International Training Workshop on Open Standards for the Practice of Conservation in World Natural Heritage Sites for SAARC Countries

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भारतीय वन्यजीव संस्थान
Wildlife Institute of India

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INTRODUCTION

An 'International Training Workshop on Open Standards for the Practice of Conservation in World Natural Heritage Sites for SAARC Countries' was organised by the UNESCO Category 2 Centre on World Natural Heritage Management and Training for Asia and the Pacific Region at Wildlife Institute of India, Dehradun, Uttarakhand from 1st to 4th December, 2015. The Open Standards bring together common concepts, approaches, and terminology in conservation project design, management, and monitoring in order to help practitioners improve the practice of conservation. A total of 26 participants representing World Heritage Sites from SAARC countries, including India, both Government and Non-Government Organisations, attended the workshop. The workshop was facilitated by resource persons from WildTeam United Kingdom. Financial support was provided by the Ministry of Environment, Forests and Climate Change, Government of India and Uttarakhand State Council for Science and Technology (UCOST), Dehradun.

INAUGURAL SESSION

In the Inaugural Session, a welcome note and introductions by all the participants were facilitated by the Workshop Coordinator, Dr. Malvika Onial, Scientist E, UNESCO C2C, Wildlife Institute of India.

The Opening Remarks were provided by Guest of Honour, Dr. Rajendra Dobhal, Director General, Uttarakhand State Council for Science and Technology (UCOST), Dehradun. Dr. Dobhal presented a reality check on the state of heritage protection in general which highlighted its challenges of scarce funds, conflicting interests of multiple stakeholders and lack of binding regulations where the Directive Principles of State Policy under the Indian Constitution provides for protection of natural heritage only as a voluntary act. To strengthen protection of heritage, Dr. Dobhal suggested enhancing funding support, conflict resolution between various entities viz. Government Departments, NGOs, scientific experts, academic professionals, etc., and greater responsibilityof the people.

The session was graced by Chief Guest, Dr. Anmol Kumar, Director General, Forest Survey of India, Dehradun. Dr. Kumar underlined the fact that Natural World Heritage Sites are primarily Protected Areas which face the common challenges of reconciling development objectives, community engagement, land use / land ownership issues among others. Based on his experience, Dr. Kumar highlighted how PA management methods have evolved over time from an exclusivist attitude to a more cooperative approach and that there cannot be a straitjacketed style of management. It is in this context that he believes that the Open Standards framework will offer elasticity, flexibility and adaptive management options in the conservation and protection of natural sites.

In the Inaugural Talk representing the host institution, Dr. V. B. Mathur, Director, Wildlife Institute of India offered an overview of the World Heritage Convention, underlining its near

universality comprising 192 member nations of the world and its cooperative nature of being perhaps the least politicised global body. The Director introduced the concept of Natural Heritage with the participants, outlining the criteria for Outstanding Universal Values of World Heritage Sites and the elaborate process of nomination/designation of a property as a World Heritage Site. The global importance of such a site was emphasised, including the importance of the concept of Open Standards in planning for effective conservation of these sites.

Dr. Adam Barlow, Director, WildTeam UK and primary resource person for this workshop, provided his introductory remarks on the concept of Open Standards for the Practice of Conservation, underlining the fact that this concept could be applied to any landscape. Dr. Barlow hoped that this workshop would be about the learning of a new approach for the participants and the building of a community of learning.

A Vote-of-Thanks was offered by Mr. Niraj Kakati, Technical Officer, UNESCO C2C, Wildlife Institute of India to all the invited dignitaries, resource persons and participants from SAARC countries, Forest Officials from India and NGO representatives actively working in natural sites in India.

TECHNICAL SESSION I

The theme of the first session was focussed on the standards and procedures for World Heritage Sites. The session included talks on 'Operational Guidelines for the Implementation of the World Heritage Convention' by Dr. Malvika Onial, Scientist E, UNESCO C2C; 'Monitoring and Reporting for Natural World Heritage Sites' by Dr. Sonali Ghosh, Scientist F, UNESCO C2C; and 'Preparation of Nomination Dossiers' by Dr. Manoj Nair, Scientist F, UNESCO C2C.

(i) 'Operational Guidelines for the Implementation of the World Heritage Convention' by Dr. Malvika Onial, Scientist E, UNESCO C2C

Dr. Onial provided an overview of UNESCO's Operational Guidelines for the Implementation of the World Heritage Convention. The major components of the Guidelines, *viz.* World Heritage List, Process for the Inscription of Properties, Process for Monitoring the State of Conservation, Periodic Reporting On Implementation, Encouraging Support For The Convention, The World Heritage Fund & International Assistance, The World Heritage Emblem And Information Sources, along with important annexures were briefly explained.

Emphasising the objectives of the Guidelines, she explained its role in facilitating the implementation of the Convention by setting forth the procedure for the inscription of properties on the World Heritage List and the List of World Heritage in Danger, the protection and conservation of World Heritage properties, the granting of International Assistance under the World Heritage Fund and the mobilization of national and international support in favor of the Convention. The key users of the Guidelines are State Parties, World Heritage Committee, Secretariat/ World Heritage Centre, Advisory Bodies, Site Managers and Stakeholders. Dr. Onial also briefly described the key roles of the Advisory Bodies *viz.* ICCROM, ICOMOS and IUCN. ICCROM (the International Centre for the Study of the Preservation and Restoration of Cultural Property) was established by UNESCO in 1956 in Rome, Italy to carry out research, documentation, technical assistance, training and public awareness programmes to strengthen conservation of immovable and moveable cultural heritage. ICOMOS (the International Council on Monuments and Sites),a non-governmental organization, is responsible for evaluation of cultural properties nominated for inscription on the World Heritage List, monitoring the state of conservation of World Heritage cultural properties, reviewing requests for International Assistance submitted by States Parties, and providing input and support for capacity-building activities. In the same way, for natural properties, the IUCN (The International Union for Conservation of Nature) working through a worldwide partnership of national governments, NGOs, and scientists, plays a key role in evaluation, monitoring the state of conservation, reviewing requests for International Assistance submitted by State Parties and supporting capacity-building activities in the context of natural heritage. Dr. Onial concluded her talk by highlighting the importance of the Tentative List as an useful planning and evaluation tool.

(ii) 'Preparation of Nomination Dossiers' by Mr. Manoj Nair, Scientist F, UNESCO C2C

In this presentation, the nomination process of designating a site as World Heritage Site was explained. As of 2015, India has 7 Natural and 25 Cultural properties listed as UNESCO World Heritage Sites. Mr. Nair explained the steps involved in the nomination process as per the UNESCO Operational Guidelines. The foremost step is making a tentative list of potential World Heritage Sites of a country. It is the duty of the State Parties to prepare a nomination dossier for tentative listing as perform at provided in the Operational Guidelines (Annex 2A). Once a site is tentatively listed by UNESCO, the State Parties prepares a nomination dossier for final inscription. Then the World Heritage Centre checks whether the dossier fulfils its outline in documenting the dossier. Thereafter, World Heritage Committee takes the final decision to inscribe the site on the World Heritage List or defers, pending more in-depth information or refuses its inscription. After all the information is provided in textual and pictorial format, World Heritage Bureau evaluates and makes recommendation on the nomination or asks State Parties for further information. The final step is a visit to the site by experts of Advisory Bodies like IUCN or ICOMOS to evaluate whether the site is of "Outstanding Universal Value". After the submission of their inputs, the World Heritage Centre declares whether a site is nominated as World Heritage Site or not.

Mr. Nair highlighted key issues in the process of nomination using for illustration the ongoing nomination of the Bhitarkanika Conservation Area, Odisha, India as a World Heritage Site which the Dossier Preparation Team at the Centre has undertaken. Mr. Nair explained the process of documentation for the dossier and pointed out the four major components *viz.* Biology (Biodiversity values), GIS (Maps), Sociology (Stakeholder analysis) and Design (Aesthetics and Layouts). Various information sources were used for data collection. For primary data collection, biological data, socio-economic data, stakeholder workshop, Photo/ Video documentation and Ground truthing/ Mapping was carried out. For secondary data, extensive literature review was referred to along with Management Plans. With all these data, the dossier was compiled and synthesised. He also shared the list of key reference and guidelines as well as the different sections *viz.* Executive Summary, Maps, Chapters (1 to 9) and Annexure. As per current status, the nomination dossier for Bhitarkanika Conservation Area submitted in September 2015 has undergone first complete check by the World Heritage Centre. The final dossier is due to be submitted to the World Heritage Centre by 1st February, 2016.

(iii) 'Monitoring and Reporting for Natural World Heritage Sites' by Dr. Sonali Ghosh, Scientist F, UNESCO C2C

Dr. Ghosh presented about the process of reporting and monitoring of World Heritage Sites as per the mandate set by the World Heritage Convention. There are 163 State Parties that are signatories to World Heritage Convention. Presently, Europe has the highest proportion

(48%) of World Heritage Sites among the continents. It is followed by Asia and the Pacific region (23%), Latin America and the Caribbean (13%), Africa (9%) and Arab States (8%). As of 2015, there are 1031 properties nominated as World Heritage Site in the world out of which 802 are cultural sites, 197 are natural sites and 32 are mixed sites.

Dr. Ghosh mentioned the 5Cs of Strategic Objectives from WHC-12/36.COM/9B) – Capacity building, Credibility, Conservation, Community and Communication. All these 5Cs are interconnected and are important for success in conservation of sites. She highlighted the obligation of State Parties to regularly prepare reports about the state of conservation and the various protection measures put in place at their sites. It allows World Heritage Committee to assess the conditions at the sites and, eventually, to decide on the necessity of adopting specific measures to resolve recurrent problems. The State of Conservation (SOC) Report is required to be submitted by a State Party for each of its World Heritage Properties either annually or once every two years. A Periodic Reporting is undertaken every 6 years by State Parties. It helps to provide an assessment as to whether the World Heritage values of the properties inscribed on the World Heritage List are being maintained over time. It provides updated information about the World Heritage properties to record the changing circumstances and state of conservation of the properties. It also works a mechanism for regional co-operation and exchange of information and experiences between State Parties concerning the implementation of the Convention and World Heritage conservation.

