# BANGLADESH ELEPHANT CONSERVATION ACTION PLAN

## 2018-2027

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# BANGLADESH ELEPHANT CONSERVATION ACTION PLAN

## 2018-2027

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# MESSAGE

Bangladesh is one of the Asian Elephant range countries holding the responsibility to lend a hand to the global effort for conserving this majestic population as they are being pocketed by habitat fragmentation, therefore, more vulnerable to extinction. The Bangladesh Elephant Conservation Action Plan provides an outline of the present status, challenges and detail actions necessary for conserving the wild elephants which is categorized as Critically Endangered in Bangladesh by IUCN in 2015. The Action Plan was made through careful field observations, partnerships at all levels and devoted government endeavors. The Government of Bangladesh is committed to facilitate the momentum for elephant conservation that will not only secure human life and enhance their livelihood, but also ensure an uninterrupted future for elephants. In doing so, we need to mobilize adequate resources to protect elephants and their remaining habitats; a reflection of our endeavor toward this mega species.

**Anisul Islam Mahmud, MP**
Honorable Minister
Ministry of Environment and Forests
Government of the People's Republic of Bangladesh

# MESSAGE

Bangladesh Elephant Conservation Action Plan (BECAP) is a fascinating publication which has examined the status and extinction risks of Asian Elephants in Bangladesh with visionary management options for their conservation in accordance to Multilateral Environmental Treaties including the Convention on Biological Diversity and the Sustainable Development Goals. The objective of protecting elephants, the endeavor and the process of formulating this action plan is an explicit milestone in the conservation history of Bangladesh. The BECAP is of multitude potentials which will provide new information to researchers, conservationists, practitioners, and strengthening the existing nationwide and global knowledge inventory about elephants. I strongly hope this action plan will act as an aid to effective national-level policy making to save the species and in mitigating sequential human-elephant conflicts. I wish my best to see a collaborative strive from all stakeholders in successful execution of the BECAP. Prosperous enactment of this maiden effort to save elephants will indeed be a boost to continual biodiversity management practices envisioned by Bangladesh.

**Abdullah Al Islam Jakob, MP**
Honorable Deputy Minister
Ministry of Environment and Forests
Government of the People's Republic of Bangladesh

# MESSAGE

Biodiversity conservation plan is essential to formulate sustainable policy and action for development. It is a great achievement indeed for the Government of Bangladesh to be able to prepare and publish the Bangladesh Elephant Conservation Action Plan (BECAP) because elephant is a keystone species, a symbol of ecosystem health in most of the remaining forests of Bangladesh. The conservation of the elephants and their habitats are critical in light of achieving the Sustainable Development Goals. The elephant range forest areas provide essential ecological services for the entire region and the livelihoods of millions of forest dependent people. We must protect this precious national asset at any cost. BECAP provides guidelines for elephant conservation efforts over the next ten years on policy issues and initiatives that need to be taken into consideration by the government, development practitioners and the communities. I thank my colleagues from different ministries, representatives from universities, civil societies and development practitioners who have taken part to develop this Action Plan. I look forward to further collaboration for successful implementation of this BECAP.

**Abdullah Al Mohsin Chowdhury**
Secretary in Charge
Ministry of Environment and Forests
Government of the People's Republic of Bangladesh

# MESSAGE

Elephants have ingrained in our culture and the importance of conserving the Asian Elephants in Bangladesh is now established. Bangladesh Forest Department is committed to the conservation of forests and wildlife of Bangladesh for future generations to come. The further development of our elephant conservation capabilities is, therefore, needed to deal with the threats faced by elephant and other wildlife. To combat threats we need to improve our understanding of their root causes and how they impact elephants, so that we can focus conservation efforts for maximum effect. There is also a need for the development of wildlife management skills to face the unique challenges of elephant conservation in the vast forest areas. Indeed, the conservation of all of our forests and their wildlife will require further strengthening of skills in the field of biodiversity conservation and protected area management. One of our greatest challenges will be to find a balance between supporting human demands on the forest, whilst ensuring its continued existence. We need to reach out beyond the forest boundaries to dependent communities to find alternatives capable of reducing the pressure on elephants and its habitat.

The Bangladesh Elephant Conservation Action Plan provides us with the direction for this journey which can only be ensured by working together. I believe that Bangladesh Forest Department will be able to implement all of its activities meticulously with all out support from national and international organizations and will make our forests a wonderful habitat for this beneficiary wildlife.

**Mohammed Shafiul Alam Chowdhury**
Chief Conservator of Forests
Bangladesh Forest Department
Ministry of Environment and Forests
Government of the People's Republic of Bangladesh

# PREFACE

Elephant are profoundly a keystone species playing an important role in maintaining and balancing the structure of an ecological community and affecting many other organisms within the ecosystem. However, their presences in the human community often cause losses and sufferings introducing a hostile relationship between them. The conservation of elephants requires multifaceted initiatives and partnerships at all levels. These initiatives are outlined in the Bangladesh Elephant Conservation Action Plan, which is a policy-level document providing guidelines for elephant conservation efforts over the next ten years. These guidelines will be monitored to evaluate progress and adapt new learning in changing conditions.

