



WWF

REPORT

BT

2015

TRAMCA FOR THE LIVING PLANET

CONSERVATION ACHIEVEMENTS THROUGH WWF JAPAN'S SUPPORT





His Majesty the King of Bhutan, November 2011, National Diet, Tokyo.

“Your generosity of spirit and the higher, greater natural bond between our two peoples that is un-definable and yet so deep and spiritual – ensures that Japan will always have a friend in Bhutan.”

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BIG WINS

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TraMCA

A HOTSPOT FOR WILD CATS



37

SPECIES OF WILD CATS
EXIST GLOBALLY

30%

OF WILD CATS ARE
FOUND IN BHUTAN

22%

OF THE WORLDS WILD CAT
SPECIES ARE IN TraMCA



Jungle cat © RMNP/WWF



Tiger © RMNP/WWF



Asiatic golden cat © RMNP/WWF



Common leopard © RMNP/WWF



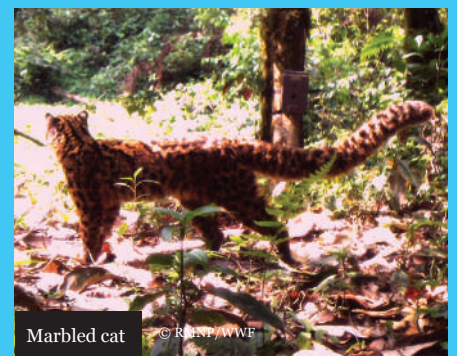
Clouded leopard © RMNP/WWF



Leopard cat © RMNP/WWF



Fishing cat © PWS/WWF



Marbled cat © RMNP/WWF

ACKNOWLEDGEMENT

Thank You for Your Support and Partnership



TraMCA, as a regional initiative was conceptualized in 2011 for the benefit of people and wildlife, transcending political boundaries.

The Himalayan sub tropical region is one of the most diverse ecosystems, harboring an incredible array of flora and fauna species. Himalayas are often associated with snow and glaciers but its rich sub tropical region of its southern foothills are equally magnificent and important in conserving the biodiversity of the region. TraMCA (Transboundary Manas Conservation Area), epitomizes the long term vision for conservation of this landscape and the initiative has been instrumental in spearheading ‘trans-boundary’ collaboration between Bhutan and India to achieve global tiger conservation goals and the Indian Rhino Vision 2020. The landscape is also important for the conservation of Asian elephants and endemic species of the Eastern Himalayas including pygmy hog, hispid hare, golden langur, swamp deer and bengal florican.

Besides the immense faunal diversity, the region also serves as an important watershed for some of the largest rivers that cascade down from the Himalayas to join the mighty Brahmaputra, providing important ecosystem services to local communities and nature in its journey through Bhutan and India.

TraMCA, as a regional initiative was conceptualized in 2011 for the benefit of people and wildlife, transcending political boundaries. Ever since, this innovative trans-boundary collaboration framework has enabled frontline park staff from Bhutan and India collaborate in addressing issues related to wildlife management, illegal wildlife trade, climate change, human wildlife conflict and information and knowledge exchange.

The generous financial support from WWF Japan and its well wishers has contributed immensely in realizing the vision of TraMCA in the parks and corridors falling within Bhutan. The technical and funding support from WWF Japan has greatly helped in curbing various threats to the rich biodiversity resources and showed significant progress in strengthening institutional and human resource capacity across all the Parks in the TraMCA region. Under the auspices of this project, research in lesser know taxonomic groups and training programs for the field staff were initiated successfully. These conservation investments have been highly successful in spreading conservation messages and enhancing stewardship of environmental resources by local people.

With the incredible support and commitment from the Royal government of Bhutan, particularly the leadership and staff of the Department of Forests and Park Services, the goals of the TraMCA conservation programs were fulfilled to a large extent. The collaboration and support of our WWF network initiatives, namely the Living Himalayas Initiative(LHI) and Tigers Alive Initiative (TAI) were also commendable in realizing the goals of the project.

The journey must go on, and we truly hope that the amazing work and vision of TraMCA will continue to find supporters and well wishers to enrich and enhance the great work that is ongoing in the field, spearheaded by a team of passionate and committed conservationists.