Explaining the process of reactive monitoring, she explained that this entails reporting by the Secretariat and the Advisory Bodies on the state of conservation of specific properties under threat to ensure that measures are taken to address threats existing in World Heritage properties. To give a practical outlook, Dr. Ghosh talked about Manas Wildlife Sanctuary, Assam which was on the List of World Heritage Sites 'In Danger' for 19 years. The main threats were insurgency, forced evacuation of Park staff, destruction of Park infrastructure, poaching & logging and illegal cultivation. The turning point came in 2003-2005 in the form of the first elected Local Government (Bodoland Territorial Areas District – BTAD) which gave the indigenous population a sense of empowerment. Unique community conservation models were adopted to mobilise the local villagers and recruitment of Forest frontline staff were strategies which helped in improving the scenario. Few best practices to bring this property out of 'In Danger' List were – rebuilding infrastructures and staff morale, involvement of national NGOs, involvement of local youth, community development programme, rhino re-introduction, scientific management, trans-boundary cooperation, Swamp-deer translocation and extension of the property. Dr. Ghosh served as a Deputy Field Director of Manas National Park before joining Wildlife Institute of India in 2014.

She also talked about IUCN World Heritage Outlook which is the first global assessment of all natural World Heritage sites and the action needed to achieve excellence in their conservation. She concluded her talk by explaining about UNESCO Category 2 Centre on

World Natural Heritage Site Management and Training for Asia and the Pacific Region at Wildlife Institute of India, Dehradun which is the first and only Category 2 Centre in the world concerned with Natural World Heritage Sites.

(iv) 'World Heritage Evaluation and Experience from the Field' by Dr. Archana Godbole, Director, Applied Environmental Research Foundation, Pune

The next presentation of the Session was made by Dr. Archana Godbole, Director, Applied Environmental Research Foundation, Pune. Dr.Godbole shared her experiences from the field on World Heritage Evaluation in sites in India as well as other parts of the Asia-Pacific Region (Mongolia).

Dr. Archana Godbole visited Mongolia to evaluate the proposal of 'Great Burkhan Khaldun Mountain and its surrounding Sacred Landscape' serial nominated properties as member of IUCN -ICOMOS Joint Mission. Her experiences of the site, communities and Government's preparedness for maintaining the site has been briefly described during the presentation.

North Eastern Mongolia, bordering Siberia, is a unique landscape supporting nomadic pastoralists and their traditions that are linked with nature and natural resources. The proposed site encompasses about 5,00,000 ha area and is dotted with various prehistoric and ancient monuments like deer stones. The dossier prepared by the Government has been detailed with a lot of information and references. Threats to the site are comparatively limited due to very low population of nomads using the area. Significant values of the property are based on UNESCO criteria III, IV & V.

Criterion III: A world cultural heritage property must bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared.

Criterion IV: The property should be an outstanding example of a landscape that illustrates significant stage(s) in human history.

Criterion V: The property should be an outstanding example of a traditional human settlement, land use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change.

Through her experiences series of meetings with stakeholders during the mission, Dr. Godbole emphasized the importance of clear dossier, clarity on roles and responsibilities at various stages of proposals and overall thorough understanding of the proposed site at heritage. Global comparative analysis of sites was carried out with Sacred Tai Shan (China), Mt. Athos (Greece) and Fujiyama (Japan). Pressures on the site included mining and tourism, globalisation and modernisation, acculturalisation of pastoralists' younger generation. She informed that the site was inscribed as WHS in 2015. The status ensured protection of

traditional pastoralists' lifestyle and monuments providing profile of the human history of the area covering more than 100 years.

Dr. Godbole has been closely associated with conservation in the Kas Plateau i.e. part of the Western Ghats World Heritage Sites. Present situation at the site and efforts being made by Forest Department as well as Civil Society groups were discussed in the presentation. Kas has been in the discussions due to increasing threats of tourism and participation of the local stakeholders in the maintenance of the site. Number of tourists during the peak season of flowering in the plateau is increasing manifold which has created threat to the very existence of the site and its unique rock outcrops. Dr. Godbole explained the positive as well as negative impacts of over-publicity of the site through social media and internet. Small size, lack of funding and manpower shortage further poses challenges for management. However collaborations, partnerships with and incentives to local communities for conservation and management in her opinion, will certainly address the challenges of tourism pressure.

TECHNICAL SESSION II

Presentation by World Heritage Site Managers

The session included presentations by Site Managers from SAARC Countries (Bhutan, Nepal, Maldives, Sri Lanka) and from Indian Natural World Heritage Sites.

(i) Keoladeo National Park, Rajasthan

(Mr. Bijo Joy, Deputy Conservator of Forests and Park Director)

Keoladeo National Park (KNP), located in the State of Rajasthan, is an important wintering ground of Palaearctic migratory waterfowl and is renowned for its large congregation of non-migratory resident breeding birds. It falls under the strategic location in the Central Asian flyway. A total of 375 species of birds and 34 mammal species have been recorded in KNP. The National Park area comprises28.723 sq. km which includes wetland area of 10.95 sq.km, grassland area of 6.74 sq.km and 11.03 sq.km of woodland area. Mr. Joy explained that KNP is a human-managed wetland targeted to conservation of birds, particularly waterbirds. He highlighted the major management issues of the Park explaining the primary issue of managing the water crisis that has posed a challenge to KNP. He described the management interventions in managing adequate water supply through water supply from reservoirs and pipelines *viz.* Ajan Dam, Pachna Dam, Goverdhan pipeline project and Chambal pipeline. He also delineated various aspects of threatsto the Park including those from major invasive species like *Prosopis juliflora*, Water hyacinth and African catfish (Mangur). He describes the steps that have been taken for removal and control of invasive species.

(ii) Kalakad Mundanthurai Tiger Reserve (KMTR), Tamil Nadu

(Mr. A .Venkatesh, Chief Conservator of Forests & Field Director)

KMTR located in the Tamil Nadu state of India, was declared as Tiger Reserve in 1988. This includes two contiguous Sanctuaries namely Kalakad Sanctuary and Mundanthurai Sanctuary and a part of Kanyakumari Sanctuary. The total area of the Tiger Reserve is 895 sq. km. Mr. Venkatesh explained the key significance of the Tiger Reserve in terms of its recognition as a Global Biodiversity Hotspot, high level of endemism, , water catchment potential and tribal considerations. A total of 2254 species of plants have been recorded of which 448 are endemic to KMTR. The major management issues for the Tiger Reserve include pilgrimage, tourism, forest fire, human-wildlife conflict, private estate (37 sq. km), settlements (727 people) inside the Tiger Reserve. He highlighted mitigation measures such asprohibition of poly bags and liquor andeco-watchers engaged in tourist places for managing non-degradable wastes. For the management of forest fire, fire-lines maintained and managed including maintenance of existing sign boards, watch towers near fire prone areas, and fixing of warning boards in tourist areas and bus routes were described.

Furthermore, the entire eastern periphery and the villages adjoining this Reserve are vulnerable to conflict with wild animals such as wild elephants, wild pigsand other herbivores. To minimize the conflict in the periphery, 42 km length of energized fencing has been erected around human habitation and maintenance of solar fencing is beingcarried out by Village Forest Committee (VFC). Apart from that 110 anti-poaching watchers engaged in KMTR, all vulnerable areas covered by establishing permanent anti-poaching camps and mobile camps. Under eco-development project in KMTR, villages and tribal habitations in the 5 km zone area s are included. According to the present survey, there are 228 VFCs within this zone which extends over 110 km along the eastern boundary of the Reserve. About 113 villages consisting of a population of 80,317 people in 2020 families are inhabiting the area and out of which 15,298 families have joined the VFCs.

(iii) World Heritage Sites in Kerala

(Ms. Reney R Pillai, Senior Wildlife Assistant, Kerala Forest Department)

In her presentation, Ms. Pillai explained the geographical and biological significance of the state of Kerala, historically known as Keralam, in South India on the Malabar Coast. Of the total geographical area of the state of 38,863 sq km, the State is rich in forest area with 29% of the total geographical area of the state being covered by forest. Out of 11309.47 sq km of the forest area, 3213.23 sq km is Protected Area which accounts for over 28% of the forest area. With a human population density of the state being859 per square km, the per capita forest area is 0.03 ha. The entire Kerala state is very rich in biodiversity with areas such as Periyar Tiger Reserve, for instance, having Outstanding Universal Values (OUVs). Ms. Pillai further described the Western Ghats World Heritage Sites in Kerala which form part of a serial site approach for World Heritage status.

(iv) Conservation Values and Management Challenges of Bumdeling Wildlife Sanctuary, Bhutan

(Mr.Karma Tempa, Park Manager)

Mr. Tempa described the biodiversity significance and management issues of the Bumdeling Wildlife Sanctuary (BWLS) which is situated in Eastern Bhutan. With a total area of 1520 sq km, BWLS spans an altitude of 1400 to 6450 mtrs. BWLS is home to various endangered birds especially Black Necked Crane and rare large cats. 745 species of vascular plants are present in the sanctuary. 45 species of mammals are reported from the area. Globally endangered mammals like tiger, snow leopards, Red panda and Muskdeer are present in the sanctuary. The sanctuary is very rich in the bird species: 335 bird species are reported from the sanctuary. 200 butterfly species are also present in the sanctuary. The Sanctuary is significant for various cultural and religious sites. According to Mr. Karma Tempa, the Sanctuary also faces tough challenges from

development activities that are going on around the sanctuary. Human-Wildlife Conflict is also very common. The sanctuary also faces challenges from poaching and illegal harvesting. Since the sanctuary is located in the high altitude, climatic conditions also poses a major challenge for the people working in the sanctuary. The sanctuary is not accessible during rainy and heavy winter seasons. Moreover, the tourists visiting the park mainly use non-biodegradable materials which pose a major problem for the park management. However, with the participatory approach, most of these conservation challenges can be overcome.