The action plan is designed in three parts. Part A provides context about the current status of elephants in Bangladesh, and an overview of the elephant habitats and its management. Part B outlines the threats to elephants and their habitat in Bangladesh. This section also describes the challenges of building a successful elephant conservation program adequate enough to deal with those threats. The Action Plan is outlined in Part C, which provides a vision, goals, and objectives to guide an integrated and holistic program to address both threats and challenges to elephant conservation. To ensure participation of those people who live around the forests and are directly affected by elephants, Bangladesh Forest Department and partners plan to develop a participatory elephant conservation program for the entire elephant ranges of the country. This program will facilitate collaboration with all stakeholders to implement elephant conservation activities and shape future conservation strategies.

**Md. Abdul Mabud**
Project Director
Strengthening Regional Cooperation for Wildlife Protection Project
Bangladesh Forest Department

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We would also like to recall the constant support of the relevant Conservator of Forests and Divisional Forest Officers who have led the consultation workshops at the local levels, especially Mr. Mohammad Shah-E-Alam, Mr. Mohammad Abdul Awal Sarker, Mr. Rakibul Hasan Mukul, Mr. M. A. Khaleque Khan, Mr. Bipul Krishna Das, Mr. Md. Sayed Ali, Mr. Mohammad Aminul Islam, Mr. Muzammel Haque Shah Chowdhury, Mr. S. M. Kaesar, Mr. Md. Shofiqul Islam, Mr. Mohammad Shamsul Azam, Mr. Md. Moyeen Uddin Khan and Mrs. Begum Ummey Habiba.

This BECAP has been prepared through a participatory process that included meetings, workshops and stakeholder consultations involving the representatives from several ministries/Government departments, civil society, academia, research institutions, local NGOs and international organizations. A desk review of several key reports, publications, websites, surveys and in-person interviews were conducted. Several people and institutions made the development of this BECAP possible and to whom we would like to extend our sincerest appreciation.

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**Raquibul Amin**
Country Representative
IUCN Bangladesh Country Office
Dhaka, Bangladesh

# ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| BDT | Bangladeshi Taka |
| BECAP | Bangladesh Elephant Conservation Action Plan |
| BFD | Bangladesh Forest Department |
| BGB | Bangladesh Border Guards |
| CBD | Convention on Biological Diversity |
| CBO | Community Based Organization |
| CHT | Chittagong Hill Tracts |
| CITES | Convention on International Trade in Endangered Species Wild Fauna and Flora |
| CMC | Co Management Committee |
| ECA | Environment Conservation Act |
| ERT | Elephant Response Team |
| GoB | Government of Bangladesh |
| GIS | Geographic Information System |
| Kg | Kilogram |
| LA | Local Administration |
| LC | Local Community |
| LEA | Law Enforcement Agencies |
| LG | Local Government |
| MDG | Millennium Development Goals |
| MIKE | Monitoring the Illegal Killing of Elephants |
| MIST | Management Information System |
| MoE | Ministry of Education |
| MoEF | Ministry of Environment and Forests |
| MoF | Ministry of Finance |
| MoFA | Ministry of Foreign Affairs |
| MoICT | Ministry of Information, Communication and Technology |
| MoL | Ministry of Land |
| MoU | Memorandum of Understanding |
| NCS | National Conservation Strategy |
| NGO | Non Government Organization |
| RO | Research Organizations |
| SDG | Sustainable Development Goals |
| SMART | Spatial Monitoring and Reporting Tool |
| TRAFFIC | Trade Records Analysis of Flora and Fauna in Commerce |
| UP | Union Parishad |
| UPz | Upazila Parishad |
| USFWS | United States Fish and Wildlife Service |
| WCCU | Wildlife Crime Control Unit |
| WNCC | Wildlife and Nature Conservation Circle |

## Acronyms

| | |
|---|---|
| Hatir Khorak | Traditional Bengali word normally used as a synonym for consuming a huge amount of food |
| Mongol Shuvo Jatra | Traditional rally held during the Bengali new year |
| Nakshi Kantha | Bengali traditional embroidered quilt |
| Kheda | An enclosure constructed to capture wild elephants |

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# EXECUTIVE SUMMARY

Elephants have been revered for centuries in Asia, playing an important role in maintaining the ecosystem they inhabit and also in the continent's culture and religion. Despite its clearly established importance, most elephant populations are fragmented and pocketed due to multidimensional threats and challenges across its ranges. Bangladesh is one of the 13 Asian Elephant range countries and holding the responsibility to contribute to the global effort for conserving this majestic animal. At the moment, the Asian elephant's population in Bangladesh ranges from 210-330 and being categorized as Critically Endangered.

Elephants are in jeopardy in Bangladesh due to negative impact deriving from food scarcity, habitat loss and degradation, and direct killing. Moreover, Bangladesh suffers from severe levels of human-elephant conflict, molded in human killing, crop raiding, resource damage, and ultimately the vengeance killings of elephants by affected local communities. Fragmentation of elephant movement routes and corridors due to encroachment, agricultural expansion, establishment of settlements also directly intimidates the survival of the wild elephant population in nature.