Dechen Dorji
Country Representative



Great Hornbill

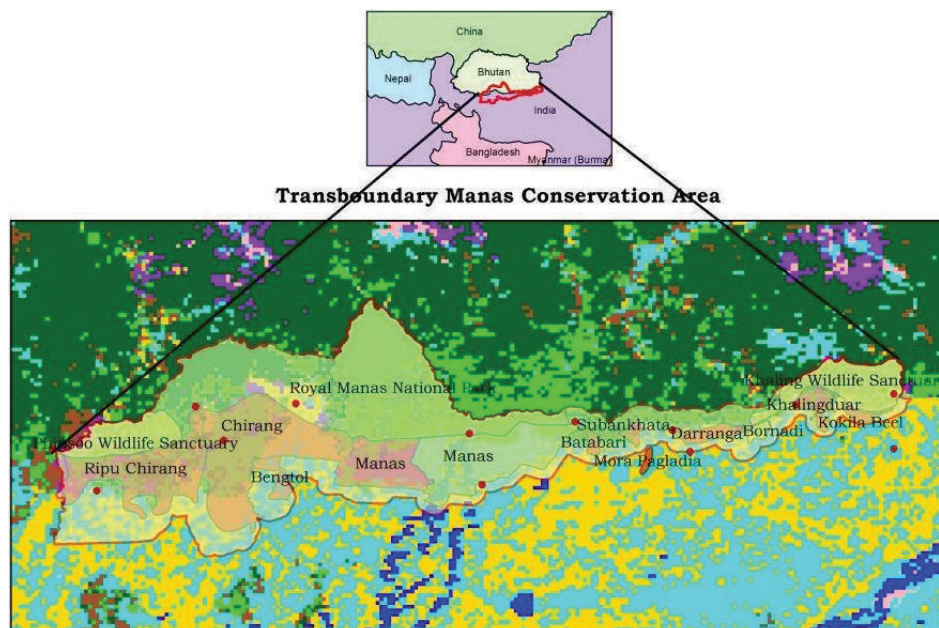
TraMCA

A landscape that ensures intact biodiversity for our happiness and wellbeing

THE CORE OF TRAMCA CONSISTS OF THREE PROTECTED AREAS PHIBSOO WILDLIFE SANCTUARY, ROYAL MANAS NATIONAL PARK AND JOMOTSHANGKHA WILDLIFE SANCTUARY AND TWO BIOLOGICAL CORRIDORS IN BHUTAN.

The Transboundary Manas Conservation Area (TraMCA) is the largest and most diverse conservation landscape conceptualized in 2011 under WWF's Tiger Alive and Living Himalayas Initiative. This conservation landscape with its rich biodiversity extends along the south-eastern part of Bhutan and the northeast Indian state of Assam. The landscape is also rich in culture, traditions and indigenous communities. The core of TraMCA consists of three Protected Areas, Phibsoo Wildlife Sanctuary (PWS), Royal Manas National Park (RMNP) and Jomotshangkha Wildlife Sanctuary (JWS) and two biological corridors in Bhutan. The Manas Tiger Reserve in India and the Royal Manas National Park in Bhutan form the main trans-boundary space of this landscape that is home to tigers, elephants, rhinos, pygmy hog, Bengal florican, hispid hare and more than 1,500 other species of mammals, birds and vascular plants. The landscape also holds rivers that cascade down the Himalayas to join the Brahmaputra which are valuable for the ecosystem services they provide to both upstream and downstream communities in Bhutan and India. In addition, the numerous indigenous communities who live in close proximity with forests add cultural and ethnic diversity to the rich landscape.

TraMCA landscape faces several threats due to its porous border, rising human population and pressure from developmental activities on both the Bhutan and India side of the border. TraMCA is also home to some of the poorest communities that are highly dependent on forests for their livelihoods which are linked to both domestic and commercial consumption of resources from forests and livestock grazing. Poaching of timber and other non-wood forest products are high although poaching of wildlife is confined to fewer animals such as Asiatic elephants, small-clawed otter, gaur, and fish. Poachers and herders also light fires in grasslands and scrubland to encourage new growth both for cattle as well as to attract herbivores, which they can hunt. Sometimes the fire gets uncontrollable and causes huge damage leading to excessive flash floods and soil erosion. There are localized land conversions due to farm road construction and electrical gridlines, and grassland degradation due to invasion by trees.



