National Tiger Recovery Program of Bangladesh
2017-2022

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Sundarbans

The largest mangrove forest of the world

EXECUTIVE SUMMARY

By 2022, a demographically stable tiger population, greater than the current tiger population, under the scientific management and conservation in the Sundarbans and in the Chittagong Hill Tracts

The tiger (*Panthera tigris*) faces imminent extinction in the wild across its habitats in Asia including Bangladesh. As a party to the Global Tiger Recovery Program (GTRP), Bangladesh had produced its first version of the National Tiger Recovery Program (NTRP) in 2010 and this is the revised version published in 2016, which is for the period of July 2017 to June 2022. The NTRP aims to present the incremental effort that Bangladesh needs to make in order to accelerate the implementation of the Bangladesh Tiger Action Plan (BTAP) with a focus on priority actions. The goal of NTRP of Bangladesh is: 'By 2022, a demographically stable tiger population, greater than the current tiger population, under the scientific management and conservation in the Sundarbans and in the Chittagong Hill Tracts'. The priority actions to achieve the goal include building institutional capacity, engaging local communities, protecting habitats, and transboundary collaboration. The policy framework needs for the implementation of the NTRP include: i) Inter-Ministerial Policy decisions to strengthen collaboration with the police, coast guard and local administrations, ii) inclusion of wildlife crime in the current cross-border law enforcement Memorandum of Understanding (MoU) between Bangladesh and India, iii) Ministry of Environment and Forests decision to retain expertise and skills within a dedicated wildlife conservation unit, iv) update of co-management guidelines, policy, and rules, v) revision of some problematic clauses of the Wildlife (Conservation and Security) Act, 2012 and formulation of associated Rules, and vi) protocol to address and mitigate tiger-human conflict.

Photo credit: Md. Modinul Ahsan

Tiger

Tiger in the Sundarbans is very good swimmer and can easily swim across big rivers

1 INTRODUCTION

Recognizing the fact that the tiger (*Panthera tigris*) faces imminent extinction in the wild across its habitats in Asia, the leaders of the 13 tiger-range countries (TRCs), together with conservation partners, had gathered in a summit at St. Petersburg, Russia, in 2010, which was the highest level of summit ever organised for tigers. The leaders agreed to strive to double the number of wild tigers across their range by 2022 by doing everything possible to effectively manage, preserve and enhance habitats; work collaboratively to eradicate poaching and illegal trade, engage with indigenous and local communities, explore and mobilize domestic as well as international funding, convene high-level meetings on a regular basis to review the progress, and build tiger conservation awareness by celebrating Global Tiger Day annually on 29 July. The leaders welcome the adoption of the Global Tiger Recovery Program (GTRP) and the National Tiger Recovery Programs (NTRPs) from the TRCs. As an outcome of this strong global initiative, the global number of wild tigers has increased in recent years (WWF 2016).

Recognizing the fact that the tiger faces imminent extinction in the wild across its habitats in Asia, the leaders of the 13 tiger-range countries, together with conservation partners, had gathered in a summit at St. Petersburg, Russia, in 2010, which was the highest level of summit ever organised for tigers

As a party to the GTRP, Bangladesh had produced its first version of the NTRP in 2010 and a revised version in 2016, for the period of July 2017 to June 2022, and gradually strengthening the tiger conservation activities through the implementation of the Bangladesh Tiger Action Plan (BTAP) (Ahmad et al. 2016). In 2014, Bangladesh hosted the 2nd Stocktaking Conference to review the implementation of the GTRP. The Conference ended up with Dhaka Recommendations on Advancing Implementation of the GTRP. Building on the pledges of the St. Petersburg Declaration, the Thimphu Affirmative Nine-Point Action Agenda, which emerged from the 2nd Asian Ministerial Conference on Tiger Conservation, held in Bhutan in 2012, outlines areas to be targeted for intensified efforts by the TRCs and partners. The conference participants agreed on some actions, viz. i) strengthen frontlines, ii) conserve habitat, iii) engage communities, iv) enhance collaboration, v) launch

restoration, vi) increase the flow of funds, develop new partnerships with business and industry, vii) build comprehensive awareness and reduce inicit demand, viii) monitor tigers, prey and habitat, ix) monitor GTRP implementation. Adoption and issuance of the Dhaka Recommendations will move us significantly closer to achieving the goal of doubling the number of wild tigers globally by 2022, and ensuring the integrity of tiger conservation landscapes.