Conservation of elephants requires multifaceted initiatives and partnerships at all levels. In order to build an effective and thriving elephant conservation attempt, there are set of challenges that need to be combated in terms of improving the research and knowledge management, strengthening the relevant policies and institutions, enhancing the protection and fortifying the relevant law enforcements, building awareness through communication and education programs, and developing collaboration between all parties involved.

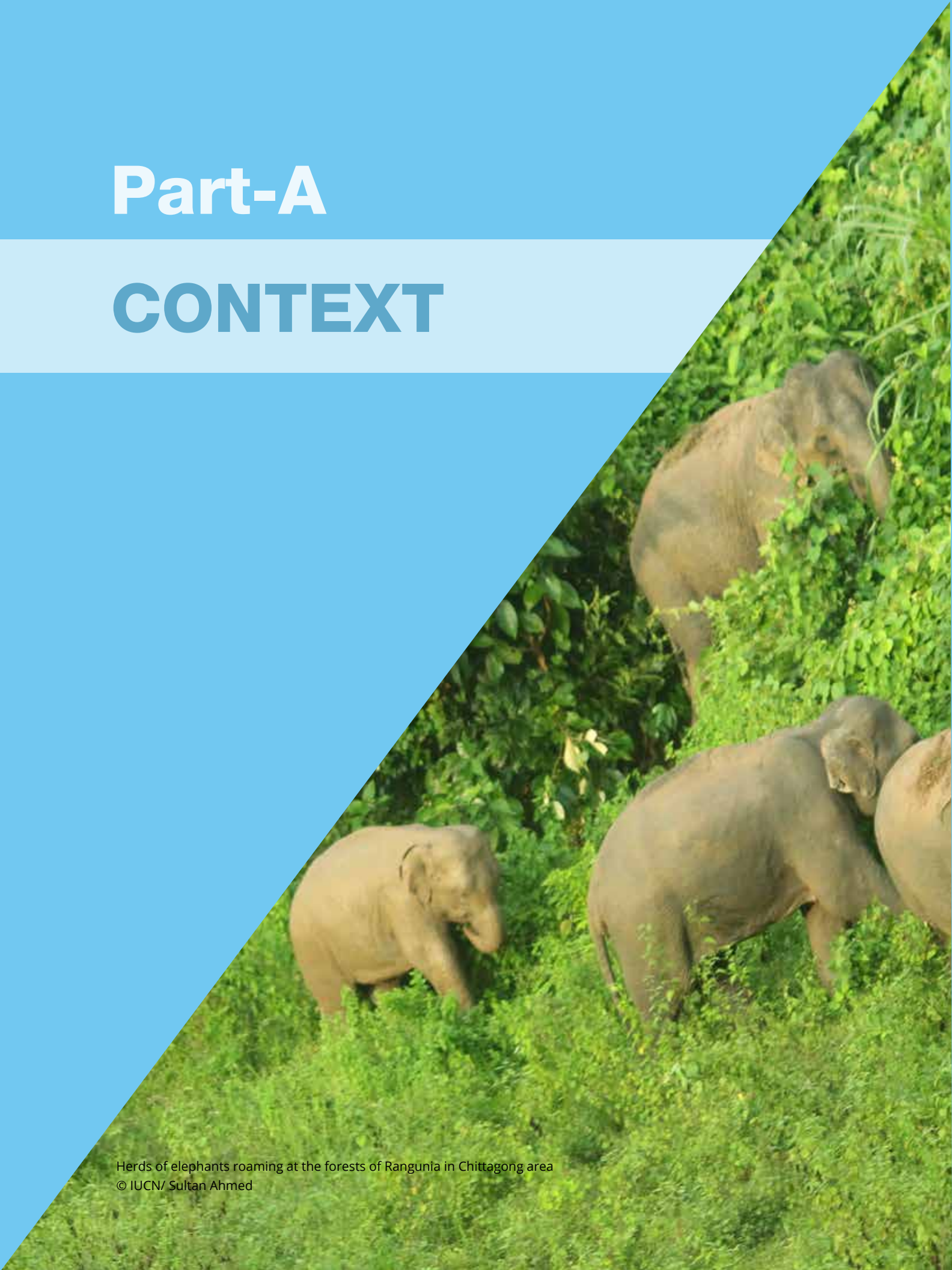
Over the last couple of decades, the Government of Bangladesh has undertaken few initiatives to conserve the wild elephants in Bangladesh. These initiatives, in most cases were discrete and taken on an impermanent basis. The Bangladesh Elephant Conservation Action Plan (BECAP) is the very first document of its kind and spots the investiture of an organized approach in ensuring long term conservation of elephants. It is a Government owned strategy document that provides a vision, goals, and objectives to steer integrated and focused elephant conservation programs. This Action Plan would acts as management prescription for the conservation of Asian elephants in Bangladesh for next ten years.

Based on the extent of practicability and relevance, BECAP addressed the elephant conservation threats and challenges by separating them into six problem pillars: (1) Human-Elephant Conflicts and Elephants Poaching, (2) Habitat Loss and Food Scarcity, (3) Protection and Regulation, (4) Research and Knowledge Management, (5) Capacity Development and Institutional Strengthening, and (6) Education, Awareness and Collaboration. Forty high priorities, 43 medium priorities and 35 low priority actions are recommended in this Action Plan to secure the remaining elephant populations of Bangladesh.