(v) Sagarmatha National Park, Nepal: Conservation and Management Practices

(Mr. Laxman Prasad Poudyal, Asst. Park Warden)

Sagarmatha NP, located in the Solukhumbu District of Eastern Nepal comprises an area of 1148 sq km. The key objectives of the park discussed in the workshop are as follows: to conserve ecosystem, species diversity and genetic resources, to achieve balance between biodiversity conservation and sustainable livelihood and to enhance quality ecotourism. Mr. Poudyal highlighted that Sagarmatha NP is very rich in floral & faunal diversity comprising 1074 species of plants, 208 species of birds, 34 species of mammals, seven species of amphibians and eight species of reptiles. The area is home to several rare species such as the snow leopard and the red panda. The Park has become a major destination for international tourism in recent years and contributes to growth of local and national economy. There has beena considerable increase in the number of tourists visiting during 2005 to 2013. The major threats for the park are: habitat fragmentation spread of weed species, poaching of rare/endangered wild flora/fauna, natural calamities and infrastructure development. He highlighted the steps taken to address the above mentioned threats which include species and habitat conservation, anti-poaching operation and illegal wildlife trade control, buffer zone management, physical infrastructure development, conservation education and awareness campaigns, religious and cultural site conservation, income generation and skill development for local people.

(vi) UNESCO Biosphere Programme: The Maldivian Experience

(Ms. Aminath Afau, Ministry of Environment and Energy, Government of Maldives)

An invited talk was presented by Ms. Aminath Afau, Ministry of Environment and Energy, Government of Maldives on 'UNESCO Biosphere Programme: The Maldivian Experience' which dwelt on the designation of the entire territory of Maldives as a Biosphere Reserve.

Maldives is an archipelago of 26 geographical (and 20 administrative) atolls in the Indian Ocean. The lagoons and reefs within the atolls total about 21,300km2. The archipelago is 860 km long (from latitude $7^0$6'35"N to $0^0$42'24"S), and is 80-120 km wide (longitude 72°33'19"E to 73°46'13"E). Altogether 285 species of algae, five species of seagrass, 400

species of molluscs, 350 species of crustaceans and 80 species of echinoderms have also been documented. The Maldivian waters have a high diversity of cetaceans with 20 species sighted. Over 1,090 species of fish have been recorded in the Maldives, with the most diverse group of fishes: gobies (90 species), followed by the wrasses and groupers (70 and 40 species respectively). Nearly 40 species of sharks and 16 species of skates have been recorded. Five species of marine turtles occur in the Maldives: the Green Turtle (*Chelonia mydas*), the Hawksbill Turtle (*Eretmochelys imbricate*) the Olive Ridley (*Lepidochelys olivacea*), the Leatherback Turtle (*Dermochelys coriacea*) and the Loggerhead Turtle (*Caretta caretta*). Additionally, the bird species number 170, most of which are seabirds; 70 of which are nationally protected. Despite the poor and infertile soils, Maldives also has a constricted vegetation cover. Coastal vegetation is particularly important in shoreline protection and land loss. There are 14 species of mangroves with 37 fungal associations. There are 583 species of vascular plants and these native plants can be ecologically grouped into five categories of vegetation (Adams 1988). They are beach pioneers, littoral hedge, sublittoral thicket, climax forest and mangrove and swamp forest. Some species are more important in terms of biological or socioeconomic vulnerability.

In the socioeconomic respect, fishermen in Maldives depend on a few species for bait and protein, fisheries being one of the two top contributors to the economy. Meanwhile, the limited terrestrial geography of Maldives restricts land resources to be associated with a few species which are vulnerable to disaster and exploitation. With respect to biological value, evolution within isolated islands and diverse reef systems is likely to have stemmed endemism and evolution of unique species which is an important conservation priority. Identifying the connectivity of island ecosystems, species diversity and conducting ecological viability assessments are needed to conserve the biological and economical value of the ecosystems in which these species reside. The increasing urban pressure and overexploitation of habitats and species without the consideration of long-term impacts will threaten species of economical/biological importance or globally threatened species finding shelter in the Maldives. Social, economic and demographic changes alter consumption behaviour, threatening the structure and function of atoll ecosystems which support globally significant biological diversity, livelihoods and environmental security of the people

Climate change and associated sea level rise increases the vulnerability of island populations, livelihood assets, and infrastructure of the small islands. More than 44% of settlements, including 42% of the population, and more than 70% of all critical infrastructures are located within 100 meters of shoreline. 96% of islands are less than 1 km2 and the average altitude is only 1.5 m.

The Environmental Protection and Preservation Act (1993) empowered the Environment ministry to draft guidelines for environmental protection and gave it the responsibility for identification and designation of protected areas and natural reserves that will be fulfilled by this project Currently, there are 42 protected areas totalling 24,494 hectares (0.2% of

Exclusive Economic Zone) designated under the Environment Protection and Preservation Act (Act No. 4/93). Furthermore, 14 turtle nesting beaches and several grouper, bait fish and tuna spawning areas are protected under the Law on The Maldives Fisheries (Act No. 5/87). In addition to this, a further 247 “environmentally sensitive areas” have been identified. The Government of Maldives has also included a ban on coral mining and developed environmental safeguards on tourism development.

In 2013, the Government of Maldives has pledged to designate Maldives as a Biosphere Reserve by 2017. The pledge by the Republic of Maldives is in response to the call to Parties, partners and other stakeholders to take urgent action towards achieving the Aichi Biodiversity Targets, made at the eleventh meeting of the Conference of the Parties (COP 11) in Hyderabad, India, and builds on the announcement made at the Rio +20 Conference. It is a strategic attempt by the government to holistically address climate change resilience of the vulnerable small, isolated island territories, whilst also taking into account conservation needs and sustainable development. Maldives as a Biosphere Reserve project is progressing slowly. Despite the challenges, it is hoped that Maldives would be the first country to designate the whole country as a Biosphere Reserve.

FIELD VISIT TO RAJAJI NATIONAL PARK

A field visit was undertaken by all participants to Rajaji National Park, Uttarakhand on 2nd December, 2015. The overall objective was to understand about the scope, opportunities, challenges and strategies of conservation and management in Rajaji National Park. The specific objective was to test the practical applicability of the Open Standards approach based on the actual conditions of a Protected Area. The group visited various strategic locations in the park with a view to recording various attributes like key species, main threats, major drivers of the threats, etc. The visit also included interaction with local community stakeholders residing around the park.

Background

Rajaji National Park, named after the first Governor General of India, C. Rajagopalachari (popularly known as Rajaji), was established in 1983 in the Himalayan State of Uttarakhand. Spread across 820 sq. km., RNP encompasses a diverse array of wildlife habitat. It belongs to the Shivalik/Sub-Himalaya ecosystem. The Shivalik ridge runs almost through the middle of the Park. The Northern side of the ridge slopes gently into the Dehradun valley and is characterised by deciduous forest of *Shorea robusta.* The Southern side of the ridge has a rugged topography with steep ridges and narrow valleys interspersed with sparsely vegetated hillsides and grassy slopes. A characteristic feature of this landscape is seasonally torrential streams and rivers locally known as 'Rao'. The park is a stronghold for tigers and has recently been included in the network of Tiger Reserves in India.

Flora and Fauna

Topographic diversity and high productivity in this landscape has resulted in a rich array of flora and fauna. In particular, two vascular plant species *Eremostachys superba and Catamixis baccharoides* endemicto the Shiwalik landscape, occur in RNP. The Park forms the northwestern range limit of India's two charismatic mammal species, the tiger and the Asian elephant. Other mammalian fauna include three ungulate species, namely sambar, chital and barking deer and antelopes, the nilgai and goat-antelope goral. The Park also has a remarkable bird diversity of 315 recorded species.

Conservation Threats

The Park faces many conservation challenges that threaten the survival of its wildlife and habitats. Linear development projects like the railway line; canal constructed for Chilla hydroelectric power channel; transmission line; and a national highway fragments the park as well as cause mortality of wildlife. Human encroachment and industrial expansion around the park act as other impediments to wildlife. In addition, forest degradation due to human activities inside the Park area further complicates conservation efforts. Van Gujjars, Taungya and Gothias are the three tribes that inhabit forests of the Park.

Field Itinerary

The first halt of the field visit was at Kunao along the canal constructed for the Chilla hydroelectric power channel which cuts through section of the park. The canal is a man-made structure which has created an artificial barrier for wildlife movement across different sections of the Park. The participants were given a briefing on the importance of the field visit to the requirements for the Open Standards Workshop by Dr, Sonali Ghosh, Scientist F, UNESCO C2C, WII. Thereafter, Dr. Adam Barlow, Director, WildTeam UK explained the task for the purpose of taking Rajaji National Park as a case study for the workshop. Following were the areas of the study-

a) What are main species of park to manage?
b) What are the main threats to the Park?
c) What are the drivers of these threats?

The next location was at Duggada Rao Aqueduct which is in the Eastern part of the Park. Dr. Suresh, Scientist, WII gave an overview of the history of the Park and discussed about the flagship species of Rajaji like tiger, elephant, etc. He mentioned about the natural and artificial barriers including the Ganga River and various linear projects that act as impediments to wildlife movement. However, the aqueduct is now also being used as a corridor by animals. Animal footprints and Camera Traps placed on location confirmed the presence of animals like tiger, leopard, hog deer, etc. at the site. Dr. Suresh mentioned about the importance of corridor connectivity for wildlife movement and emphasized the significance of protecting smaller, less-charismatic species like tortoise, etc.