The NTRP aims to present the incremental effort that Bangladesh needs to make in order to accelerate the implementation of the BTAP with a focus on priority actions. These efforts are over and above the major projects implemented by the Bangladesh Forest Department (FD), many supported by donors, viz. i) the EC-funded 'Sundarbans Environmental and Livelihoods Security (SEALS)' project has supported the sustainable development of the Sundarbans Reserved Forest (SRF) including sustainable resource use by the local communities, restoring and cyclone-proofing the SRF; an Information Management Information System to guide SRF protection and management. The total cost of this project was Euro 10,444,444, of which the EC component is Euro 10 million; ii) the World Bank funded regional (Bangladesh, Bhutan, India and Nepal) IDA project titled 'Strengthening Regional Co-operation for Wildlife Protection (SRCWP)' has supported the protected area management, capacity building, wildlife crime (including tiger and prey poaching) control activities, and human-wildlife conflict mitigation. The total cost of this project was USD 36 million.; iii) the USAID's 'Integrated Protected Area Co-management (IPAC)' project has supported the FD in developing a protected area strategy for all ecologically and economically significant areas, and a SRF co-management plan. The IPAC also produced a detailed economic analysis of the resource dependence dynamics around the Sundarbans Impact Zone (SIZ), including an analysis of SRF fisheries resources. The overall cost of this project including SRF components is USD 15.5 million (2008-2013); and iv) the 'Multi Donor Trust Fund for Climate Change' has funded the climate change related activities including the restoration of mangrove habitats in the degraded areas.

In Bangladesh the tiger was once commonly found in all the forests and even in some village groves (Mitra 1957, Khan 2011). The tiger was so abundant that it was considered as a pest and the Government used to pay bounty for killing tigers. With the course of time the population and distributional range of the tiger have been drastically declined due to poaching, prey depletion and habitat loss, and the species has identified as globally Endangered (IUCN 2015) and nationally Critically Endangered (IUCN-Bangladesh 2015). At present the only stable population of the tiger is found in the Sundarbans (ca. 6,000 sq km; Figure 1), and the population is isolated from the nearest tiger populations by about 300 km of agricultural and urban land (Figures 1 and 2). According to the latest estimate based on camera-trap survey in the Sundarbans of Bangladesh, the tiger population is estimated at 106, or 2.17 tigers per 100 sq km of land area (Dey et al. 2015) (Table 1), which is distributed throughout the entire

forest with differential densities (Barlow 2009). There are reports of tiger sightings by the hill people in the Chittagong Hill Tracts, but the status is still unknown (Khan 2011, Chakma 2015). Therefore, Bangladesh has the opportunity to contribute substantially to the future of the species.

The available information suggest that the major threats to tigers in the Sundarbans are: i) poaching, ii) human-tiger conflict when tigers stray into villages or villagers venture into forests to collect forest produce, iii) depletion of prey due to poaching, and iv) habitat-related threats stemming from unsustainable wood and aquatic resource harvesting, upstream water extraction/divergence and pollution, and the various effects of climate change. Thus, interventions to minimize these threats are necessary to achieve the tiger conservation goal.

It is important to note here that the tiger habitat in the Sundarbans also provides essential ecological services of local, national, and global significance, such as trapping of sediment and land formation, protection of human lives and habitation from cyclones, serving as a nursery for fish and other aquatic life that support a significant fishery, production of oxygen, recycling of waste material, supply of food and building materials, and carbon cycling and sequestration. Cyclonic activities are expected to increase in intensity and frequency in response to the global warming, making conservation of the mangroves an even greater imperative to save economies (local and national), livelihoods and lives. There is clear evidence