Success of this Action Plan would depend greatly on the timely implementation. Meaningful implementation of this Action Plan could be achieved by ensuring effective coordination among the relevant policies, strategies and actors. Proper monitoring and evaluation of recommended actions in this Action Plan will provide a basis for assessing the achievements of the elephant conservation endeavors. Timely implementation of the BECAP would not be possible without adequate and continued funding supports.

# Part-A

# CONTEXT



Herds of elephants roaming at the forests of Rangunia in Chittagong area
© IUCN/ Sultan Ahmed

## 1.1 ELEPHANTS AND THEIR CONSERVATION SIGNIFICANCE

Imagine the last 327 elephants are roaming freely around their range areas in the hilly forests of Bangladesh. The communities are welcoming elephants wherever this largest species of Earth is manifested – in the forest side or in the locality and the concern authority is helping them returning to the wild. Elephants are embedded with our culture (Khatun *et al*., 2013) – the vivid procession of '*Mongol Shova Jatra*' in the Bengali new year (Pohela Baishak) is celebrated with grandeurs and colors where elephant masks and figures are displayed; elephant motifs are in the stitches of the traditional embroidered quilt '*Nakshi Kantha*'; their tales are told for generations; their ability of consuming huge amount of food is versed as '*hatir khorak*' referring extravagant people; the elephant ride of the past Bengal elites, the elephant head Hindu god Ganesha proves their attachment with our culture.

Elephant is a keystone species whose presence is essential for the structure and functioning of the forest and mountain ecosystem. Elephant is an important mega herbivore in the food chain. To meet up its huge dietary demand and to hold up a viable population, elephant herds require large areas of land known as the elephant range (Sitompul *et al.,* 2013). In their trail, they maintain the integrity of the forest and the mountain indicating good potency of the ecosystem (Tikhile *et al.,* 2013); regenerating the forest environment and maintaining the diversity of flora and fauna. Besides the ecological and cultural significance, the largest land mammal on earth has its own right to roam around the nature.

Herds of elephants roaming at the forests of Rangunia of Chittagong South Forest Division
© IUCN/ Sultan Ahmed

In the present world there are two species of elephants: the African Elephants (*Loxodonta africana*) and the Asian Elephants (*Elephas maximus*). Currently, Asian Elephants are spread across 13 countries. The serious human-elephant conflict has threatened their survival compared to other elephant range neighboring countries which categorized them as Critically Endangered species in Bangladesh (IUCN Bangladesh, 2015). Disappearance of such species unquestionably indicates the future collapse of many other species in the wilderness (Baskaran and Desai, 2013). On the other hand, protecting them can lend a hand to secure the future of biodiversity as well as forest ecosystems upon which people depend (Mohapatra *et al.,* 2012; Barua, 2014). So, elephant is considered as flagship species which enables successful national and global biodiversity conservation campaigns.

How it would be if the forest of Bangladesh completely lost the largest land mammal on earth? Standing upon this reality, a comprehensive and long-term conservation effort is very urgent to save the Asian Elephants of Bangladesh from extinction. With effective planning and intensive endeavor, it is still possible to make sure that wild elephants keep travelling on the earth everlastingly. This book explains the present status of elephants, the basic steps towards elephant conservation, reasons of human-elephant conflicts and a 10 years action plan to establish harmonious habitats in Bangladesh.

## 1.2 STATUS AND DISTRIBUTION OF ELEPHANTS IN BANGLADESH

Over the decades, a number of studies had been conducted to identify the population size and distribution of elephants in Bangladesh (Table. 1). Nevertheless, it is imperative to mention that most of these studies were not comprehensive and the observations also varied and showed inconsistencies. The changing status of Asian elephants in Bangladesh requires in depth studies compatible with the publications in other Asian elephant range countries (Alamgir *et al.,* 2015).

Table 1: Glimpse of Elephant Population Surveys Conducted in Bangladesh

| Elephant Population | | | | References |
|---|---|---|---|---|
| Resident | Migratory | Captive | Total | |
| | | | 150 | Ranjitsingh (1978) |
| | | | 250 | Olivier (1978) |
| | | | 348 | Gittins and Akanda (1982) |
| | 60 | | 200 | Khan (1985) |
| 151-170 | 42-54 | | | Chakraborty (1996) |
| 195-239 | - | | | Kemaf and Santiapillai (2000) |
| 151-344 | - | | | Feeroz *et al.* (2004) |
| 196-227 | 83-100 | 94 | 228-327 | IUCN Bangladesh (2004) |
| 210-330 | 79-107 | 96 | | IUCN Bangladesh (2016) |

The resident wild elephants in Bangladesh were once abundant in the evergreen forests of Chittagong and the Chittagong Hill Tracts (CHT), semi-evergreen forests of Sylhet and moist deciduous forests of Mymensingh Forest Division (Khan, 2004). Now-a-days their distribution is

Figure 1: Elephant Distribution in Bangladesh

Source: Survey of Bangladesh and field survey

limited only in the southeast part of the country – the forests in Chittagong, CHT and Cox's Bazar areas (Fig. 1) (Motaleb *et al.,* 2016). CHT are still considered as one of the richest forest composition of Bangladesh with an estimated coverage of 6,700 $km^2$ that occupies 44% of the total forest areas managed by Bangladesh Forest Department (BFD) (Alam, 2008).