A trip was made inside the forest up to the Mundal Forest Camp of Chilla Range of Rajaji National Park. Participants could observe the natural recovery of grassland in the Mundal area after relocation of Gujjar tribal community who were earlier settled inside the forest. Resettlement was undertaken to two villages, namely Pathri and Gaindikhatta. The area has now undergone natural regeneration of the vegetation and repopulation of wildlife. Mr. S.S Rasaily, former Director of the Rajaji National Park, explained the situation about the management challenges faced by the Park authorities. He also described the ecology and succession in the vegetation of the Park.

In order to understand the human dimension issues of forest settlement, relocation and rehabilitation of local community, the participants visited Gaindikhatta, where a substantial proportion of Van Gujjar community was resettled. The Van Gujjars, a pastoralist community, rely heavily on the forest for lopped fodder for their dairy based economy support as well as to meet their demands of fuelwood and building material for their huts. In the past, Van Gujjars followed transhumance and collected fodder in the foothills during the winter and migrated to high altitude meadows in the Himalaya. However, due to changing circumstances, most of the Van Gujjars have abandoned this traditional migration

leading to increased year-round pressure on the protected area. Almost a decade back, a major voluntary relocation drive of the Van Gujjar families from Rajaji to Haridwar (Pathri and Gaindikhatta) helped in release of some pressure from the forest. The participants had informative interaction with the Van Gujjars about their life after resettlement. The Van Gujjars exhibited positive attitude to their resettlement and gratitude to the Forest Department for supporting their rehabilitation. The Van Gujjar community expressed that this decision has enhanced their livelihood, provided education to their children, better job perspectives, better medical facilities for their families, and provision of basic infrastructure. After the rehabilitation programme, several NGOs have come up in support of Gujjar Women Community and are making efforts to strengthen the prospects of Gujjar women through training and education programmes. They also emphasized their peaceful co-existence with wild animals and natural resources like medicinal plants. Gaindikhatta demonstrated one of the successful relocation and rehabilitation initiatives of the Government and Forest Department.

The field visit was an orientation visit for the participants of the workshop to witness first-hand the issues and challenges of Protected Area management and the attempts at dealing with them. This practical exposuresubsequently became the basis of the group exercises undertaken by the participants during the workshop over the next two days.

TECHNICAL SESSION III AND VI: OPEN STANDARDS FOR THE PRACTICE OF CONSERVATION

The sessions were reserved for the concept of Open Standards and facilitated by Dr. Adam Barlow, Director, WildTeam UK. A basic understanding and introduction to Open Standards was provided by Dr. Adam Barlow. Open Standards is current best practice for conservation planning. It's a process of adaptive management for conservation projects and programmes of any scale and in any geographical location.

Overview

The Open Standards for the Practice of Conservation are a product of the collaborative work of the Conservation Measures Partnership. The Open Standards bring together common concepts, approaches, and terminology in conservation project design, management, and monitoring in order to help practitioners improve the practice of conservation. Open Standard is current best practice for conservation planning. It's a process of adaptive management for conservation projects and programmes of any scale and in any geographical location. OS practices have been used around the world by Government departments, NGOs, Academic institutions, Donor agencies etc. OS helps organisations to develop strong strategies, monitor impact of actions, learn about what actions really work, build partnerships, save time communicating, raise funds and identify research needs. At individual level it helps in progressing career in conservation and saving wildlife. Using the Open Standards to improve the practice of conservation is part science, part art. It requires some skill and experience to take these very orderly and structured principles and artfully apply them to real-world situations.

The session included group exercises for the participants. The groups were assigned serial tasks aligned to the course outline of the workshop and based on the conditions derived from the earlier field visit to Rajaji National Park. For the purpose of Open Standards, the exercises included determining project scope and targets, identifying and assessing threats, creating a conceptual model, identifying benefits and barriers, carrying out a situation analysis, setting indicators and methods among other technical aspects.

Group Exercises

In order to fully understand all the component of open standards for practice of conservation a practical mock session was arranged after discussing every steps and components of conservation frame work. All the participants were divided in four teams namely *Alpha*, *Apex*, *Addu atholhu* and *Shiwaliks*. **The first step in the Open Standards framework was identifying scope and targets.** ased on the field trip to Rajaji National Park, four teams were asked to identify a scope and six targets of that scope.

a. **Identifying scope and targets**: Scope is the geographic area where the wildlife of interest lives. It should be specific and shown on map. Target is the biodiversity that

the project is trying to save. Target should be a focus upon which other planning and monitoring steps are concentrated to ensure that everything else you do links directly back to the biodiversity in question, should be defined as species, communities, or ecosystems and should be eight or less in number.

Based on the explanation, all the four team selected scope as Rajaji National Park and following targets of the Scope i.e. Rajaji National Park, were identified:

Sl. No	Name of the target	Name of team considering the targets				Justification for selection of the target from the team. (Peer reviewing and Updating)	Notes
		Alpha	Apex	Addu atholhu	Shiwaliks		
1	Grasslands	Yes	Yes	Yes	-	Grasslands in Rajaji NP play a major role as it not only supports the prey community for apex and secondary carnivore species but also shelter many other lesser life forms.	During peer reviewing it was also mentioned that the target also indicates the health of ecosystem and level of human interference as well as the severity of invasive weeds.
2	Mahseer	Yes	-	Yes	-	Mahaseer was included as they are the flagship species of perennial river systems.	Howsoever the small perennial tributaries which are spread throughout the Protected area might not get any protection.
3	Elephant	Yes	Yes	Yes	Yes	Elephants were considered because the conservation of this species not only ensure the conservation of habitat but also the protection of the corridor in terms of connectivity as this group dwells in a large area and tends to migrate in groups from one place to another for different purposes.	All the groups kept it as a prime target as Rajaji NP is an elephant dominated landscape and justification was more or less same.
4	Riverine Ecosystem	Yes	-	-	-	This ecosystem was considered as target as it is inhabited by most of the aquatic as well as amphibian communities. This also provides resources in terms of food, water, breeding ground of multiple life forms and communities. This ecosystem is life source during the dry season.	None
5	Tiger	Yes	Yes	Yes	Yes	Tiger was the prime target due to its status as flagship as well as umbrella species. Its conservation as a apex predator protects almost all	All the groups kept it as one of the two prime targets as Rajaji has a stable population of Tigers.

						the life form in top-down manner.	
6	Butterflies	Yes	-	-	-	Butterflies were kept as target because of their role as Bio-indicator. Their larval host plant specificity as well their obligatory relationship with its larval host plant. The butterfly community of a place, habitat or landscape projects an overall health and plant diversity of that particular area.	It was a new idea and a while few site managers had their doubts on selecting butterflies as target which was later cleared by the Open Standard instructors.
7	Habitat	-	-	Yes	-	The habitat was considered as target as it hosts all the life forms and diversity.	It was pointed out by the instructor that habitat was too broad to be a target. We were also advised to select the targets which are precise. As an example it was mentioned that grass land or perennial streams are the habitats that can be selected as target.
8	Invasive species	-	-	Yes	-	It was selected as target because monitoring the invasive species we can tell about the health of our scope. For an example, Lantana is a species that need profound sunlight for its growth. Forest patches where pollarding is a common practice allows more sunlight to the forest floor as the branches and hence the canopies are cut down. Looking at the growth of the lantana we can tell about the human interference in the forest and the health of the forest.	It was pointed out by rest of the participants and later supported by the coaches that invasive species can be a threat to a particular target but not really a target for the scope.
9	Shiwalik ecosystem	-	-	-	Yes	The Shiwalik ecosystem was targeted as it inhabits vast groups of fauna and flora.	The instructors pointed out that Shiwalik ecosystem was again too broad to be a target. Perhaps it is more qualified to be the 'scope' itself.
10	Rare & endemic plant species	-	Yes	-	-	Rare and endemic plants were considered as target as the presence and abundance tells the health about the forest.	Here the coaches mentioned perhaps the threat of this target can be mentioned as invasive species.
11	Ground	-	Yes	-	-	Ground dwelling fauna was	None

	dwelling fauna					considered as target as it gives an idea about the ecology of the forest flore. It also gives an account of the previous forest fire incidents.	
12	Prey spp.	-	Yes	-	-	The prey species were considered as target as it gives an account of the carrying capacity of the area for the apex predator. It also gives an account of poaching.	The coaches gave an example that in Sundarbans of Bangladesh the population trend of prey species is increasing and so is the poaching. So the population trend might not give a clear indication about poaching is the population and the landscape is large and might only work for the bottle neck population of prey spp. in a small confined area.
13	Lesser known fauna	-	-	-	Yes	Lesser known fauna was selected as they have attribution to the health of ecosystem.	The open standard coaches mentioned that the target should be a precise group of a lesser known fauna, for example Beetles, Geckos or Crustaceans.
14	Vultures	-	-	-	Yes	The vultures were selected as target as because they gives an overall idea about the ecological health.	None

b. Identifying and assessing threats: Direct threats are human-induced actions or events that will directly degrade one or more targets. These threats are made up of human activities, natural phenomena whose impact is altered or increased by human activities.

"The IUCN Threat Taxonomy" chart was provided in the presentation which gave us a clear idea how to identify and categorize the threats of particular targets.