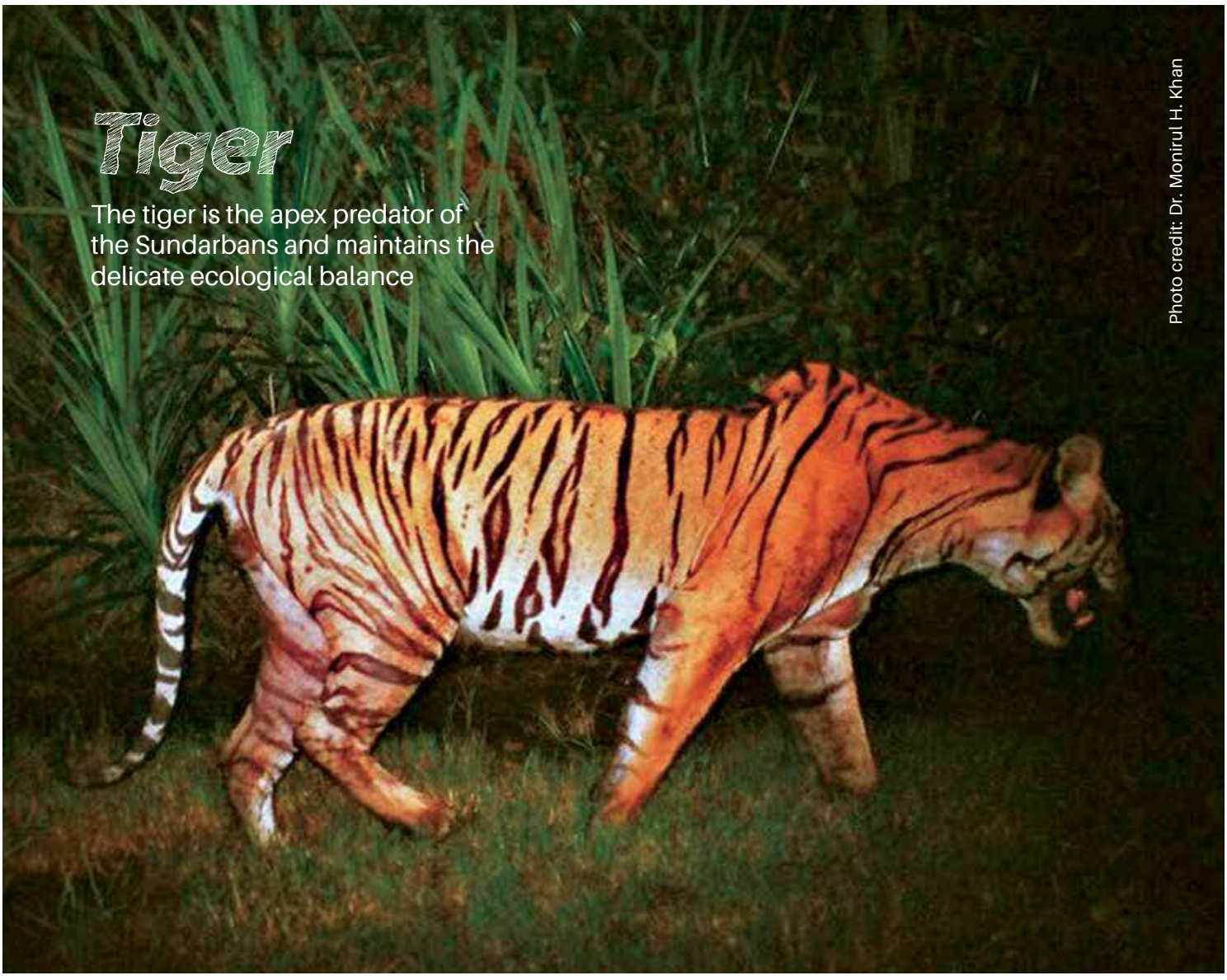


Photo credit: Dr. Mahendra Shrestha

Tiger summit in St. Petersburg, Russia, 2010

Photo credit: BFD

Second Global Tiger Stocktaking Conference in Dhaka, 2014

to show that the impacts of the 2009 cyclone Aila and 2007 cyclone Sidr were partly mitigated by the mangroves of the Sundarbans. Unfortunately the economic value of these ecological services has not been quantified; thus, an economic valuation of the mangroves is necessary to facilitate willingness of the Government and communities to invest in protection of this valuable ecosystem from further degradation.

Since the Sundarbans is a huge area of wilderness where public access is legally and naturally restricted, there is a good chance of increasing the current tiger number or density. Notably, the latest estimate of tiger number in the Sundarbans is much less that what was estimated earlier (Ahmad et al. 2016). Therefore, the goal of NTRP of Bangladesh is: 'By 2022, a demographically stable tiger population, greater than the current tiger population, under the scientific management and conservation in the Sundarbans and in the Chittagong Hill Tracts'. This goal, however, should be periodically reviewed to adapt with the pace of implementation of BTAP and NTRP as well as the ecological and socio-economic changes across the tiger landscapes in Bangladesh.