TraMCA map showing the landscape connectivity



Twin water fall near Changazam on the way to Manas

PROJECT BACKGROUND

The scientific data on flora and fauna has been updated for prioritizing conservation measures through development of climate integrated conservation management plans.

**THE INCIDENT OF
HUMAN WILDLIFE
CONFLICT FOR
THE AFFECTED
COMMUNITIES AND
TRANSBOUNDARY
WILDLIFE CRIME
ACROSS THE BORDER
HAS BEEN REDUCED.**

This project was implemented in Bhutan as part of TraMCA, which includes three protected areas (RMNP, PWS and JWS). It is aimed at contributing to biodiversity conservation through sustainable management of natural resources. Therefore, the local communities residing in parks and corridors were an important component of pursuing the biodiversity conservation in that space. The project period was three years and four months and was implemented from July 2012-October 2015.

The project has achieved its objectives successfully. The scientific data on flora and fauna has been updated for prioritizing conservation measures through the development of climate integrated conservation management plans. The incident of human wildlife conflict for the affected communities and transboundary wildlife crime across the border has been reduced. To enhance habitat management salt licks and water holes were mapped and restored, and grasslands management were intensified. The introduction of Spatial Monitoring and Reporting Tool (SMART) and its roll out has been successful in reducing the incidence of poaching of wildlife and other forest resources within the country and across the borders. Conservation awareness on the importance of biodiversity and forest and nature conservation rules and acts were imparted to the local communities. Institutional strengthening involving capacity building of the staff, supply of research equipment, transportation and communication facilities, field gear and infrastructure development such as ranger's outpost construction and maintenance, wildlife watch tower construction, patrolling route maintenance and support to local communities have helped achieve the project's goal.



Freshwater Otter

BIG WINS







OPERATIONALIZATION OF JOMOTSHANGKHA WILDLIFE SANCTUARY

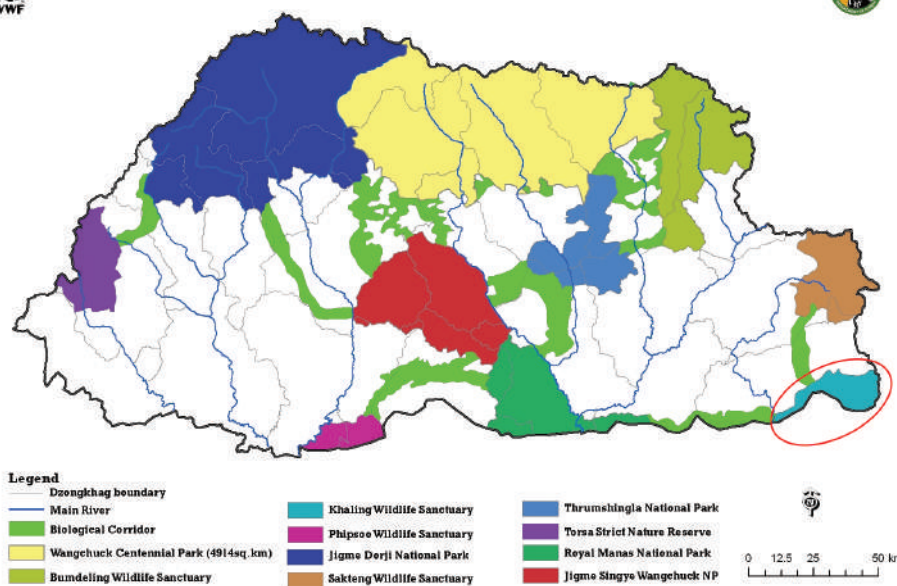
Jomotshangkha Wildlife Sanctuary (JWS) covering an area of 334.73 SQ KM is located in the south-eastern part of Bhutan under Samdrup Jongkhar District. It shares border in the south with India state of Assam. It was officially declared as a protected area in 1992 as it harbors important habitat for Asian elephants, Gaur, and other tropical wildlife. However, due to lack of resources and capacity it remained as a paper park. The project has assisted the Government to start operations.

JWS facilitates connectivity of the Bhutan part of TraMCA through the Khaling forest reserve to the India part of TraMCA. Since JWS represents a very important connectivity in the eastern part of TraMCA; unless JWS is operational and secured, there can be no justification for the eastern extension of the TraMCA corridor, beyond the Manas complex. One significant achievement of this operation is that it was able to halt the development of Nganglam town right in the middle of the biological corridor connecting RMNP and JWS. The survey carried out jointly by RMNP and JWS revealed that the new town plan and other human rehabilitation programs in the area could affect the corridor. Now the town is planned outside the biological corridor.