Based on this information all four groups were told to select three targets out of the six and mention the threats related to it. The following target and threats were selected by the four groups:

Team: Alpha	
Threat	**Target**
Forest fire	Grass Land
Invasive exotic weeds	
Forest fire	Elephant
Poaching	
Roads and railway tracks	
Canal	
Human disturbance	
Forest fire	Tiger
Poaching	
Roads and railway tracks	
Canal	
Human disturbance	
Notes (Peer reviewing and Updating): None	

Team: Apex	
Threat	**Target**
Forest fire	Rare and endemic Plants
Invasive exotic weeds	
Forest fire	Ground dwelling fauna
Grazing	Prey species
Poaching	
Roads network	
Soil erosion	
Notes (Peer reviewing and Updating): It was cleared by the workshop instructors that soil erosion is a natural phenomenon. If there is a human activity which is triggering this natural phenomenon then that human activity could have been considered as threat but soil erosion solely cannot be considered as threat to any target.	

Team: Addu atholhu	
Threat	**Target**
Forest fire	Grass Land
Invasive exotic weeds	
Grazing	
Tourism pressure	
Pesticide	
Garbage	
Climate change	
Unauthorized electric fences	Elephant
Roads and highway	
Canal	
Human-elephant conflict	
Railway tracks	
Poaching	Tiger
Canal	
Hunting of prey	
Notes (Peer reviewing and Updating):	

Team: Shiwaliks	
Threat	**Target**
Riverbed mining	Shiwalik Ecosystems
Pollution (air, water)	
Invasive exotic weeds	
Pilgrimages and ashrams	
Roads	
Forest fire	
Forest fire	Elephant
Poaching	
Roads	
Pilgrimages and ashrams	
Grazing/lopping	

Forest fire	Tiger
Poaching	
Roads	
Grazing/lopping	

Notes (Peer reviewing and Updating): The former Director of the park, Mr. Rassaily, who was attending the workshop pointed that the riverbed mining is no more an existing threat as during his service the department convinced the miner that the deposition of the soil and sand is profound outside the protected area and presently the riverbed mining is taking place outside the park boundary hence it does not possess a direct threat to any of the target. The participants as well as coaches also wanted to know how exactly Pilgrimages and ashrams are threat to elephants. The team explained that these Pilgrimages and ashrams were built around the corridor and park boundaries. Most of these set-ups have their own plantation of fruiting trees which attracts elephants during the fruiting season resulting increases in the human-elephant conflict.

c. Assessing the threats in 3 criteria:

i. Scope
Ii. Severity
Iii. Irreversibility

1. **Scope:** The proportion of the biological target that can reasonably be expected to be affected by the threat within ten years given the continuation of current circumstances and trends.

   Low: The threat is likely to be very narrow in its scope, affecting the target across a small proportion (1-10%) of its occurrence/population.

   Medium: The threat is likely to be restricted in its scope, affecting the target across some (11-30%) of its occurrence/population.

   High: The threat is likely to be widespread in its scope, affecting the target across much (31-70%) of its occurrence/population.

   Very High: The threat is likely to be pervasive in its scope, affecting the target across all or most (71-100%) of its occurrence/population.

2. **Severity:** Within the scope, the level of damage to the target from the threat that can reasonably be expected given the continuation of current circumstances and trends.

   Low: Within the scope, the threat is likely to only slightly degrade/reduce the target or reduce its population by 1-10% within ten years or three generations.

   Medium: Within the scope, the threat is likely to moderately degrade/reduce the target or reduce its population by 11-30% within ten years or three generations.

High: Within the scope, the threat is likely to seriously degrade/reduce the target or reduce its population by 31-70% within ten years or three generations.

Very High: Within the scope, the threat is likely to destroy or eliminate the target, or reduce its population by 71-100% within ten years or three generations.

3. **Irreversibility:** The degree to which the effects of a threat can be reversed and the target affected by the threat restored.

   Low: The effects of the threat are easily reversible and the target can be easily restored at a relatively low cost and/or within 0-5 years.

   Medium: The effects of the threat can be reversed and the target restored with a reasonable commitment of resources and/or within 6-20 years.

   High: Effects of the threat can technically be reversed and the target restored, but it is not practically affordable and/or it would take 21-100 years to achieve.

   Very High: Effects of the threat cannot be reversed and it is very unlikely the target can be restored, and/or would take >100 years to achieve.

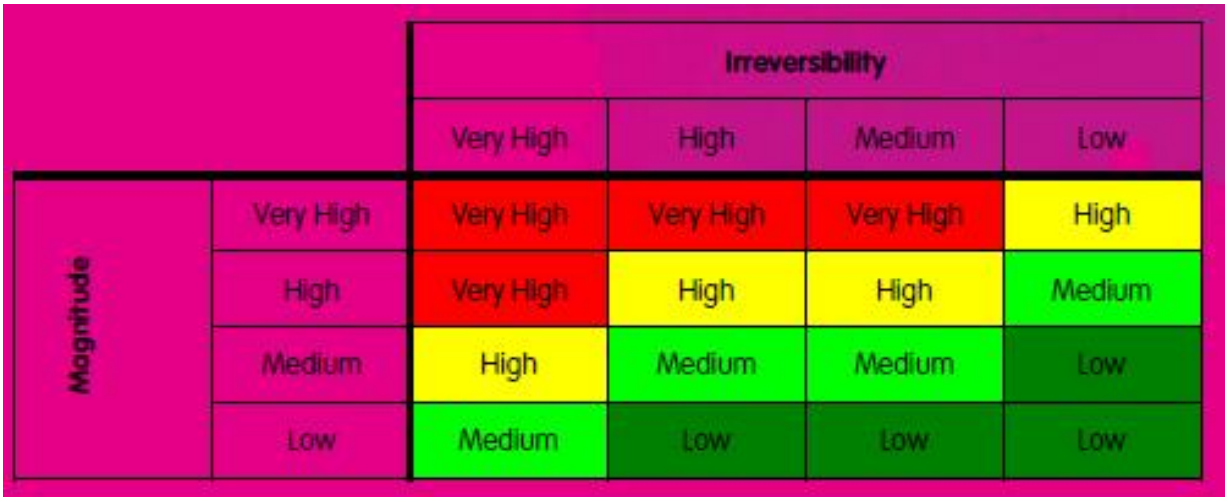
The next step of assessing the threat was measuring "The Threat Magnitude" which is the accumulation of the scope of threat and the severity of threat. It can be expressed as,

Scope + Severity = Threat Magnitude

		Scope			
		Very High	High	Medium	Low
Severity	Very High	Very High	High	Medium	Low
	High	High	High	Medium	Low
	Medium	Medium	Medium	Medium	Low
	Low	Low	Low	Low	Low

Once the threat magnitude is categorised, it has to be accumulated with the threat irreversibility in order to rate the threat. **The Threat Rating** can be expressed by following formula,

Threat Magnitude + Irreversibility = Threat Rating



Magnitude \ Irreversibility	Very High	High	Medium	Low
Very High	Very High	Very High	Very High	High
High	Very High	High	High	Medium
Medium	High	Medium	Medium	Low
Low	Medium	Low	Low	Low

After this an exercise was given where the four teams had to consider three threats and fill up the following table,

Threat	Scope	Severity	Irreversibility	Magnitude	Rating

All for teams have selected the following threats and rated the selected threats,

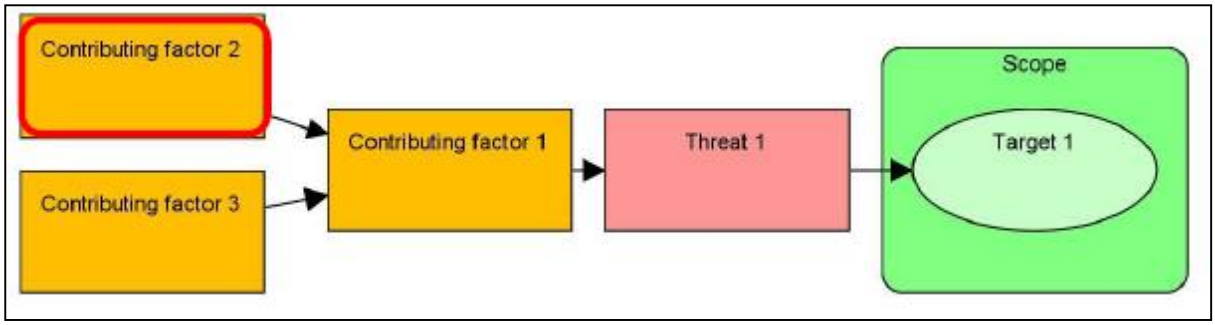
Team	Threat	Scope	Severity	Irreversibility	Magnitude	Rating
Alpha	1. Canal	Very High	High	High	High	High
	2. Invasive exotic weeds	Medium	High	Medium	Medium	Medium
	3. Forest Fire	Medium	High	Low	Medium	Low
Apex	1. Soil erosion	Very High	Very High	Very High	Very High	Very High
	2. Killing of Sambar deer	Medium	Medium	Medium	Medium	Medium
	3. Road network	Medium	Very High	Very High	Medium	Medium
Addu atholhu	1. Rail track	Medium	Medium	High	Medium	Medium
	2. Invasive exotic weeds	Medium	High	Medium	Medium	Medium
	3. Forest fire	Medium	High	Medium	Medium	Medium
Shiwalik	1. Poaching	High	Very High	Very High		Very High
	2. Roads	Very High	Very High	High	Very High	Very High
	3. Fire	Very High	Low	Low	Low	Low

The categories of all the component of rating the threat was based on the assumption and perception and not on statistics. Hence same threats are rated differently by different groups.