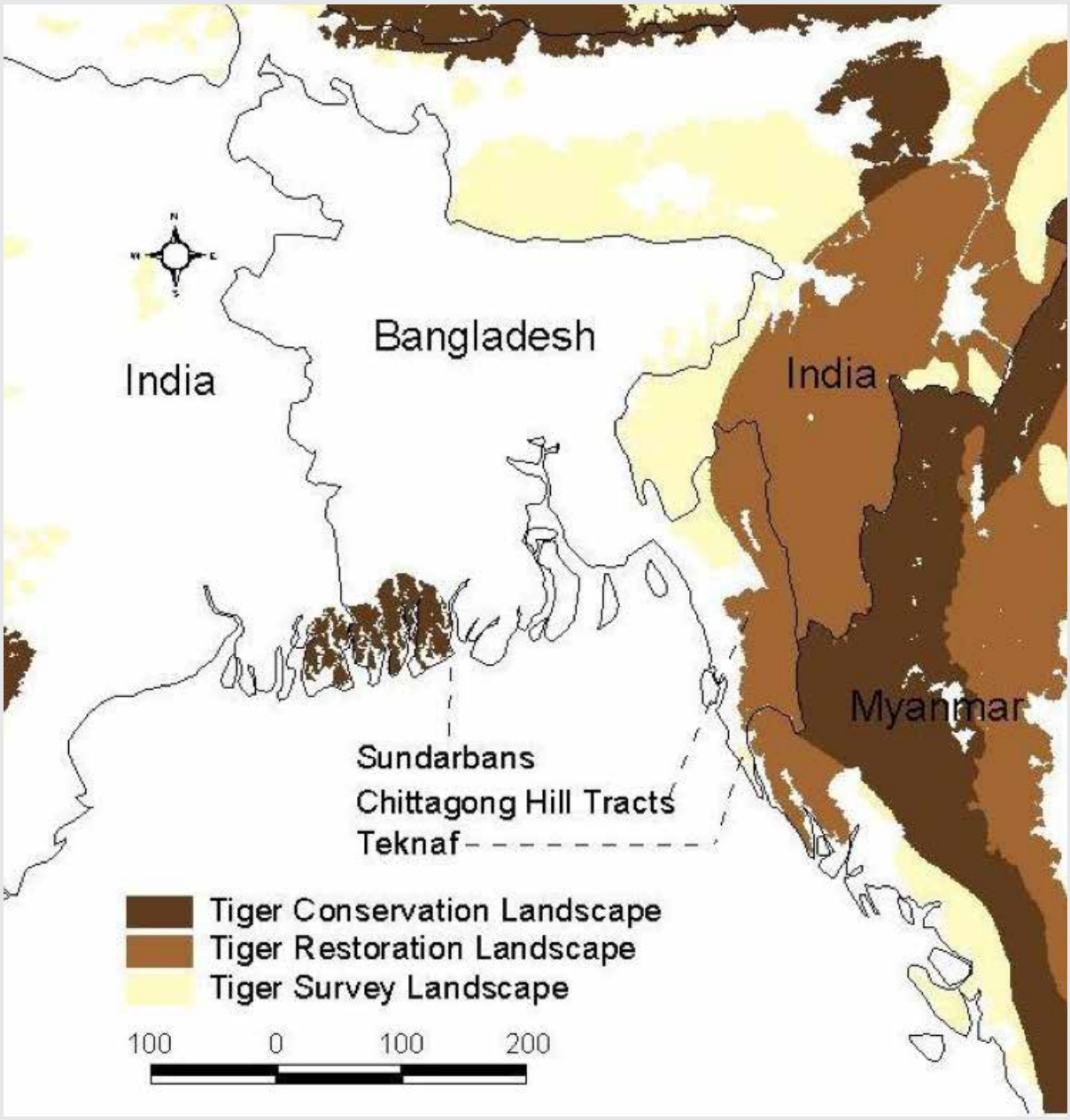
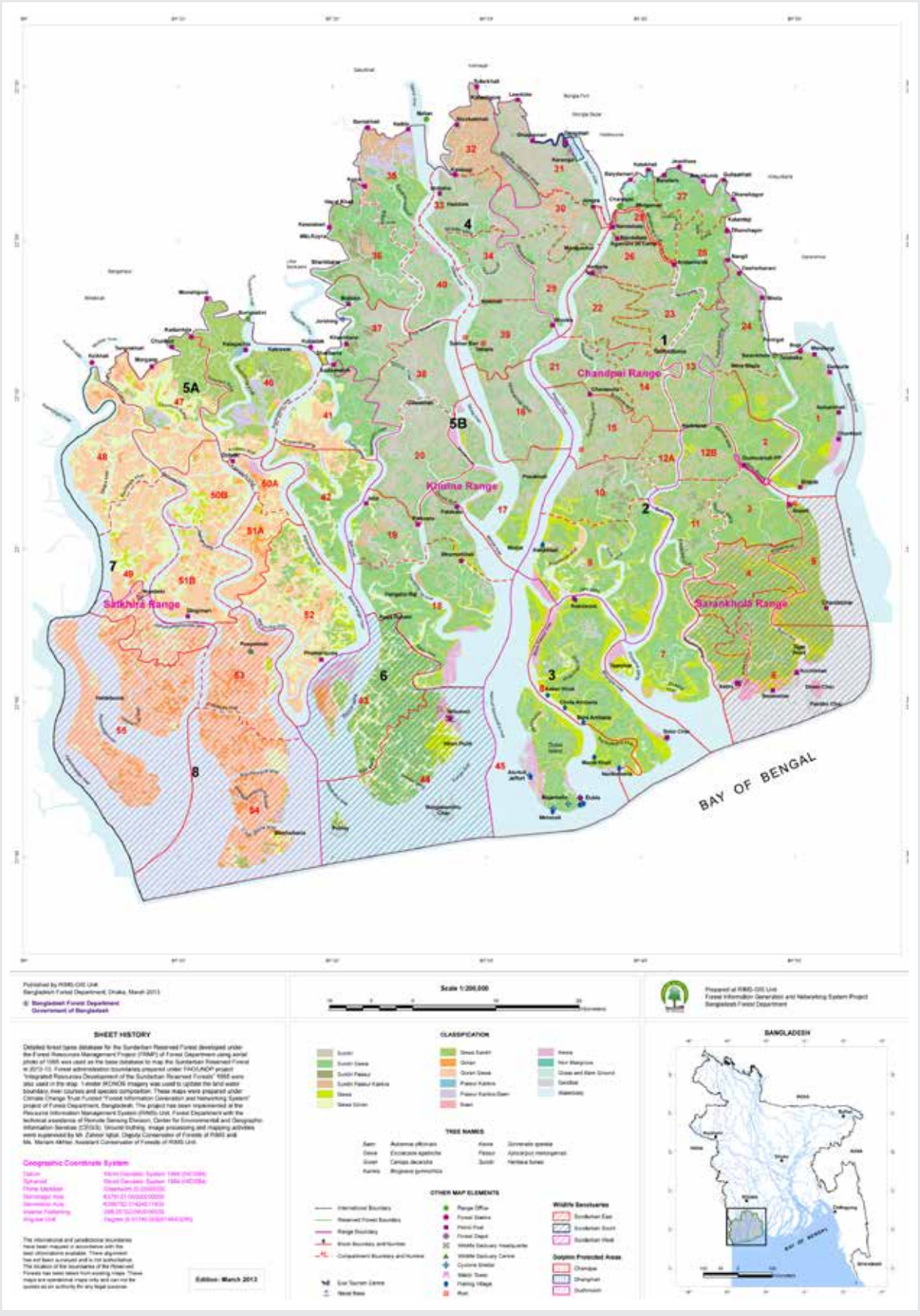


Figure 1. Tiger conservation areas in and around Bangladesh (Sanderson et al. 2006).