The project also helped curb the rampant poaching from across the border with regular joint patrolling with Indian counterparts through transboundary initiatives. Ranger's post and staff quarters were renovated and wildlife watch towers cum transit camp were constructed. Information on biodiversity and socio economics were collected to develop management strategies.



National Protected Areas and Biological Corridors of Bhutan







ECOLOGICAL CONNECTIVITY SECURED WITHIN THE TraMCA LANDSCAPE

Recognizing the importance of conserving this rich transboundary landscape in the face of growing threats and pressures from development activities, the project has made the TraMCA vision a reality for the benefit of both biodiversity and the people of Bhutan and India. Apart from operationalizing JWS, surveys were conducted in the biological corridors connecting all three parks in the Bhutan part of TraMCA which was found to be functional and vibrant.

The joint tiger monitoring survey in 2014 between Royal Manas National Park and Manas National Park in India identified 14 individual tigers of which three were found to be transboundary. Likewise, species such as Elephant, Guar and spotted deer were also confirmed to be using both Bhutan and India as their habitat.

Ranger's posts and wildlife transit camps with watch towers in strategic locations across the landscape were constructed and some old ones were renovated. Communication networks were enhanced through establishment of radio repeaters for walkie talkies and radio handsets were made available. Field gear and amenities are provided on a regular basis to the staff which helps them conduct regular conservation activities and also boosts their morale.

TRANSBOUNDARY TIGERS IN 2014



Captured in Bhutan



Captured in India



Captured in Bhutan



Captured in India



Captured in Bhutan



Died in India



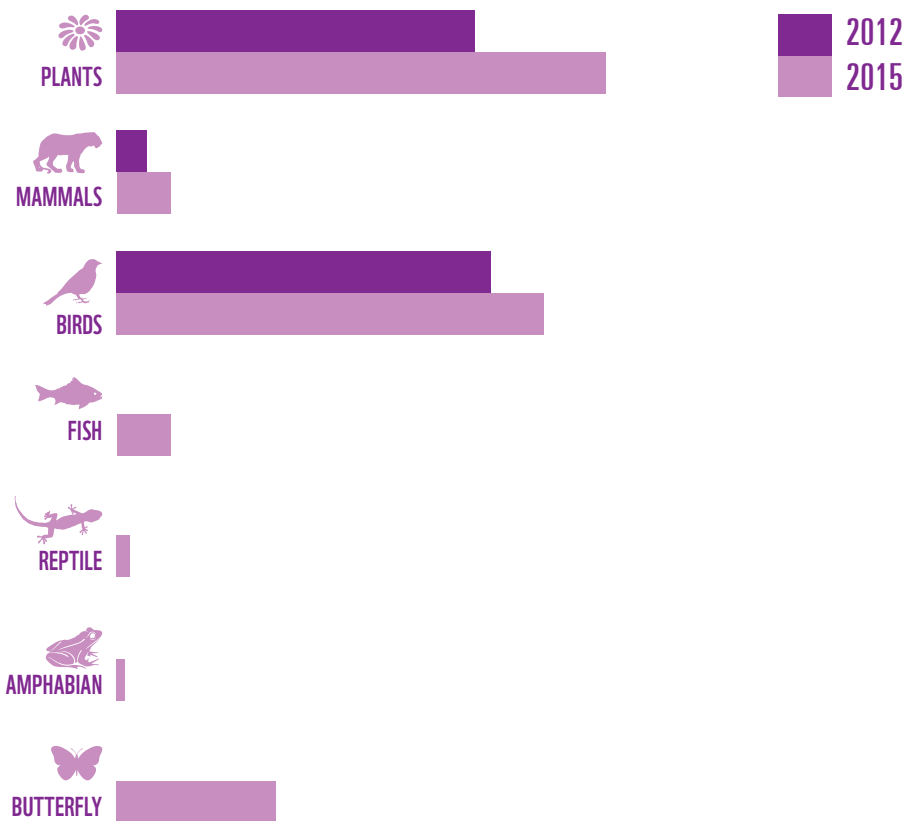


RESEARCH UNVEILS NEW WILDLIFE SPECIES

The project has made great strides in terms of establishing the inventory and understanding the ecology of species through various research and surveys conducted to accumulate a solid repository of scientific information. The inventory of mammals, plants and birds were updated with a record of new species. A study on herpetofauna, fish and butterfly were started which is being continued. Prior to this staff capacity was built in biodiversity surveys, data analysis and reporting. Survey equipment such as cameras, wildlife surveillance cameras, binoculars and other survey kits were made available to help park management continue with such important activities for effective conservation.