d. Building a Conceptual Model

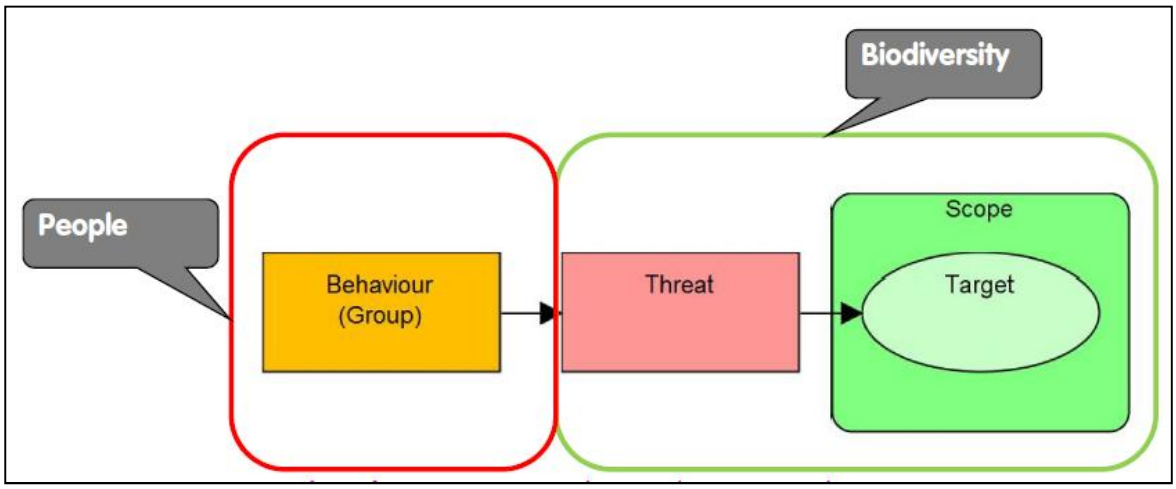
A conceptual model is a tool that visually portrays the relationships among the different factors in situation analysis.A good model illustrates the cause-and effect relationships that are assumed to exist within the project area. It should be as simple as possible while still including the most important details. To make sure that the conceptual model generally represents what is happening at site, it should be built in a team.Likewise, it is ideal to ground-truth (or field test) the model with key stakeholders and partners both inside and outside the project team to make sure that the model reflects their understanding of the situation.

Following generic conceptual model was shown to understand the project context.



Here Contributing factor is the factor that is directly or indirectly contributing to a threat. The contributing factors directly lead to the behaviour. Behaviour is something that people do e.g. cutting, trading, selling, consuming, hunting etc.

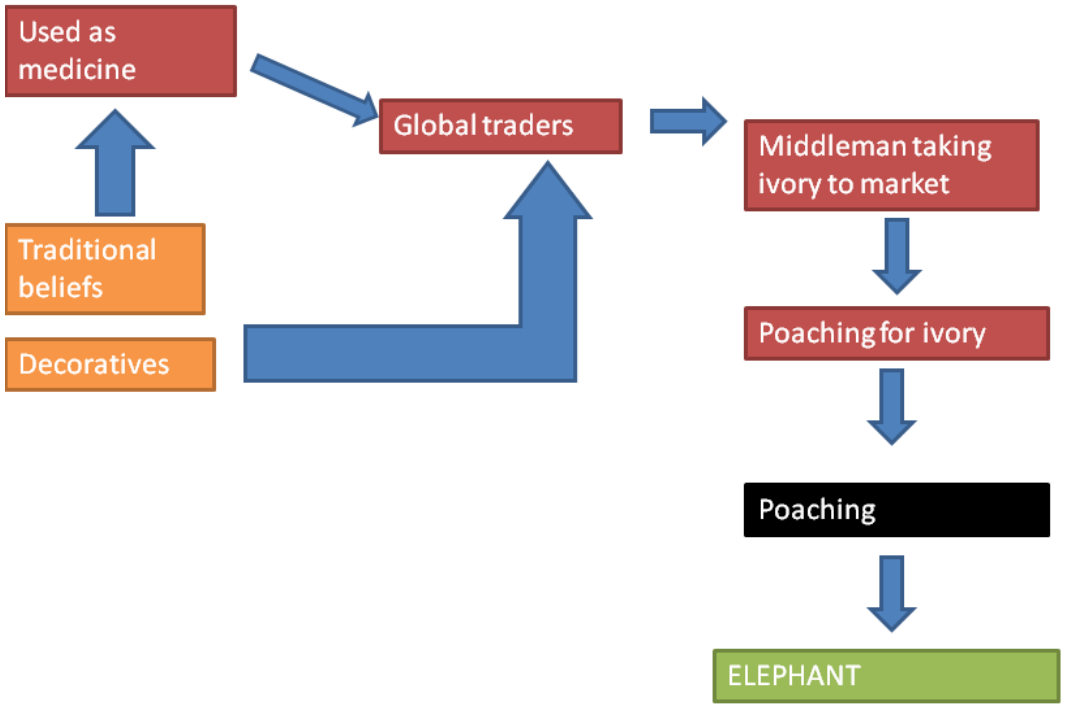
The following chart shows that threat and target is related to biodiversity, whereas behaviour has a very different entity, i.e. People.



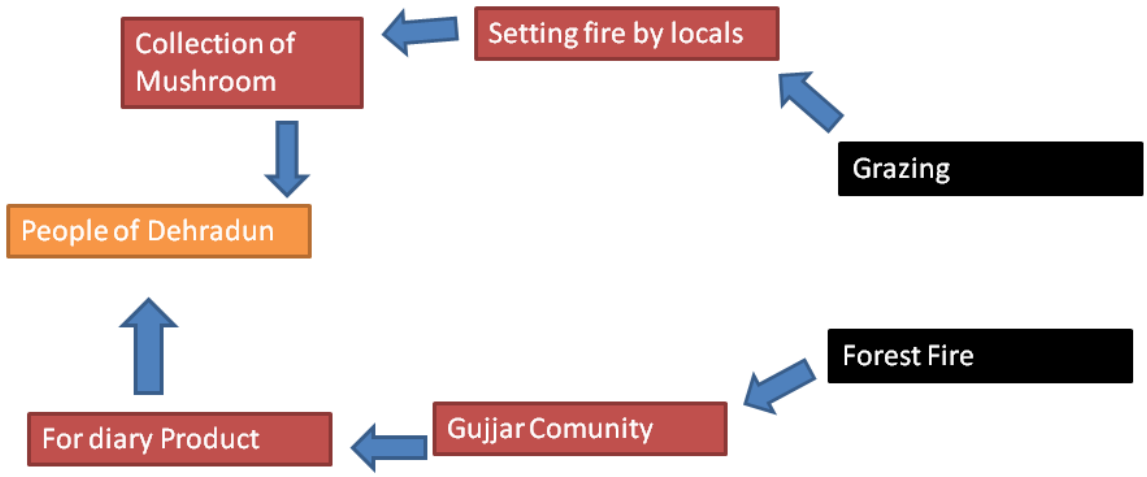
After briefing about the conceptual model, the importance of **selecting 'correct intervention point'** was discussed. Key intervention point is contributing factor that must be addressed to reduce the threat.

To test and to further clear our understanding each team was asked to create a concept model for two threats and select two intervention points.

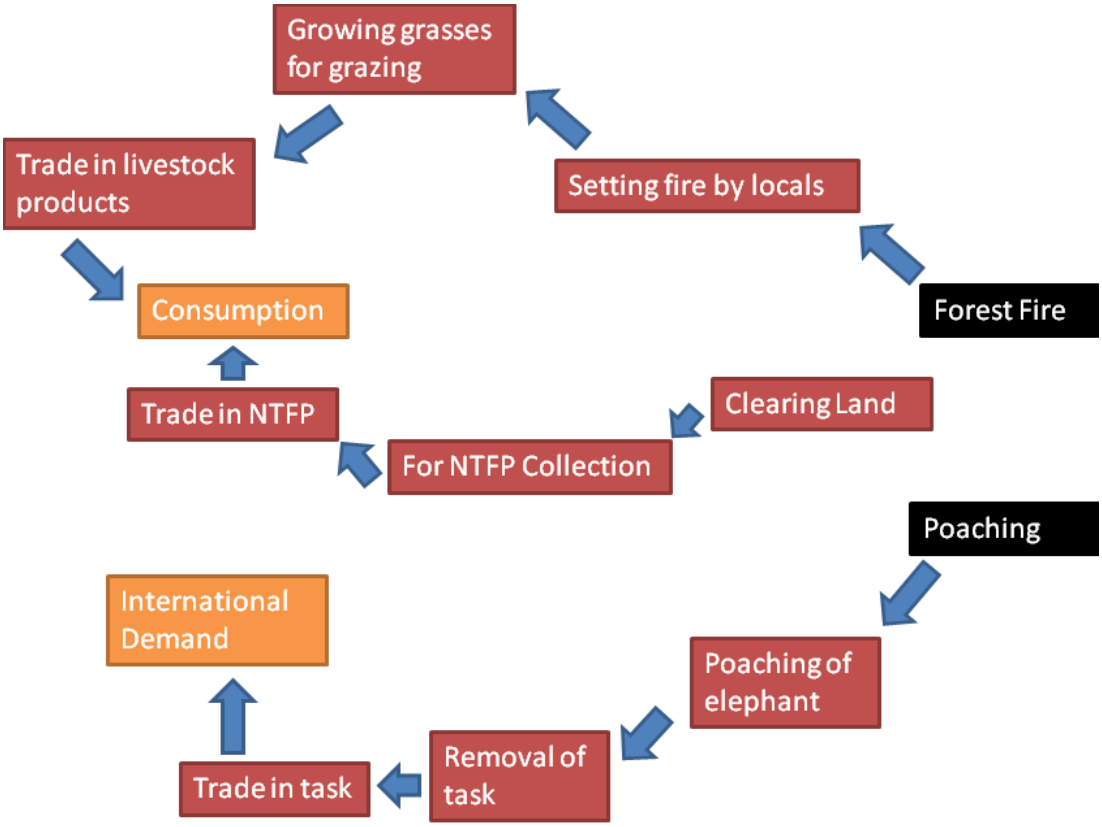
Team Alpha considered just one threat, 'poaching' and following model was made,