Courtesy: RIMS Unit, BFD

Figure 2. Sundarbans of Bangladesh showing the different vegetation types, Forest Department outposts and three main protected areas (together form the World Heritage Site).

2

VISION, GOAL AND OBJECTIVES

Photo credit: A.N.M. Hossain

Vision

Protected tiger landscapes of Bangladesh where wild tigers thrive at optimum carrying capacities so as to perform their ecological role, and which continue to provide essential ecological services to mankind.

Goal

By 2022, a demographically stable tiger population, greater than the current tiger population, under the scientific management and conservation in the Sundarbans and in the Chittagong Hill Tracts'.

Objectives

The major objectives of the NTRP are to-

1. Develop capacity in Forest Department (FD) for effective wildlife and habitat conservation
2. Reduce community dependency on forest resources
3. Strengthen local institutions
4. Reduce tiger-human conflict
5. Reduce tiger and prey species poaching and consumption
6. Deploy an effective and efficient man-power of wildlife conservation field staff to conserve tigers and tiger habitats
7. Establish an institutionalized system to curb cross-border trade and poaching of tigers and other wildlife.

Photo credit: Emdadul Islam Bitu

3 PROGRAMS

3.1 Building Institutional Capacity

The FD is the sole government department responsible for nature conservation in Bangladesh including the tiger and prey. However, the FD is still expected to produce short-term revenue from the national forests. As a result, the FD does not receive the required funds to perform conservation duties or develop conservation specialists. Therefore, a paradigm shift is required to bring both the FD and the government from production forestry to conservation, and to mainstream conservation into the development agenda, especially since the ecological services provided by the Sundarbans are important to support and sustain the economic development. An economic valuation of the Sundarbans, plus reinforcement via policy level communications will support this change.

The capacity of protected area managers is very important to stop tiger and prey poaching, and recovery of tigers. The staff should have to be equipped with up-to-date technology. A SMART patrol program has been initiated in the Sundarbans in 2015, but this should be sustained by providing financial support from the government's revenue budget

Within the FD, the Wildlife and Nature Conservation Circle (WNCC) formed in 2001 is responsible for wildlife conservation across the country, but does not yet have sufficient institutional presence to fully carry out its intended roles. Many posts lie vacant, and staff regularly transferred between wildlife and territorial (forest) posts, hampering the development of wildlife or ecosystem conservation specialists. Retaining and motivating staff to work in remote areas with poor services

and in risky environments poses an additional challenge. Therefore, a dedicated institution for wildlife conservation and management is necessary, with appropriate training and logistical support. The territorial arm of the FD will also require organizational change to effect change from production forestry to conservation. In addition, collaboration with other sectors and stakeholders in wildlife conservation remain weak, yet are needed to bring in the multitude of skills needed to conserve tigers. Therefore, mechanisms to expand overall biodiversity conservation governance across the government organizations (GOs), non-government organizations (NGOs), civil society and the local communities are required.

3.2 Engaging Local Communities

Patrolling and protecting the vast Sundarbans ecosystem by a small cadre of government staff is inefficient and ineffective. A more practical solution is to engage the local communities as conservation stewards, which as already been initiated under the co-management framework. Currently, the local people venture into the forest to collect forest products and frequently come into conflicts with tigers; the Sundarbans suffers the highest level of human killing by tigers in the world. Heavy extraction of forest products like timber, fuel wood, fish and other aquatic resources are also contributing to forest degradation, which can potentially destabilize the mangrove ecosystem, leaving the coastal areas vulnerable to cyclones and ocean surges. Given their poverty, the local communities can also succumb to offers from organized poachers. Therefore, creating alternative livelihoods linked to wildlife and healthy habitats will make them willing stakeholders and conservation stewards.

3.3 Protecting Habitats

The FD lacks trained and adequate staff, field infrastructure, mobility, equipment and operational resources to adequately protect the >6,000 sq km of the Sundarbans with the winding, convoluted waterways and islands. Many areas lack guard posts, and many guard posts do not have boats or fuel to operate boats when needed. Accommodation conditions are basic, there are problems of drinking water, and medical facilities are extremely limited. Existing laws do not provide guards with enough protection from death or injury during the duty and there is no risk or medical allowance to compensate for dangers faced by the FD staff. Thus, adequate field staff must be recruited, trained and posted with adequate logistic support and appropriate incentives.

3.4 Transboundary Collaboration

While hard data on the extent of illegal trade and cross-border poaching of tigers is difficult to come by, anecdotal evidence and the volume of other wildlife smuggled across the open, porous border, particularly with India, suggests that it could be significant. Moreover, the national, regional and international shipping routes through the rivers of the Sundarbans offer the scope of easy transport of the body parts of poached wildlife. Currently no protocol or system exists for effective cross-border collaboration in the area of wildlife preservation. Thus, transboundary and regional collaboration is necessary to curb cross-border poaching, smuggling and trade.