PWS and JWS confirmed the first ever photographic evidence of tigers thus declaring the entire TraMCA landscape hotspot for Royal Bengal tigers while RMNP has confirmed the photographic evidence of tigers in the northern part of the park for the first time. Over the last four years of scientific monitoring of tigers, a total of 28 tiger individuals have been identified in TraMCA.

BAR GRAPH SHOWING INCREASE IN SPECIES RECORD DURING THE PROJECT PERIOD IN TraMCA



NEW SPECIES RECORD OF BIRDS AND MAMMALS



Hodgson's Giant Flying Squirrel © Uttam Mahatha, 2014



White Bellied Heron © Kuenley Gyeltshen/PWS



Malayan Night Heron © Dorji Wangchuk/RMNP



Asiatic Brush-tailed Porcupine © RMNP



Chinese Ferret-badger © Chien-Jen Wang © Chien-Jen Wang



Common Tree Frog

Herpetofauna research

One of the most notable achievements was the first ever herpetofauna survey which revealed that TramCA landscape is rich in reptiles and amphibians.

Professor Hidetoshi Ota, University of Hyogo and Director of Museum of Nature and Human Activities along with Dr. Dr. Naobi Okayasu, Conservation Scientist, WWF Japan trained 33 participants on how to handle and collect reptiles and amphibians and process specimens including autopsy. Amphibians and reptiles of Bhutan have never been surveyed extensively and this is perhaps the first training of its kind in the country. The field staff were trained on Herpetofauna survey, both specimen collection and preservation. The study is being continued and more species are being added to the list .



Yellow Monitor Lizard (juvenile) © WWF Bhutan



Water Monitor Lizard © WWF Bhutan



Elongated Tortoise © Kuenley Gyeltshen/PWS



Spectacled Cobra © WWF Bhutan





GETTING SMART ON THE GROUND TO PROTECT WILDLIFE

Poaching of wildlife and illegal collection of forest resources is a serious threat to the landscape. The conventional patrolling method which was not systematic and pragmatic just records the number and nature of offences and has failed to render desired results. So the project has introduced spatial monitoring and reporting tool (SMART) that has helped increase the effectiveness of law enforcement for the protection of wildlife and its habitat. Field staff were trained in SMART patrolling which included field data collection and the use of SMART software to analyze data and generate reports.

With the SMART, on each discovery a ranger would input coordinates and observations into a hand-held GPS device while another documents the scenes with a digital camera. At the end of the patrol, the data was mapped using a grid system that pinpoints geographical areas where the threats to wildlife are greatest. It now helps protected area managers and their rangers plan their next patrols and equips them for one of today's most pressing conservation challenges: protecting wildlife from poaching and illegal trafficking.

The results showed that the overall record of the cases of illegal activities has declined by 31 % in the last three years from the 2014 baseline in TraMCA. Considering its significance, the Department of Forest and Park Services during the last annual park conference has endorsed SMART patrolling to be adopted nationwide.



© Kuenley Gyeltshen/PWS





HABITAT MANAGEMENT ATTRACTS MORE SPECIES

Besides forest cover three other important elements of wildlife habitats in TraMCA are alluvial grasslands, water holes and salt licks. These elements are now surveyed and mapped and continuously monitored. Existing water holes are being maintained, and few artificial water holes in strategic locations were created. Natural salt licks were maintained using artificial salts, wherever deemed required. Potential grasslands were restored by weeding invasive species such as Chromolaena Odorata, Lantana Camera, and some selective shrubs and trees. Prescribed burning is now adopted to maintain these grasslands. Palatable grass species were planted to enrich the grassland habitats. This intervention covered 1141 acres of grassland. Regular species monitoring confirmed sighting an increasing numbers of wildlife in grasslands, water holes and salt licks.

Considering the importance of grassland habitat in maintaining the functionality of the grassland ecosystem, a proper scientific grassland management regime is in the process of development for stabilizing and expanding grasslands, which forms an important benchmark of the potential for the long-term protection of grassland ecosystems.



