic threats like cattle grazing, felling, lopping or any other infrastructure presence.

The team also continuously monitoring the communities to assess their socio-economic status before and after relocation, to understand the impact of relocation on their lives and to take corrective

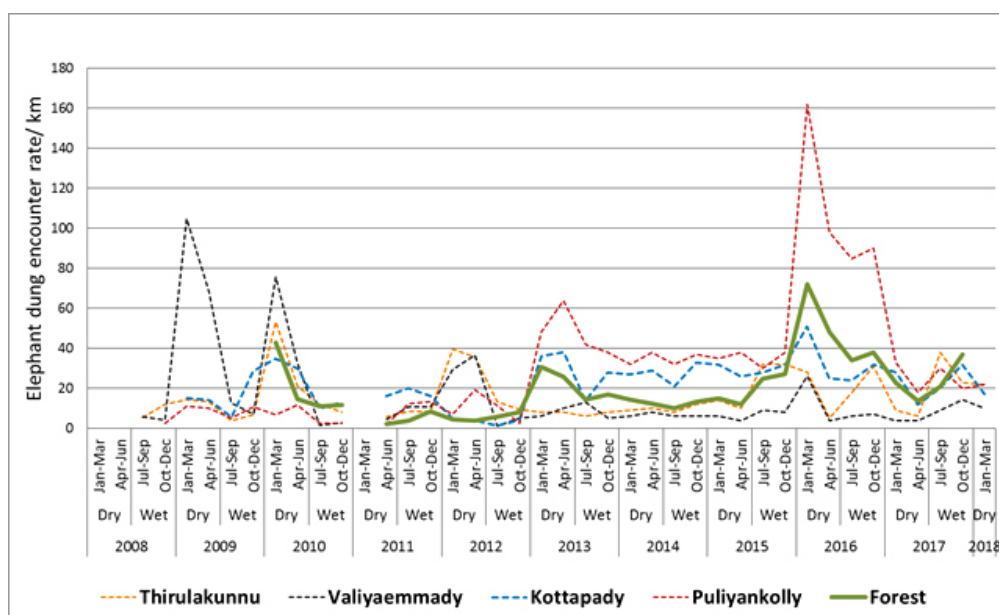


Fig 1: Elephant dung encounter rate in corridor lands and forests

measures if need be, as well as to channelize various government schemes to benefit the villagers.

The average elephant dung encounter rate in secured corridor lands from January 2008 to March 2018 was found to be 21.79 (standard error of ± 1.57), and in corridor forests it was 20.67 (SE ± 2.49).

The dung encounter rate was also analysed across sites and seasons. Elephant dung encounter rate in secured corridor land and corridor forest is almost similar that clearly indicates that the secured corridor lands are regularly used by elephants and has become part the corridor forest over the years. Studies in Kalakad - Mundanthurai

Right:
Elephants at
Puliyanakolly
Photo credit:
Pranav Capila



Tiger Reserve in the Western Ghats have shown an encounter rate of 2.01 dung piles/km in a landscape containing evergreen, dry deciduous and mixed deciduous vegetation patches. Similar studies in mixed deciduous scrub forest have recorded a dung encounter rate of 15.5 piles/km. A total of 19 mammals were reported from the secured area of the corridor including tiger, elephant, gaur, bonnet macaque, spotted deer, sambar deer, mouse deer, Indian grey mongoose, ruddy mongoose, Indian hare, small Indian civet, wild boar, etc.

A major concern in the secured corridor is the proposed National Highway from Kozhikode to Mysuru (alternate route due to night traffic ban in Bandipur) via Perambra – Thottilpalam – Mananthavady – Panavalli – Appapara –Kutta – Kanoor – Belale – Hunsur).

This is being proposed as an alternative route due to the night traffic ban in Bandipur Tiger Reserve that will pass through the centre of the corridor in Panavalli- Appapara section. The proposed road and related activities along the highway will be a major hindrance to wild-life movement and defeat the very purpose of securing the corridor. Alternate route from outside the corridor should be explored for the highway.