4

PROGRAM INDICATORS

The indicators to assess the success of program will be selected from the suite below -

Tigers: Relative tiger abundance, absolute tiger density (current density is 2.17 per 100 sq km; Dey et al. 2015), ratio of adult to cubs of tigers, ratio of male and female tigers (number of active female is a determinant of survival of tiger population), number of tigers poached, and number of tigers killed in surrounding villages.

Prey: Absolute prey abundance, number of prey poached, number (or amount of meat) of prey consumed in the locality, and tiger to prey ratio.

Habitat: Terrestrial habitat quality (include satellite imaging with ground truthing), aquatic habitat quality (freshwater inflow, salinity levels, etc.), key threats (sea level rise, forest resource harvest, etc.), and the temporal changes of bio-indicators. The suitable indicator species will be selected later, but some habitat specialist and sensitive species like Ganges river dolphin (*Platanista gangetica*), mangrove whistler (*Pachycephala cinerea*), lesser adjutant (*Leptoptilos javanicus*), brown-winged kingfisher (*Pelargopsis amauroptera*), and estuarine crocodile (*Crocodylus porosus*) might be good candidates.

5 ACTIONS

The program has four priority components: i) building institutional capacity, ii) engaging local communities, iii) habitat protection, and iv) transboundary collaboration.

5.1 Building Institutional Capacity

Objective 1

Develop capacity in Forest Department (FD) for effective wildlife and habitat conservation

Recruitment, training and logistical support for staff and reorganize Bangladesh Forest Department by creating a dedicated wildlife wing for conservation and management of wildlife and wildlife habitats of the country. The current arrangements result in staff trained in wildlife conservation being transferred to forestry postings as regular staff rotations. Currently the FD is dependent of donor's fund. For sustainability of any conservation work budget must be allocated from the revenue source. Moreover a Wildlife Crime Control Unit (WCCU) and a Forensic Lab are being formed under the SRCWP project which is needed to be continued and this is only possible if there is a current and recurrent budgetary allocation from the revenue fund.

Actions	Expected outcomes	Performance Indicators	Timeline
• Establishment of Wildlife Wing in the Forest Department • Allocate budget from government revenue • Strengthen WCCU and Forensic Lab • Ensure effective involvement of other law enforcement agencies in the WCCU	Improved conservation of the Sundarbans and the forests of the Chittagong Hill Tracts, and the wildlife measured in terms of tiger, prey and habitat.	• Wildlife Wing in Forest Department established • Budget allocated from revenue sector • WCCU and Forensic lab strengthened • Effective involvement of other law enforcement ensured	4-5 years

5.2 Engaging Local Communities

Objective 2

Reduce community dependency on forest resources

Provide Sustainable Alternative Income Generation (SAIG) options to reduce the dependency of local people on forest resources and minimize the presence of people in the forests, thus reducing the community dependency on forest resources and plummeting habitat degradation.

Actions

- Community based ecotourism (boat hire, home stay and eco guiding etc.)
- Apiculture, handicrafts, cage/pen and pond fish culture
- Social forestry, nursery raising around the periphery of the Sundarbans
- Alternate source of energy such as solar energy (instead of fuel wood), LPG at reduced cost

Expected outcomes

Improved habitat condition because of reduced extraction of forest resources; socio-economic development of the local communities through the emerging income generation opportunities

Performance Indicators

- Less number of people entering into the forests
- Habitat remains undisturbed.

Timeline

2-5 years

Objective 3

Strengthening of local institutions

The Forest Department has formed local institutions for working for the biodiversity conservation of the Sundarbans (i.e. Collaborative Management Organizations (CMOs). This organization is a four tier platform (Comanagement Council, Comanagement Committee, people's Forum and Village Conservation Forums). This institution should be made active in building community awareness for the tiger and habitat conservation thus developing ownership among the community for the Sundarbans. For sustainability of the institution there is need of continued support from the government and the CMOs are needed to be nurtured, strengthened by providing with continuous motivational training and other supports. Community Patrolling Groups (CPGs) have already been formed but they need to be nurtured properly with all supports. Other local institutions such as Forest Tiger Response Team (FTRT) and Village Tiger Response Teams (VTRTs) are to be brought under the CMO umbrella for the greater interest of the tiger and prey conservation of the Sundarbans (see below).

Actions

- Undertake Sustainable Alternate Livelihood Programs (SAIG) for the forest dependent people
- Involve CMOs in building community awareness for tiger and habitat conservation
- Extend support and formalize Community Patrolling Group (CPG)
- Formally include FTRT and VTRTs under the CMO umbrella.

Performance Indicators

- FTRT and VTRT brought within the CMO loop
- CMOs working pro-actively for the community awareness building
- Number of forest and wildlife crime reduced

Expected outcomes

Community become aware and acting proactively for the biodiversity conservation of the forests; Forest Tiger Response Team (FTRT) and Village Tiger Response Teams (VTRTs) are brought within the existing CMO loop; the number of wildlife and forest crime is reduced.