Grassland being burnt, ploughed and enriched © Jigme Dorji/RMNP



Degraded grassland with invasive plants © WWF Bhutan





PREVENTING AND RESOLVING HUMAN-WILDLIFE CONFLICT

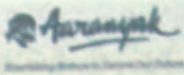
TraMCA landscape forms the major habitat for Asiatic Elephant in the country and therefore the human wildlife conflict issue is particularly dominated by this species. The project has helped assuage the plight of local communities as a result of human wildlife conflict by putting in place various schemes like crop insurance, livestock insurance, solar and electric fences, eco-tourism and awareness and educational services. Among these solar electric fencing, light and alarm fencing in villages were the winners with their immediate impacts, which substantially mitigated HWC and resultant retaliatory killings of wildlife. A total of 16 kilometers of solar electric fencing has been supported by this project which has benefited about 111 households in mitigating the crop loss to wildlife and prevent retaliatory killing under the landscape. Further, the record maintained with RMNP for at least two years showed a downward trend of HWC cases with 25 cases reported at the end of 2014 compared to 30 cases reported at the end of 2013.



Solar charged electric fencing © WWF Bhutan

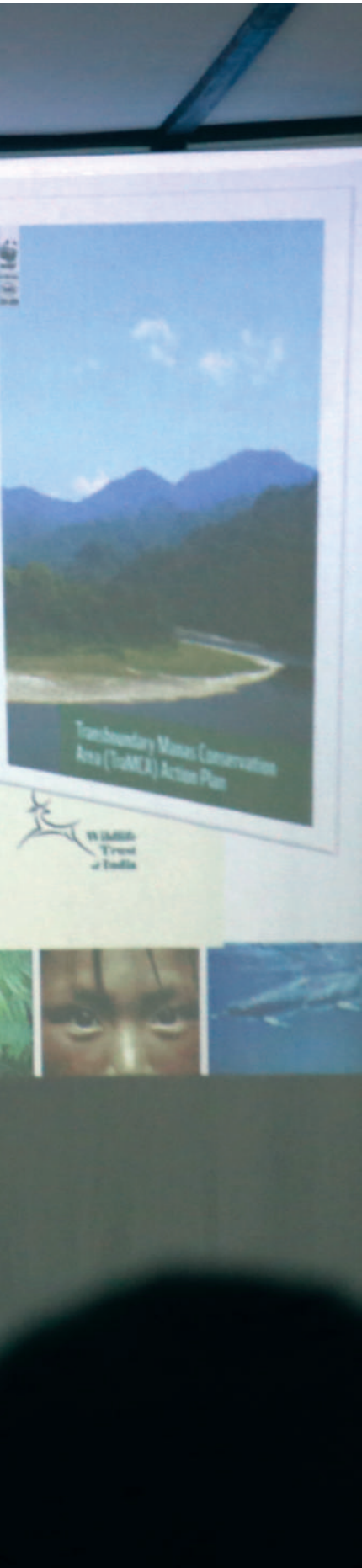


Transboundary Manas Conservation Area Action Plan (2015-2020)



Phurba Lhendup WWF





TRANSBOUNDARY COORDINATION DRAWS GREATER ATTENTION TOWARDS WILDLIFE CONSERVATION

Annual transboundary biodiversity coordination meeting have been regularized since 2013 and so far three meetings took place. As it progressed, the number of stakeholders increased and now there are fourteen stakeholders from India (9 Government agencies and 5 NGOs) and ten stakeholders from Bhutan including WWF Bhutan.

The workshop has been very effective in terms of sharing lessons learned from transboundary conservation efforts in TraMCA and discussing challenges and opportunities to improve transboundary management of biodiversity.

One of the most important outcomes was the endorsement of the TraMCA action plan which currently helps both the countries mobilize resources to plan the conservation intervention as per the landscape goals. It also serves as a platform for updating and planning the joint patrolling in the border areas to curb illegal activities. The joint monitoring of transboundary wildlife started with the tiger using camera traps.



TraMCA meeting in 2014 in Guwahati, India

© WWF Bhutan



Little ringed plover, one of the species to which the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) applies.