The relocation of villagers from a remote region inside corridor to a more accessible location has significantly improved the life of the beneficiaries as they now have better access to state services, health-care and market facilities. The families were provided with land for housing in an area not far from the forest with the added benefit of facilities like schools, healthcare systems, transport links, and access to better livelihood opportunities.

The project successfully provided concrete houses with tiled roofs for the relocated families with functional toilets and access to water, leading to better hygiene for the relocated families and also brought the beneficiaries closer to various community infrastructures.

Most families were involved in agriculture or daily wage labour as their primary source of income prior to relocation. It was estimated that the yearly income averaged Rs 41,040 per household. The annual income improved considerably after relocation as a result of more wage labour opportunities for the relocated families apart from their own agricultural produce. The average annual income increased to Rs 175,080 per annum as the land allocated was considerably closer to town and estates, the families had ample opportunity to also work as labourers in neighbouring agricultural land.

The relocation has also helped improve the education of their children due to better access to schools and colleges and electrification of their houses and safe drinking water.

Prior to relocation, all the families relied on fuelwood for cooking and post relocation, almost 50% of the families enrolled for an LPG connection.

With improved infrastructure and earnings and access to better education and healthcare support, there has been a significant improvement in their lifestyle and has created a win-win situation for both the animals and the local communities. It has also created a successful model of collective approach that could be replicated for securing other corridors in the country.



*Photo Credits:
Raghavan G*

Community Based Elephant Conservation

Rangku N. Sangma, Chief Forest Officer, Meghalaya

Elephants have always been an integral part of the a'chiks (Garo) way of life. They have always been revered and is always referred to as 'Dalgipa' or the 'big one' and very rarely by their local name 'mongma' except when necessary. The a'chiks have always shared space with these magnificent creatures and learnt to evolve with them. many a folk lore associated with the 'Big one' have been narrated through generations with some of the popular ones being; 'they can hear through distances', 'they never forget', 'they can sense your intentions' and so on.

The forest department of the Garo Hills Autonomous District Council has had the privilege to look after the well being of the 'Big one' since the inception of the Council in 1952. Garo hills has been abundantly blessed with lush greenery with almost 80% of the total geographical area under forest cover. These forests have been supporting diverse wildlife since time immemorial. By mandate of the 6th Schedule to the Constitution of India, the Garo Hills Autonomous District Council enacted the 'Garo Hills District (Forest) Act, 1958, to safeguard this rich green and wild heritage. Under this Act, the Garo Hills Autonomous District (constitution and management of village Forests Rules, 1976, was formulated to empower communities in looking after their forests and wildlife under traditional and cultural laws. Accordingly, Forest Department has been working with communities for the securement of forests, wildlife and habitats.

The land tenure system in Garo hills is unique. The communities have ownership over territorial (clan) lands (territories) and it was realized



long back that to secure forests and wildlife we would have to first secure the lives of the communities living around these forests. Hence, management of these forests need to be planned in a way that includes community participation throughout, which has been the mantra of Forest Department for a long time.

Communities in Garo hills are predominantly forest dependent and get livelihood from forests resources.

Hence, they have always been conservation oriented because they know that their lives and livelihoods are affected when forests are depleted. The Garo hills are part of the largest elephant landscape in Meghalaya, which includes the Garo hills elephant Reserve spread across 3500 square kilometers, viz, the Nokrek Biosphere Reserve, three Protected Areas (Balpakram National Park, Siju Wildlife Sanctuary and Nokrek National Park), Baghmara Reserved forest and five crucial elephant corridors (community forests, looked after by the district council) which together support around 800-1000 elephants.

The communities have been proactive in the conservation of their forests and have been voluntarily setting aside huge patches of their forests for declaring as village reserves. With their help Forest Department has been able to declare over 200 registered Village Reserved Forests with many more under process.