Timeline

3-5 years

Objective 4

Reduce tiger-human conflict

One Forest Tiger Response Teams (FTRT) and forty nine Village Tiger Response Teams (VTRTs) are formed so far to respond to tiger related conflicts, monitor conflict patterns, monitor stray tiger presence, and encourage safer behavior inside the forest to minimize conflict. Compensation package for wildlife victims has been initiated.

Actions	Expected outcomes	Performance Indicators	Timeline
• Initiate activities of FTRT in all four ranges • Strengthen existing FTRTs and VTRTs • Develop easy system of delivering compensation to the wildlife victims • Restrict human presence in the protected areas of the Sundarbans	Improved relationships between the FD and the local communities; reduction of retaliatory killing of tigers and reduction of human and livestock killing by tigers.	• Four FTRTs are working in all four ranges of the Sundarbans • All FTRTs and VTRTs included in the loop of the CMOs • Wildlife victims compensated easily • Number of human foot print reduced	3-5 years

Objective 5

Reduce tiger and prey species poaching and consumption

Community-led anti-poaching teams formed or developed upon existing Tiger Response Teams to gather intelligence on poaching and consumption activities and to support the FD, police, Border Guard Bangladesh (BGB) and Rapid Action Battalion (RAB) in the arrest of offenders. Awareness campaigns to make people (especially local communities, GO, NGO) aware of the need for tiger, prey and habitat conservation; stigmatize poaching and consumption; link socio-economic advantages of Alternative Income Generation (AIG) to conservation. Consumption of deer meat has become a chronic disease in the society; special steps should be taken toward "Zero" consumption movement.

Actions	Expected outcomes	Performance Indicators	Timeline
• Formation of Wildlife Crime Intelligence Unit (WCIU) under the Wildlife Crime Control Unit • Formation of community-led anti-poaching teams • Joint training with community-led teams, FD, BGB, police and RAB • Develop a mechanism for the general public to report crime, poaching and consumption monitoring programs • Initiate community-based awareness campaigns targeting particularly the local educational institutions, local government and the religious entities • Special campaign of "Zero Consumption" of venison (deer meat).	Better protection of the tiger and prey populations from poaching; community stewardship of tiger and prey conservation	• Wildlife Crime Intelligence Unit (WCIU) established and functioning • Number of wildlife crime reduced • Wildlife crime reported beforehand to the FD and other law enforcement agencies • No tiger and prey poached	3-5 years

5.3 Protecting Habitats

Objective 6

Deploy an effective and efficient man-power of wildlife conservation field staff to conserve tigers and tiger habitats

Under the Strengthening Regional Cooperation for Wildlife Protection (SRCWP) project and BAGH project SMART patrolling was initiated in the Sundarbans. This patrolling is to be continued with dedicated man-power round the years to get the maximum conservation benefits and the budget for this can be allocated from the revenue head. However, there is a lack of adequate boats, fuel and other logistics too. On the other hand, the forest staffs are still not getting the risk allowance though steps has been taken by the forest department.

Actions

- Continue SMART patrolling in the whole Sundarbans round the year with dedicated forest staff
- Allocate budget for SMART patrolling from revenue head
- Provide all logistic support including fast water vessels, communication devices, housing, water, ration, medical facility (floating medical services), risk allowances for the front-liners
- Enhance and ensure front-line level coordination among the forest department , local administration and other law enforcement agencies

Expected outcomes

Continued SMART patrolling in the Sundarbans resulted with ensured protection of tiger, prey and habitat. Revenue funded SMART patrolling equipped with all logistics for the frontlines. Increased effective collaboration among the forest department, local administration and other law enforcement agencies

Performance Indicators

- SMART patrolling in full swing
- Number of tiger and prey poaching reduced
- Undisturbed wildlife habitat
- The FD getting budget from revenue head
- All logistic support including risk allowances provided for the forest staff

Timeline

3-5 years

5.4 Transboundary Collaboration

Objective 7

Establish an institutionalized system to curb cross-border trade and poaching of tigers and other wildlife

A collaborative body South Asian Wildlife Enforcement Network (SAWEN) has been established for curbing wildlife crime in the South Asia. Bangladesh has endorsed the SAWEN statute. However there is also a need of forming a platform among Bangladesh, India and Myanmar dedicated to eradicate transboundary wildlife crime. Tiger Conservation Committee (TCC) and Joint Working Group (between Bangladesh and India) have also been working in the country. On the other hand, Bangladesh and India had signed a Memorandum of Understanding (MoU) and Protocol for the Sundarbans and tiger conservation. Additionally there is a linkage with INTERPOL and TRAFFIC. This linkage should be strengthened and maintained properly.

Actions

- Formation of a common platform among Bangladesh, India and Myanmar dedicated to eradicate transboundary wildlife crime. The platform can be used for exchanging intelligence for detection of wildlife crime and knowledge sharing for tiger conservation within the bordering countries.
- Work closely with the Indian counterpart to implement all the items of the MoU and Protocol
- Increase collaboration and coordination with INTERPOL and TRAFFIC
- Strengthen SAWEN by implementing items of the Statute

Expected outcomes

Cross border trade and smuggling of tigers/parts and other wildlife reduced significantly, poaching threats to tigers reduced.