Migrations of elephants occur in the central-north and southeast international borders of Bangladesh, with ranges overlapping with transboundary countries. It is estimated that up to 30% of Bangladesh's elephant population are transboundary, migrating over the borders from and to neighboring India and Myanmar. In the central-north, elephants in Sherpur, Jamalpur, Netrokona, Kurigram and Moulvibazar districts, have trans-boundary ranges overlapping the Indian states of Meghalaya and Mizoram (Motaleb *et al.,* 2016). In the southeast, some herds in the CHT move to and from Mizoram state of India and some in the Teknaf area of Cox's Bazar district move to and from Arakan State/Province of Myanmar (Choudhury, 2007).

## 1.3 ELEPHANT CONSERVATION INITIATIVES IN BANGLADESH

The Bangladesh Forest Department (BFD), the steward of wildlife and forests in Bangladesh, is escalating the biodiversity conservation in recent years undertaking exemplary conservation actions and legal protections. BFD in close collaboration with few other conservation agencies has been leading the elephant conservation initiatives in Bangladesh. In addition to the multifaceted conservation actions, ensuring strong legislation and watchful enforcement are particularly important for elephants (Wilson *et al.,* 2013). Because, direct killing of elephants in the form of poaching or stray elephant killing and danger due to over-exploitation of forest resources in elephant habitats have been threats for wild elephants in most of their landscapes (Sarker *et al.,* 2014).

### 1.3.1 CONSERVATION ACTIONS

Bangladesh Forest Department has declared seven wildlife sanctuaries i.e. Chunati, Dhopachari, Dudhpukuria, Fashiakhali, Pablakhali, Sangu, and Teknaf; and one national park i.e. Kaptai National Park with a view to protect the elephants in their natural habitats. Additionally, the Chunati wildlife sanctuary has been declared as Monitoring the Illegal Killing of Elephants (MIKE) site in 2003. The establishment of several wildlife sanctuaries and national parks within adjoining biodiversity hotspots demonstrates the conservation significance of these vast landscapes.

Recently, BFD together with IUCN Bangladesh has mapped the elephant movement routes and corridors all over the country. They have also completed an extensive elephant population survey (Motaleb and Ahmed, 2016). Now-a-days, the co-management committee (CMC) established by the forest department is engaging the local communities adjacent to the Protected Areas to protect and manage the forest. The pioneer initiative specific to elephant conservation is the formation of Elephant Response Teams (ERT) by the Forest Department in collaboration with IUCN Bangladesh. ERT has been established across most of the human-elephant conflict prone areas of Bangladesh to connect the grassroots communities into the field level human-elephant

conflict management as well as conservation of critically endangered elephants. They have been introducing a range of conflict management techniques in different conflict prone areas e.g. alternative cropping practices, bio-fencing, solar powered fencing, and setting up early warning systems on a pilot basis. The human-elephant conflict is considered as one of the most challenging issues in elephant conservation scenario of Bangladesh (Aziz *et al.,* 2005; Yadab *et al*., 2012). Side by side, a number of education and awareness programs e.g. trainings, street shows, stakeholder engagement events, and community dialogues have been organized to involve and sensitize the concerned stakeholders.

Furthermore, to enrich elephant habitats and secure the food sources for wild elephants, BFD with assistance from IUCN Bangladesh has undertaken a couple of habitat improvement programs, where nearly 700,000 seedlings of elephant fodder species have been planted in over a 600 hectares area in Sherpur, Chittagong and Cox's Bazar. In late 2015, the first ever transboundary dialogue was organized between the Forest Departments of Bangladesh and India. The aim of this dialogue was to ensure safe and free movement of transboundary wild elephants across the international borders between these two countries. The follow up actions of this dialogue are now ongoing, and a protocol or else a Memorandum of Understanding (MoU) between two countries are expected soon.

Bangladesh Forest Department has recently developed a Wildlife Crime Control Unit (WCCU) in 2012 (WNCC, 2016). The WCCU is dedicated to stop and control illegal wildlife trade and related

Elephant Response Team members scaring a herd of raiding elephants away
© IUCN/ Rajib Mahmud

crimes and take actions against such activities. WCCU receives all kinds of wildlife criminal information, and is reached by a hot line number publicized across the country. Formal and direct attempts to protect biodiversity and wildlife became observable in Bangladesh from 2001. The BFD created it's new "Wildlife and nature Conservation Circle" (WNCC) and established four Wildlife Management and Nature Conservation Divisions in Dhaka, Chittagong, Khulna and Sylhet under the WNCC (http://www.bdforest.gov.bd). Later, three more such divisions were established in Rajshahi, Habiganj and Sherpur regions. These divisions grounded dedicated positions to safeguard biodiversity and wildlife, primarily in the Protected Areas. Presently, landscapes with major biodiversity significance, such as national parks, wildlife sanctuaries and eco-parks are managed by these divisions (Hossen, 2013).