TAKING THE NEXT STEP

The first phase of the project has set a solid baseline and platform for upscaling the conservation interventions. To take this ahead, WWF Bhutan and the Government are proposing phase II of the project which is a multiyear (three year) project that contributes to the overall goal of the TraMCA landscape. Through stakeholder consultations, the proposal has defined five conservation targets and framed goals and objectives under each conservation target. These are presented in the tables below.

CONSERVATION TARGET	GRASSLAND HABITAT
GOAL	By 2020, 50% of potential grassland habitat under TraMCA landscape is restored to provide quality habitat for the wildlife.
OBJECTIVE	<ol style="list-style-type: none"> 1. By 2019, 70% the invasive species in the grassland habitats is eradicated. 2. By 2018, the system of unscientific burning of grassland is stopped. 3. By 2019, the number of unproductive cattle is reduced by 20% from 2014 baseline. 4. By 2019, the cattle herd within the park is reduced by 50% from the 2016 baseline. 5. By 2019, the incident of cattle grazing from India is reduced by 70% from the 2016 baseline.

CONSERVATION TARGET	FOREST HABITAT
GOAL	By 2020, the forest cover under TraMCA landscape is maintained at 2010 baseline to provide a secured habitat for wildlife and ecosystem services to the people.(Ref: Landover map)
OBJECTIVE	<ol style="list-style-type: none"> 1. By 2018, the incident of illegal logging is reduced by 30% from the 2015 baseline. 2. By 2019, the volume of waste is reduced by 70% from the 2016 baseline. 3. By 2019, the patrolling effort is increased by 50% from 2017 baseline.

CONSERVATION TARGET	ROYAL BENGAL TIGER
GOAL	By 2020, the tiger population under TraMCA landscape is increased by 20% from the 2015 baseline.
OBJECTIVE	<ol style="list-style-type: none"> 1. By 2019, retaliatory killing of tiger is completely stopped. 2. By 2019, zero poaching of tiger for at least one year is achieved.

CONSERVATION TARGET	ASIATIC ELEPHANT
GOAL	By 2019, the population of Elephant is maintained at 2016 baseline
OBJECTIVE	<ol style="list-style-type: none"> 1. By 2017, Elephant population, its migratory routes and habitat status is understood 2. By 2018, the human Elephant conflict incidents are reduced by 75% from the 2016 baseline.

CONSERVATION TARGET	BIOLOGICAL CORRIDORS/CONNECTIVITY
GOAL	By 2020, the TraMCA landscape connectivity is secured through the operationalization of 2 critical biological corridors PWS-RMNP of 375.87 km ² and RMNP-JWS of area 218.03 km ² .
OBJECTIVE	By 2018, management team and resources for the operation of corridors is instituted.

The above goals and objectives will be supported by the following 5 strategies for which a number of activities will be proposed under each strategy.

STRATEGIES

Enhance scientific management and protection of wildlife habitats

- Habitat enrichment (grasslands, forest, water holes, salt licks)
- Protection and law enforcement (e.g. SMART connect)

Improve scientific research

- Species survey and habitat monitoring
- Collaring and tracking Elephants
- Grassland management and fire ecology
- Invasive species management

Continue and improve transboundary coordination

- Annual meetings
- Data sharing
- Joint monitoring
- Joint training

Human wildlife conflict and communities

- Safe Systems Rapid Assessment and management strategy is operational
- Income diversification
- Community-based waste management
- Preventative measures (e.g. education programs, strategic fencing)

Securing corridors

- Support UNDP program (collaboration, joint activities, information sharing)
- Develop guidelines for smart green infrastructure

TraMCA AT A GLANCE

EXCHANGE VISITS BETWEEN WWF JAPAN AND BHUTAN



TraMCA managers from Bhutan with WWF Japan members in Tokyo



WWF Japan members visit to Royal Manas National Park



TraMCA managers from Bhutan at WWF Japan coral reef research centre in Ishigaki, Japan



Dr. Naobi Okayasu and Prof. Hidetoshi Ota with TraMCA staff for Herpetofauna survey



Shibata Yoshiko with members in Manas



Dr. Naobi Okayasu and Kimiyo Tsuji with TraMCA staff

1961

WWF was founded in 1961

+ 100

WWF is in over 100 countries,
on 5 continents



+ 5M

WWF has over 5 million
supporters

+ 5,000

WWF has over 5,000
staff worldwide



Why we are here

To stop the degradation of the planet's natural environment and
to build a future in which humans live in harmony and nature.

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