*Above:
Elephant Corridors
in Garo Hills*



1



2



3



4

The Council has also been working with a long time partner in conservation, the Wildlife Trust of India and have collaboratively been able to secure crucial habitats and corridors measuring over 3500 hectares and have been able to impact lives of communities in a positive way by sharing the benefits of conservation through ways that influence their daily lives. Meghalaya have always linked conservation with food security and realized early on that, to secure forests we would first have to secure livelihoods of people living around those forests.

5

- 1. Assisted Natural Regeneration Work in Sasat Sakal Aduma_2011
- 2. Daribokgre Rice husking mill
- 3. Jadegindam Hanging Bridge Renovation_Mar 2020
- 4. Misimagre spring water chamber
- 5.. Daribokgre_ Settled Cultivation

Photo Credit: GHADC.



Conservation news



World Elephant Day 2020

World Elephant Day is an international annual event, dedicated to the preservation and protection of the world's elephants. The goal of World Elephant Day is to create awareness on elephant conservation, and to share knowledge and positive solutions for the better protection and management of wild and captive elephants.

This year, the World Elephant day was celebrated by Project Elephant Division and Elephant cell of

WII at Indira Paryavaran Bhawan, New Delhi.

The programme involved releasing the booklet on "Best practices of Human-Elephant Conflict Management in India" and the launch of the beta version of the National Portal management of human elephant conflict called "Surakhsya" for collection of real time information & also for managing the conflicts on a real time basis. A video on measures for encouraging

human – elephant co-existence through HEC mitigative approaches was also screened.

The was held in the august presence of Shri Prakash Javadekar, Hon'ble Minister EF&CC, Shri Babul Supriyo, Hon'ble MoS, EF&CC, Dr. Sanjay Kumar, DGF&SS, MoEF&CC; Shri Soumitra Dasgupta, ADG (Wildlife), Shri Noyal Thomas, IGF & Director Project Elephant, MoEF&CC and other senior officers of MoEF&CC. The State Forest Departments,

WII and other stake holder organizations joined the celebrations on the virtual mode. Shri Prakash Javadekar Hon'ble Minister, EF&CC emphasized on co-existence of people with elephants and the efforts taken by the government to augment food and water availability to wild animals in forests. He also stressed on the use of

technology and urged scientists and policy makers to implement out of box ideas to mitigate HEC. Shri Babul Supriyo, Hon'ble Minister of State, EF&CC raised concern over the death of humans and elephants that die every year due to increasing HEC and the efforts taken by the Ministry and State FDs to address the situation.

He echoed the need of people and elephants to co-exist which blends well with the theme of the World Elephant Day 2020, "Living with elephants" and urged people to pledge to come together in protecting our National Heritage Animal for our future generations.





Release of Portal “Surakshya”

Union Environment, Forest & Climate Change Minister, Shri Prakash Javadekar and Minister of State, Shri Babul Supriyo launched National Portal on Human-Elephant conflict called “Surakshya”

on the eve of World Elephant Day in August 2020. The portal aims to collect real-time information and will also manage conflicts on

a real-time basis. It shall help to set the data collection protocols, data transmission pipelines and data visualization tools to enable policy-makers to leverage HEC data for policy formulation and for preparation of Action Plans for mitigation of conflicts. At present the portal shall be run on test run in the states of Odisha and Chhattisgarh.



*Photo credit:
Amila Tennakoon*

Indian Elephants in Appendix I of Convention of Migratory Species (CMS)

Indian elephants migrate from India to neighbouring countries Bangladesh, Bhutan, Nepal and Myanmar. However, wildlife laws and protection regimes for these species can be different in each country, making them vulnerable to getting killed during their movement across political boundaries. In addition, many migratory species are threatened with extinction due to habitat degradation, barriers in their migration routes, and other pressures. Therefore, these species need special attention by all countries that are part of their range. In a bid to protect elephants, India put through

a proposal to include Indian elephants in the Appendix I of the Convention to the Migratory Species (CMS) which was unanimously accepted by the 13th Conference of Parties (COP) of the UN Convention on the Conservation of Migratory Species (CMS) at Gandhinagar in February 2020.



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