## 1.3.2 LEGISLATIVE INITIATIVES

The BECAP is a step towards achieving the recently signed United Nations 'Transforming Our World: The 2030 agenda for Sustainable Development', commonly known as Sustainable Development Goals (SDGs 2030). The Goal 15 of SDGs 2030 clearly manifested on the conservation and sustainable management of all life forms on land; ensuring the conservation, restoration and sustainable use of ecosystems, species and their services. The Government of Bangladesh has legally protected Asian elephants through regulations and legislations. Importance has been given to the conservation of biodiversity and natural resources in several national strategies. At the same time Bangladesh showed strong observance to international guidelines, agreements and treaties for the conservation of its elephants.

### 1.3.2.1 Legal Protection at National Level

Bangladesh Forest Department is the designated agency for the conservation and management of wildlife and forests of the country. The Department has a long standing history of operation since 1864 and till today has evolved through experiencing versatile regimes (Islam *et al.,* 2006). Throughout these regimes, the operating philosophies kept changing but typically rounded on monitoring and controlling the illegal activities, regulating legal provisions, issuing permits and generating revenues.

Elephant Protection Act, 1879 was the first law regulating the hunting and capture of Asian elephants in the Indian subcontinent (Khan, 1980; Perera, 2009). It was not effective before the banning on '*Kheda*' operation in 1965 which used to construct enclosures to domesticate wild elephants (Islam *et al.,* 2006). Bangladesh first highlighted the conservation of elephants by The Wildlife (Preservation) Order, 1973 by introducing light punishments and the most noteworthy regulatory step of declaring some profound ecosystems as Protected Areas to conserve the wildlife. This declarations protected elephants along with other valuable keystone species (Feeroz *et al.*, 2004; Hanif and Khan, 2015). The Bangladesh Wildlife (Preservation) (Amendment) Act 1974 defined the elephant as 'protected animal' prohibiting the killing except cases of self-defense, protection of crops and livestock; or disallowing their capture excluding approved scientific research or sanctioned transport or possession.

The National Environment Policy 1992 embraces a number of related different sectors including agriculture, industry, health, energy, water, land, forest, fisheries, marine, transport, housing,

population, education and science. It delivered required actions in the development sectors of the country to facilitate long term sustainable use of all natural resources. It also gave the direction of time to time amendment of the existing laws. The National Forest Policy of 1994 is the amended version of the National Forest Policy 1977 enlightening the National Forestry Master Plan.

The Environment Conservation Act 1995 (ECA, 1995) is the main act governing environmental protection in Bangladesh which focuses on (1) ascertaining responsibility for compensation in cases of damage to ecosystems, (2) increasing the provision of punitive measures both for fines and imprisonment, and (3) assigning the authority to realize the offences. Later, the Environmental Conservation Rules 1997 introduced a set of the relevant rules to implement the ECA, 1995.

The National Biodiversity and Strategic Action Plan 2006 provided a framework for conservation, sustainable use and sharing the benefits of biodiversity of the country. The plan focused on the cross-sector linkages with the biodiversity conservation, the social and the economic development in Bangladesh. The 'Perspective Plan of Bangladesh 2010-2021' widely referred as Vision 2021 emphasized on the conservation of biodiversity by enhancing habitats of severely affected species having threat of extinction. The 15$^{th}$ Amendment of the Constitution of Bangladesh, 2012 (http://bdlaws.minlaw.gov.bd) under the heading "Protection and improvement of the environment and biodiversity" gave the highest priority in the conservation of wildlife, biodiversity and natural resources. The Section 18A of the constitution states that, "The state shall endeavor to protect and improve the environment and to preserve and safeguard the natural resources, biodiversity, wetlands, forests and wildlife for the present and future citizen".

The Wildlife (Conservation and Security) Act, 2012 have emphasized into the conservation and protection of elephants and few other flagship species more than ever. The act mentioned the killing of elephant as a non-bail able crime and kept a provision of punishment for a maximum seven years of imprisonment and up to 10 lakh taka of a monetary fine. In addition, strictness has also been shown in the case of unlawful collection, carriage and trades of elephant body parts and products by sentencing a maximum three years of imprisonment and up to three lakh taka of a monetary fine. The act also exempted cases where the elephant became a threat to one's life.

The Compensation Policy for the Victims of Wildlife Attack-2010 exhibits the concern of the government of Bangladesh towards protecting wild elephants. As per the policy, if elephants unfortunately kill a person, the victim's family is eligible for a compensation of BDT 100,000. If an action of the elephant handicaps any person then the victim will be compensated by BDT 50,000. In case of crop raiding or damages of resources, then the claimer will receive no more than 25,000 BDT.

### 1.3.2.2 Adherence to International Initiative

The conservation of elephants and their range require cross-country and regional partnership along with global cooperation (Pant *et al.,* 2015). Bangladesh adheres to international agreements, treaties or platforms of wildlife conservation even elephant conservation. However, the extent to integrate the international guidelines and initiatives into the country's national conservation strategies and policies require clarification.

***Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES):*** The CITES is an international agreement to ascertain that international business in specimens of wild fauna and fauna does not threaten their survival. The CITES includes both Asian and African elephants. Bangladesh ratified this convention on 20 November 1981 and entered into force on 18 February 1982 (www.cites.org).