Performance Indicators

- A common platform established
- Wildlife crime intelligence shared within the member countries
- Number of trans-boundary wildlife crime reduced
- Number of meeting with INTERPOL and TRAFFIC

Timeline

3-5 years

Photo credit: Emdadul Islam Bitu

5 CONSTRAINTS

The major constraints in implementing the NTRP are: i) continuous flow of budget for implementing NTRP prescriptions, ii) lack of technical skills for SMART including the remote sensing and research, iii) inadequate technical staff in WNCC (adds only 10% to numbers to effectively cover the area of Territory Forest Divisions), iv) lack of skills for community engagement and wildlife crime enforcement, v) little support for new model of community conservation management committees, councils, community-based anti-poaching and patrolling teams, additional Tiger Response teams, and vi) cultural change and other skills within FD, especially related to proposed reorganization.

6 POLICY FRAMEWORK NEEDS

The policy framework needs for the implementation of the NTRP include: i) provision to support from revenue head, ii) Inter-Ministerial Policy decisions to strengthen collaboration with the police, coast guard and local administrations, iii) inclusion of wildlife crime in the current cross-border law enforcement Memorandum of Understanding (MoU) between Bangladesh and India, iv) Ministry of Environment and Forests decision to retain expertise and skills within a dedicated wildlife conservation unit, v) update of co-management guidelines, policy, and rules, vi) revision of some problematic clauses of the Wildlife (Conservation and Security) Act, 2012 and formulation of associated Rules, and vii) protocol to address and mitigate tiger-human conflict.

Deer

Major prey species of tiger in the Sundarbans

7 STAKEHOLDERS

The primary responsibility of the implementation of the NTRP lies to the FD, Ministry of Environment and Forests, but the key stakeholders include policy makers, other GOs (local, regional, central), bank/ financial institutions (national and international), local people/ forest users, law enforcement agencies (police, coast guard, BGB), judiciary, NGOs and media.

Photo credit: Md. Modinul Ahsan

FINANCE

The indicative total cost for a five-year program is USD 66.0 million or BDT 5278.35 million (following the conversion rate of USD 1 = BDT 79.97) (Table 1).

There are several funding options that largely depend upon the architecture and design of the project to meet the set criteria of the funding sources, viz. i) the Government budget to pay for ecological services once these are properly quantified, ii) increased revenue from well-managed tourism, iii) Global Environment Facility (GEF) to fund the priority components, iv) follow-up project of the regional IDA project supported by The World Bank, v) continuation of the Non Lending Technical Assistance (NLTA) project supported by The World Bank, and vi) a potential transboundary project between Bangladesh and India for habitat protection and preservation of the biological integrity of the Sundarbans as a holistic ecosystem.

Table 1. Indicative costs (in million USD) for a five-year (July 2017 to June 2022) program in Bangladesh.

Activity	Estimated Total Budget	Govt. Contribution (Expected)	Donor Contribution (Expected)
Infrastructure	5	1	4
Strengthening of Wildlife Crime Control Unit and Forensic lab	5	3	2
Protection, controlling tiger and prey poaching including logistic support (improved patrolling through SMART)	10	7	3
Wildlife Crime Intelligence Unit Activity (including intelligence gathering, crime analysis, database/server maintenance, law cost etc)	5	5	0
Staffing, incentives and risk insurance	3	3	0
Tiger-human conflict mitigation	3	3	0
Habitat management	3	1	2
Scientific monitoring, survey and research (including survey in the Chittagong Hill Tracts)	8	2	6
Transboundary wildlife crime control	3	3	0
Institutional strengthening and capacity building	8	2	6
Support for the FTRTs and VTRTs	5	0	5
Alternative income generation for the forest dependent community	8	0	8
Total	**66**	**30**	**36**

Photo credit: Emdadul Islam Bitu

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The **Strengthening Regional Cooperation for Wildlife Protection (SRCWP)** project, the first World Bank supported regional project in South Asia, aims to build country capacity and incentives for tackling the illegal wildlife trade and other selected regional conservation threats to habitats in border areas. The project was launched in 2011 in Bangladesh and Nepal in the first phase and Bhutan joined in the second phase to bring regional collaboration in combating wildlife crime through strengthened legislative and regulatory frameworks and well-equipped specialized agencies and systems, as well as relevant training and awareness programs for staff responsible for enforcement of wildlife laws and regulations. The project is also supporting the institutional strengthening of the South Asia Wildlife Enforcement Network (SAWEN) which was established by SAARC countries in 2011 to combat wildlife crime in the South Asia Region.

The Bangladesh Forest Department (BFD) is implementing the project through a partnership with research institutes, universities and environmental NGOs. A total of 36 sub-projects have been supported to improve the management of protected areas and conservation of flagship species through a landscape approach. Some of the sub-projects are addressing human-wildlife conflict through engagement with the local communities and civil society to foster an enduring culture of wildlife stewardship and protection. The regional wildlife project has supported the establishment of a Wildlife Crime Control Unit (WCCU) within the Wildlife Circle, three Wildlife divisions in the Forest Department, and a Wildlife Centre to undertake training, research, education and awareness on the issues of wildlife conservation and protection. This publication has documented the outcome of the sub-project entitled "Implementation of National Tiger Recovery Programme (NTRP)"

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