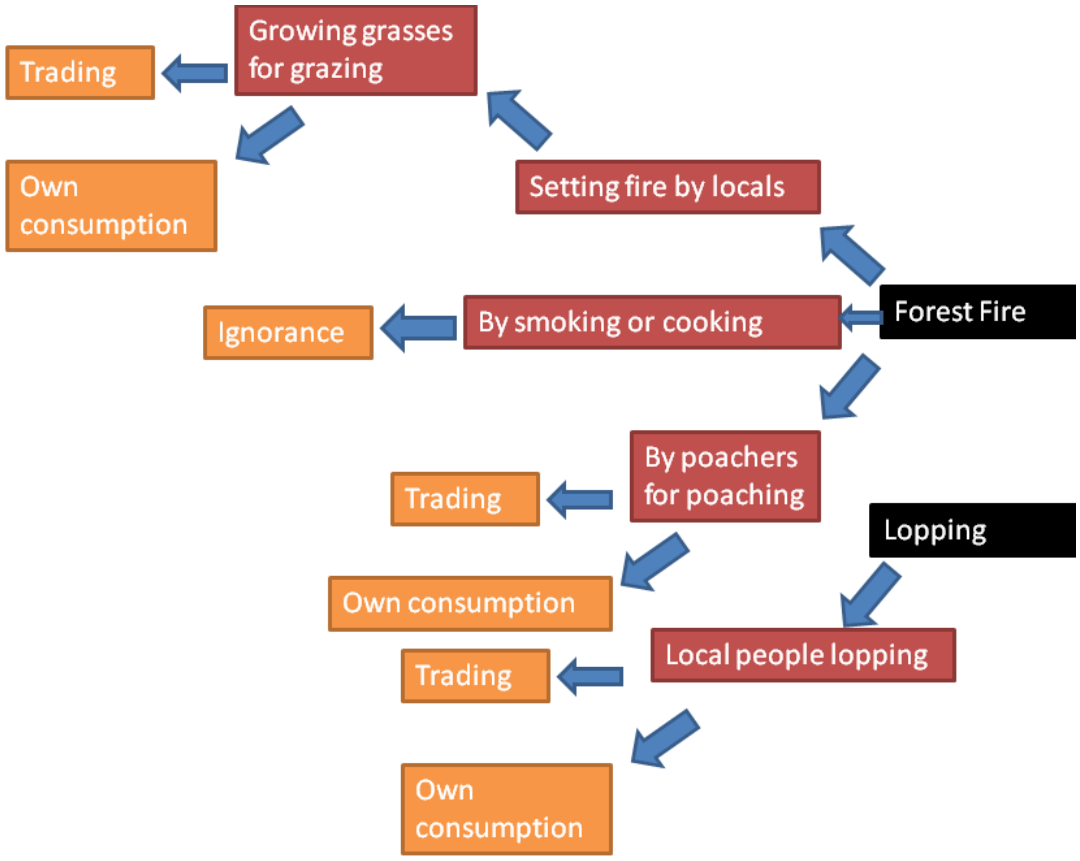
Team Apex considered 'grazing' and 'forest fire' and following model was made,



Team Addu Atholhu considered 'forest fire' and 'poaching' and made the following model



Team Shiwalik considered 'Forest fire' and 'lopping' and came up with following model,



And intervention points were selected by different teams are as follows,

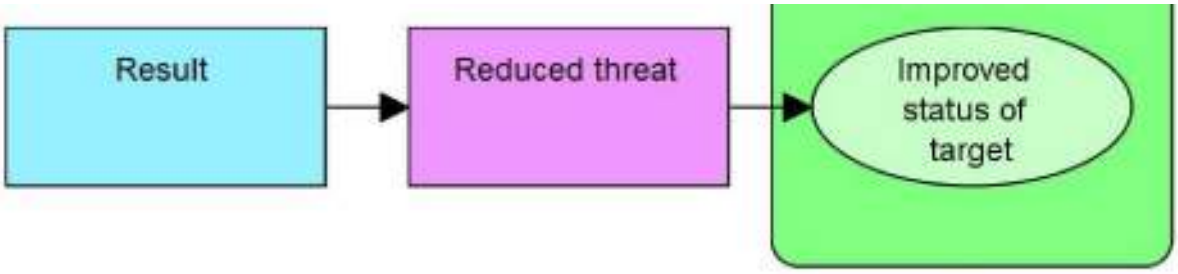
Team	Threat
Alpha	Poaching of Ivory
	Global trade
Apex	Gujjar comunity
	People of Dehradun
Addu atholhu	Local people setting fire
	Trade in tusk
Shiwalik	Trading
	Ignorance

e. Identifying benefits and barriers

'Benefit' of a behavior is the factors which are making the group feel good about doing the behavior and 'barrier' of a behavior is the factors which are making the group feel bad about doing the behavior. Benefits barrier table is created to help understand why the group is carrying out the behaviour.

Benefits	Barriers

The next step that was taught was “Creating a theory of change”. First step of this exercise was that we had to **define the result that we want to achieve through our project** and it had to follow an “if….then” logic.



After that a group exercise was carried out where each team had to create a result chain for 1 intervention point.

f. Result for monitoring

A result is the desired future state ofBiological targets, threats, behaviours, knowledge, attitudes and skills. Selecting results to monitor provides a way of assessing the scale and quality of project outputs/outcomes.Each selected result will also improve a project’s ability to track progress and adapt but will also increase a project’s workload and cost. Ideally, selected results should be within project control, important for showing impact and needed for evaluating and adapting activities.

After explaining ‘the selection the result for monitoring’ all the teams were given a task to select two results to monitor in their result chain.

g. Objectives and Indicators

An **objective** is the specific, future state of a result and also used to measure project impact. It should be specific, measurable, achievable, realistic and time bound. After explaining all the teams were asked to set objectives for their selected result.

Next learning was **setting the indicator**. An indicator is the specific unit used to measure state of objective and to measure the effectiveness of work packages to achieve an objective. Every team was assigned to set indicator for each objective and planned indicator values for each year.

After this exercise **setting of method**, the final component was discussed. A method is the approach used to collect and analyze indicator data. It should be fast, affordable, repeatable, sound and timely.

After understanding this final component each team was asked to fill up the following table,

Result	Objective	Indicator	Year				Method
			1	2	3	4	

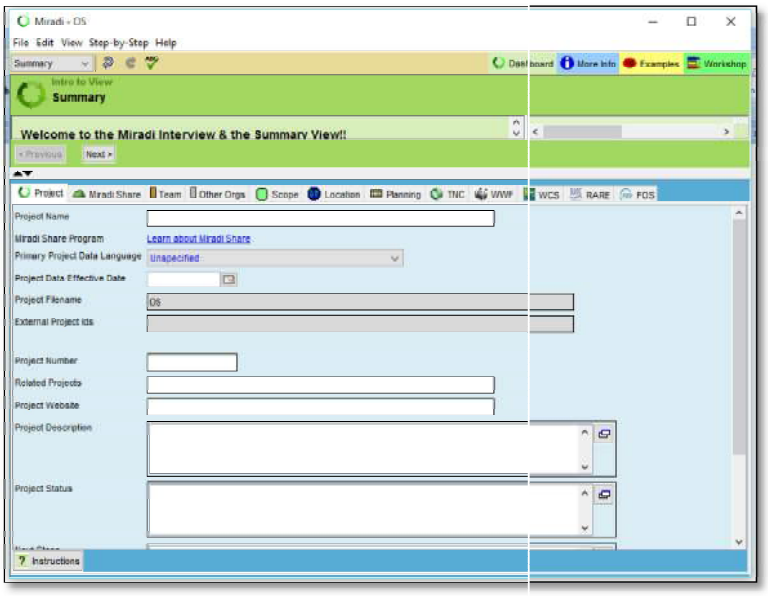
After finishing this exercise all the participants were taken to computer room where all the components of OS were practiced in project management software named MIRADI.

(i) Miradi Open Standards Software

A computer-based hands-on training module on MIRADI Software was arranged for the participants.Miradi is a joint venture between the Conservation Measures Partnership and Sitka. The software is designed by highly skilled conservation practitioners for conservationists, researchers and project managers.The software is based on a user-friendly platform and guides user through a step by step process to design, plan, implement and monitor conservation projects. The participants were asked to link field visit observations and group exercise activities to the Open Standards strategic wizard. The software provides various options in a drop-down menu and also a conceptual diagram view which provides a visual overview of a project's situation in a flowchart format. After having the practical session on Open Standards conservation practice through Miradi software, participants could produce their output files in the form of a Full Report.

Summary

- Project Name
- Duration
- Project number
- Description
- Status
- Scope
- Biodiversity features
- IUCN Red Data list
- Protected Area category

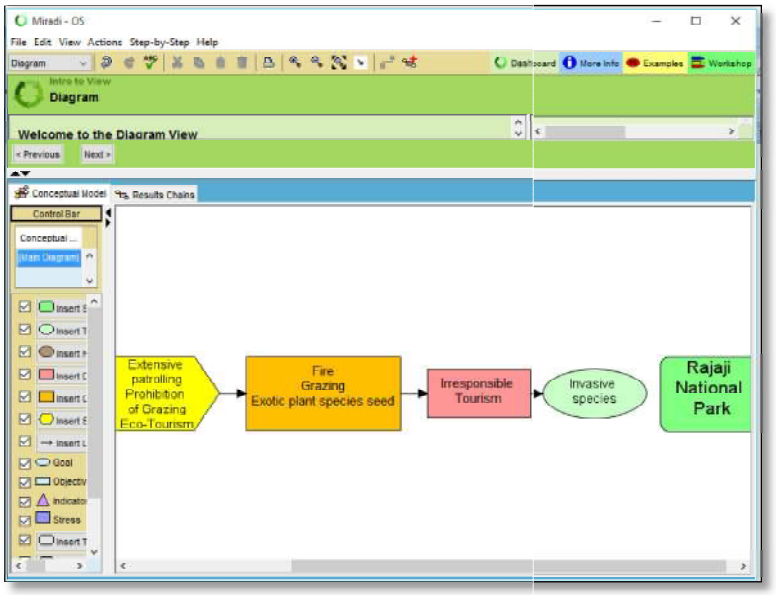


Conceptual Diagram

Conceptual diagram view provides a visual overview of a project's situation in a flowchart format. In this tab, the participants defined the overall project scope and linked it to specific conservation targets that are in turn linked to direct threats and the contributing factors. It also allowed participants to devise strategies and outcomes of their conservation plans. This feature of Miradi is linked with threat rating features which helped the participants to develop their project report.