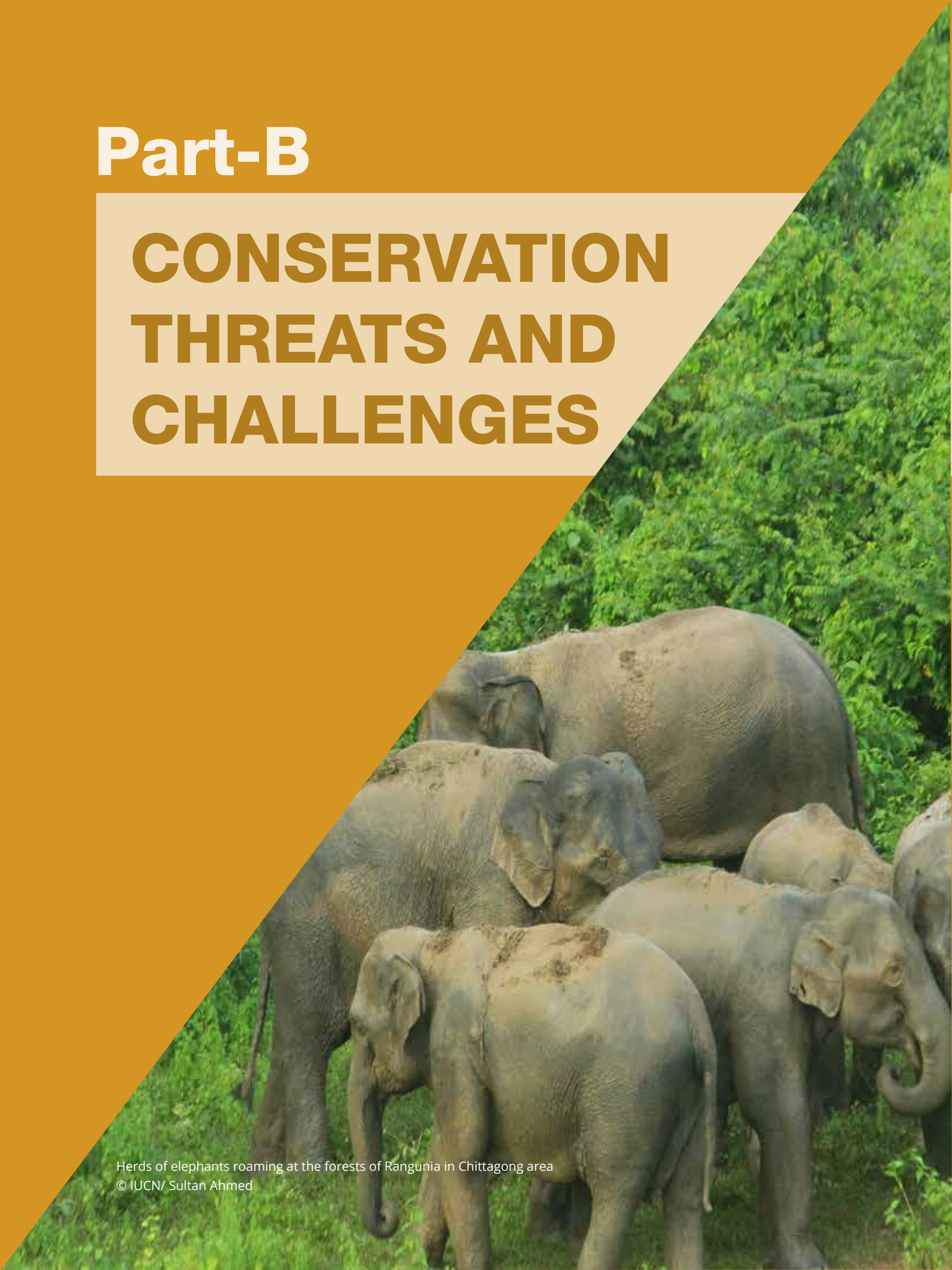
***Convention on Biological Diversity (CBD):*** The CBD forwards a dramatic step in the conservation of biodiversity and the sustainable use of its components which was opened for signature on 5 June 1992 at the United Nations Conference on Environment and Development (the Rio "Earth Summit"). Becoming a member in 1992 (http://www.cbd.int/convention), Bangladesh has been implementing various activities to comply with the provisions under the convention as well as its commitment towards conservation and sustainable use of natural resources.

CBD parties committed a significant reduction rate of biodiversity loss achievable nationally, regionally and globally by 2002 to 2010 which leads to benefit all life on Earth and alleviate poverty. This target was subsequently endorsed by the World Summit on Sustainable Development and the United Nations General Assembly and was incorporated as a new target under the Millennium Development Goals (MDG). At the 9$^{th}$ Conference of the Parties (CoP) this Strategic Plan was considered beyond 2010 in its Decision IX/9. These targets focuses on protecting the species and biodiversity components as well as assessing the threats and promoting sustainable uses of these resources, consequently reducing the loss of biodiversity. The conservation of Asian elephant efforts are indeed contributing to achieve CBD and MDGs which is now embedded with the global goal 15 of the SDGs. In decision X/2, the tenth meeting of the CoP, held from 18 to 29 October 2010, in Nagoya, Aichi Prefecture, Japan, adopted a revised and updated Strategic Plan for Biodiversity, including the Aichi Biodiversity Targets, for the 2011-2020 period. The Aichi Biodiversity Targets specifically focused on making people aware of the biodiversity values and integrating the values into national strategies, protecting threatened species from extinction, conserving important biodiversity habitats, and maximizing the ecosystems benefits. Admitting the Aichi Target Bangladesh is planning to conserve 17% of its terrestrial and inland water; and 10% of coastal and marine areas potential for biodiversity and ecosystem services under protected area network within 2020. It is quite obvious that the efforts for elephant conservation are very much linked with, and would contribute significantly to, the achievement of the 2020 Aichi Biodiversity Targets.

