



## INTERIM REPORT

# Training Workshop on Disaster Risk Reduction & Heritage Sites (Natural and Cultural)

A 6-day training programme

14th to 16th April & 17th to 19th April, 2017

Venue: T.S. Rehman Institute, Nhava Mumbai



Disaster Risk reduction aims to reduce the damage caused by natural or manmade hazards, through an ethic of prevention. The frequency of disasters and their consequent impact to lives, property and livelihoods has seen an unprecedented rise in recent years (UNISDR 2009). A rapidly urbanizing world, increasing population, climate-change etc. has increased the vulnerability of nations, especially developing countries such as India.

When World Heritage properties, as with all heritage proper-ties, are exposed to disasters, their integrity is threatened and their val-ues may be compromised. The loss or deterioration of these Outstanding Universal Values (OUVs) would negatively impact local and national com-munities, both for their cultural importance as a source of information on the past and a symbol of identity, and for their socio-economic as well as ecological values. Existing national and local disaster preparedness and response mechanisms usually do not include heritage expertise in their operations. As a result, hundreds of sites are virtually defenseless with respect to potential disasters. Protection of heritage sites in the event of natural disasters, conflicts and accidents requires urgent attention of the disaster management community, environmentalists, archeologists and policy makers responsible for protection of people and properties. Since risks related to disasters within heritage sites are a function of their vulnerability to different potential hazards each site requires contexts specific DRR plans.

In this regard, a training workshop on disaster risk reduction and natural heritage sites was collaboratively organized by Wildlife Institute of India, Dehradun and Tata Institute of Social Sciences, Mumbai at T S Rehman Institute, Nhava, Mumbai from 14<sup>th</sup> to 16<sup>th</sup> April 2017. It was attended by 15 participants from Assam, Karnataka, Madhya Pradesh, Uttarakhand and Maharashtra.

The primary objectives of the Natural heritage and DRR training part (14-16 April) were the following:

- Learn the significance of natural heritage sites, how they are notified, and issues and challenges involved
- Learn about ecosystem -based DRR approach to Pro-ected Areas and Natural heritage sites.
- Learn how sites serve as effective buffers for natural hazards (such as Tsunamis, floods and landslides).
- Learn about the ways in which heritage can assist in reducing the impact of disasters, before, during and after they have taken place.
- To appreciate the need for DRR approaches for natural heritage sites.

On the first day of workshop, Inaugural plenary and overview was given by Dr. Janki Andharia, Professor, Jamsetji Tata School of Disaster Management, Tata Institute of Social Sciences, Mumbai, followed by introduction of the participants. Initial lecture was on “Natural hazards at Natural World Heritage sites- case studies from Asia Pacific region” by Dr. Sonali Ghosh, Scientist F, UNESCO C2C, Wildlife Institute of India, Dehradun. She explained three types of heritage sites viz. Cultural, Natural and mixed; also the 10 criteria taken into consideration for certification of the same. After this lecture Dr. Vinita Vyas, Deputy Director, Sahyadri Tiger Reserve presented a case study of STR about Natural hazards impacting world heritage. In her lecture she discussed about many problems such as poaching, grazing, fire, lack of connectivity, scarcity of staff etc. “Disaster risk in Asia and the Pacific: New tools and techniques for damage and loss assessment” was discussed by Dr. Manish Kale, C-DAC, Pune. He explained about satellite remote sensing, drone surveillance, electromagnetic radiation etc. In the post lunch session Dr. Janki Andharia put some light on the basics of disaster management explaining vulnerability and resilience. After this lecture Dr. Debi Goenka, Executive Trustee Conservation action Trust gave a session on “Saving mangroves for DRR Reduction- a legal case study”. In his talk he elaborated on the Coastal zone management plan and shared some of his experiences in the field of conservation of mangroves. This was followed by a short field visit to the regenerating mangroves near the jetty where the participants saw many avian species as well.

The second day started with a very informative lecture on “Operational guidelines for world heritage with special reference to DRR” by Dr. Sonali Ghosh. The economic damages and loss to heritage sites due to disasters and their operational measures, also ecosystem-based DRR and adaptations were discussed in this lecture. This was followed by a lecture on “Monitoring, evaluation and periodic reporting” by Mr. Anukul Nath, UNESCO C2C, WII, Dehradun. He discussed about some issues and challenges in the periodic reporting. In post lunch session we had a visit to Marine museum (Sir Mohamed Yusuf Seamen Welfare Foundation) in the campus of T S Rehman Institute followed by a lecture on “Global datasets and introduction to geo-hazards visualization (Computer based exercise)” by Mr. Chitiz Joshi, UNESCO C2C, WII, Dehradun. He explained about various types of databases, cloud sourcing, Digital elevation model, Defense Metrological Satellite program, Bhuvan etc. Documentaries related to DRR planning in Uttarakhand and ECO-DRR were also shown. This was followed by allotment of group assignments for the participants.

On the third day there were two guest lectures followed by presentations given by participants on disaster risk management plan for different heritage sites. Initial lecture was of Dr. T P Singh, Director, Symbiosis institute of Geoinformatics, Pune on “Space based disaster risk assessment in Protected areas” He elaborated on general remote sensing, also forest fire detection and monitoring, drought assessment and prediction, forest biomass assessment etc. Second lecture was delivered by Ms Prerna Agarwal on “Managing risk from increasing tourism at natural heritage sites- Kas plateau case study”. In her lecture she explained about problems faced by this plateau due to uncontrolled tourism, also overgrazing, fire, scarcity of water, human-animal conflict etc. In the valedictory session Dr. Anish Andheria, President, Wildlife conservation Trust, discussed on current status of forest management and climate change in India with respect to other countries. He also focused on local knowledge and use of technology for empowerment at local level. The workshop was concluded with the feedback and distribution of certificates.

It is expected that a cadre of informed citizen with through understanding of the linkages between DRR and heritage has now been equipped with the wherewithal to take up the necessary actions to promote the same.