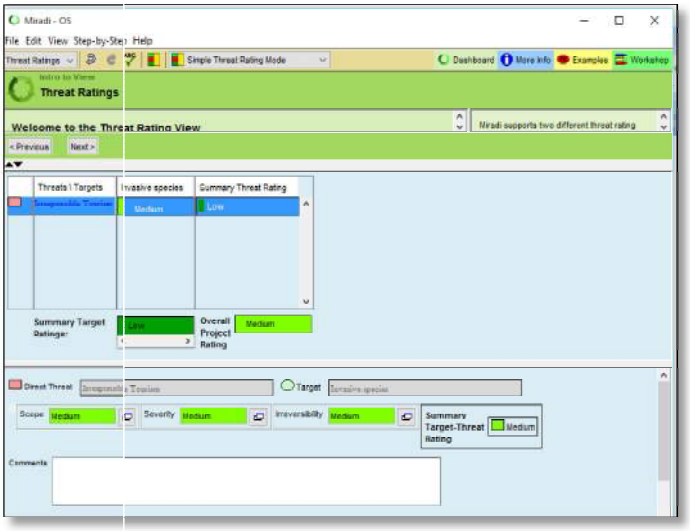
Diagram

- Scope
- Target
- Threats
- Contributors
- Strategies
- Goals
- Objectives



Threat Ratings

Threats and contributors are ranked on the basis of their scope, severity and irreversibility. To determine the most important threat, each threat was assessed on aforesaid three parameters and ranked ranging from low to very high. In the plate shown, an example of invasive species is taken to demonstrate the software's features.



Strategic Planning

In the strategic planning view, participants developed their project's specific goals and objectives using the inputs from previous sections. This enabled the users to link specific strategies to their goals and objectives. The monitoring view helped the applicants to identify and prioritize monitoring indicators to measure the status of their individual conservation targets and to assess the effectiveness of their strategies.

Results

After having the practical session on Open Standards conservation practice through Miradi software, participants produced their output files in the form of a full report. Apart from the full report, the software also converts conceptual models, maps, project plans, and budgets into printer-friendly formats.

CONCLUSION

The concluding session of the workshop was chaired by Dr. V. B. Mathur, Director, Wildlife Institute of India. Participants shared their feedback on the training where they appreciated the learnings from the workshop. One of the major outcomes of the training was the creation of a network of World Heritage Site personnel with enhanced capacity for developing and monitoring conservation plans to be implemented in their respective sites. The learning from the Workshop provided site managers, NGOs and other stakeholders a structured approach and framework to apply from the stage of planning to implementation of conservation projects/interventions and will guide improved project management and evaluation for World Natural Heritage Sites.

International Training Workshop on Open Standards for the Practice of Conservation in World Natural Heritage Sites for SAARC Countries

Inaugural Session

Day 1: December 1, 2015

Inaugural Session in WII-1

Inaugural Session in WII -2:
Dr. V.B.Mathur, Direcor, WII &
Dr. Anmol Kumar, Director General, FSI

Inaugural Session in WII-3:
Dr. Sonali Ghosh, Scientist F, WII &
Dr. Rajendra Dobhal, Direcor General, UCOST

Inaugural Session in WII-4:
Mr. Manoj Nair, Scientist F, WII &
Dr. Adam Barlow, WildTeam, UK

Day 1: December 1, 2015

Technical Session I-1

Technical Session I-2

Technical Session I-3

Technical Session I-4

Field Visit to Rajaji National Park

Day 2: December 2, 2015

Kunao Barrage, Chilla Range, Rajaji Tiger Reserve

Dogadda River & Acqueduct, Rajaji Tiger Reserve

Camera Trap demonstration, Dogadda River

Tiger Pugmark identification, Dogadda River

Day 2: December 2, 2015

Mundal Chawki-1, Chilla Range, Rajaji National Park

Mundal Chawki-2, Chilla Range, Rajaji National Park

Gaindikhata-Relocated village-1

Gaindikhata-Relocated village-2

Open Standards Group Exercises

Day 3: December 3, 2015

Technical Session III-1

Technical Session III-2

Technical Session III-3

Technical Session III-4

Day 3: December 3, 2015

Technical Session III-5

Technical Session III-6

Technical Session III-7

Technical Session III-8

Open Standards Group Exercises

Day 4: December 4, 2015

Technical Session IV-1

Technical Session IV -2

Technical Session IV -3

Technical Session IV -4

MIRADI Software

Day 4: December 4, 2015

Technical Session IV-5

Technical Session IV -6

Technical Session IV -7

Technical Session IV -8

International Training Workshop on
Open Standards for the Practice of Conservation in
World Natural Heritage Sites for SAARC Countries

1-4 December, 2015

Wildlife Institute of India, Dehradun

PROGRAMME

0900 h – 0930 h Registration

Tuesday, 1 December, 2015	
0930 – 1100 h	**Inaugural Session** Welcome and Introductions: Dr. Malvika Onial, Scientist, UNESCO C2C, Wildlife Institute of India Opening Remarks by Guest of Honour: Dr Rajendra Dobhal, Director General, UCOST Opening Address by Chief Guest: Dr Anmol Kumar, Director General, Forest Survey of India Inaugural talk: Dr VB Mathur, Director, Wildlife Institute of India Remarks by Dr Adam Barlow, Director, WildTeam Vote of Thanks: Mr Niraj Kakati, Technical Officer, UNESCO C2C, Wildlife Institute of India
1100 – 1130 h	Group Photograph and Tea
1130-1300 h	**Technical Session I** Chair: Dr Adam Barlow Session Coordinator: Dr Bhumesh Singh, (UNESCO C2C) Rapporteurs: Mr Chitiz Joshi, ATO and Ms Persis Farooqi, WHA (UNESCO C2C)
1130-1200 h	Operational Guidelines for the World Heritage Convention: Dr Malvika Onial, UNESCO C2C
1200-1230 h	Monitoring and Reporting for Natural World Heritage Sites: Dr Sonali Ghosh, UNESCO C2C
1230-1300 h	Preparation of Nomination Dossiers: Bhitarkanika Tentative World Heritage Site, Odisha, India: Mr Manoj Nair, UNESCO C2C
1300 – 1400 h	Lunch
	Technical Session I *contd.*
1400-1430 h	World Heritage Evaluation and Experiences from the Field: Dr Archana Godbole, Director, Applied Environmental Research Foundation, Pune, India
1430-1625 h	**Technical Session II** Chair: Dr Archana Godbole **Presentations by SAARC country participants**
1515 – 1530 h	Tea break
	Technical Session II *contd.* **Presentations by World Heritage Site Managers, India**
1630 -1730 h	**UNESCO Biosphere Programme: The Maldivian Experience, Ms. Aminath Afau, Ministry of Environment & Energy, Maldives. *Venue: WII Auditorium***
1930 h	**Dinner at the Grille, Rajpur Road**

Wednesday, 2 December, 2015	
0800 – 1930 h Field visit to Rajaji National Park	
Thursday, 3 December, 2015	
0900 – 1300 h	**Technical Session III: Dr Adam Barlow, Director, WildTeam** Chair: Mr Manoj Nair
0900-0930 h	Overview of the Open Standards
0930-1100 h	Setting Scope and Targets
1100-1110 h	Tea Break
1110-1300 h	Assessing Threats
1300 – 1400 h	Lunch
1400-1730 h	**Technical Session IV: Mr Stuart McBride, WildTeam** Chair: Dr Sonali Ghosh
1400-1600 h	Carrying Out a Situation Analysis
1600-1610 h	Tea break
1610-1730 h	Creating a Theory of Change
Friday, 4 December, 2015	
0900 – 1300 h	**Technical Session V: Dr Adam Barlow, Director, WildTeam** Chair: Dr Sonali Ghosh
0900-1000 h	Setting Objectives
1000-1100 h	Setting Indicators and Methods
1100-1110 h	Tea break
1110-1300 h	MIRADI Training
1300-1400 h	Lunch
1400-1600 h 1400-1530 h	**Technical Session VI: Dr Adam Barlow and Mr Stuart McBride, WildTeam** Chair: Dr V.B. Mathur Planning for OS Implementation at UNESCO World Heritage Sites
1530-1535 h	Vote of Thanks: Mr Niraj Kakati (UNESCO C2C)

UNESCO Category 2 Centre for World Natural Heritage Management & Training for Asia and the Pacific Region at Wildlife Institute of India, Dehradun

Ministry of Environment, Forest and Climate Change, Government of India | United Nations Educational, Scientific and Cultural Organization | World Heritage Centre | भारतीय वन्यजीव संस्थान Wildlife Institute of India | WILDTEAM | UNESCO Category 2 Centre World Natural Heritage Management and Training for Asia and the Pacific Region

International Training Workshop on Open Standards for the Practice of Conservation in World Natural Heritage Sites for SAARC Countries

December 1-4, 2015

Wildlife Institute of India, Dehradun

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