***Monitoring the Illegal Killing of Elephants (MIKE):*** The MIKE program is one of the international collaboration established by a resolution of the CoP to the CITES at its 10$^{th}$ Meeting in Harare in 1997. The prime goal of the MIKE is to provide information required for elephant range countries to make suitable management and enforcement decisions and to build institutional capacity within the range countries for the long-term management of their elephant populations (http://www.cites.org). Bangladesh joined the MIKE in 2003 and declared the Chunati Wildlife Sanctuary as a MIKE site in 2003.

# Part-B

# CONSERVATION THREATS AND CHALLENGES



Herds of elephants roaming at the forests of Rangunia in Chittagong area
© IUCN/ Sultan Ahmed

Elephants require available food, suitable shelter, sufficient water and healthy habitat conditions to endure (Zimmermann *et al.,* 2009; Kar *et al.,* 2016). Considering these requirements, elephants are in enormous danger led by habitat loss and fragmentation, food shortage, and direct killing; together these are seriously impacting the Asian elephant population in Bangladesh. There remain alarming gaps regarding scientific knowledge, management tools and resources, capacities and policies; which demand urgent reinforcement to lessen these threats. The following section outlines the nature, attributes, and dimensions of these threats and challenges.

## 2.1 THREATS TO ELEPHANTS

About 100 years ago, elephants were apparently present in most of the forests of Bangladesh (Alam, 2008). Even in the middle of the last century, more than 500 elephants were present in their natural habitats throughout Bangladesh (Choudhury, 2007). During the last 50 years of the last century their population dropped by more than a half (Mishra & Bisht, 2016). Studies revealed that human actions are responsible for their decay (Stewart & Ritthirat, 2007; English *et al.,* 2014). The lingering population is continuously reducing by the consequences of frequent habitat loss and fragmentation, encroachment, food scarcity, human-elephant conflicts, and illegal killing. These threats are great barriers of elephants to reproduce in the nature. Based on available knowledge and information, three key threats to elephant populations in Bangladesh are: 1) Food insufficiency, 2) Habitat loss and fragmentation, and 3) Direct killing of elephants.

### 2.1.1 FOOD INSUFFICIENCY

Elephant is the largest terrestrial mammal staying on top of the food chain without any expected predators in the nature. An Asian elephant typically consumes up to 150 kg of plant materials and drinks around 140 liters of water a day (Fernando *et al*., 2010). The diet of an Asian elephant is made up of large varieties of plant species where grass is the most preferred along with roots, leaves, vines, shrubs, stems and barks (Mitra, 2013). A study by United States Fish and Wildlife Service (USFWS) in 2002 suggested that grass accounts for more than half of the Asian elephant's diet. Adequate foods consumption is required for proper nutrition making them healthy and resistant to diseases (Sitompul *et al.,* 2013). However, elephants are habituated with low energy diet which makes them to forage over a large area in search of food resulting most of the elephant herds to migrate seasonally for greener pastures (Aziz *et al.,* 2005; Plotnik *et al.,* 2014). Because of huge dietary requirements, elephants extensively search for food, water, and shelter within a particular habitat or other habitats. During the early wet season, elephants are scattered throughout forested areas, when food and water are available. The quality of habitat and resources begins to depreciate during the summer season, and then the elephants look for and move to the other habitats where food and shelter are available (Kumar *et al*., 2015; Varma, 2013). So, obstruction in their movement eventually impacts their food availing capacities. On the other hand, compared to other large mammals it has a longer gestation period when food sufficiency is vital (Joshi and Singh, 2009). Thus elephant population on a landscape is largely reliant on the abundance of fodders.

Bangladesh has one of the world's lowest forest-to-population ratios (<0.02 ha per person, (Alam, 2008). In recent years, the remaining natural forests of Bangladesh are disappearing at an alarming rate. The constant deforestation is shrinking the options for the elephants to search and consume ample foods, creating direct pressure on their survival (Sarker & Røskaft, 2011). It is crucial to control the unsustainable collection of forest resources, protect elephant fodders and create wider sources of foods for elephants through different habitat improvement programs.

An elephant feeding upon an Acacia tree- unusual feeding behavior indicating food scarcity
© IUCN/ Rajib Mahamud

## 2.1.2 HABITAT LOSS AND FRAGMENTATION

Habitat loss puts elephants in danger by shrinking space, splitting shelters and fragmenting dwelling areas (Yadav *et al.,* 2012; Redpath *et al.,* 2015). In Bangladesh, the wild elephants inhabit mostly in the evergreen, semi-evergreen and moist deciduous forests in the central-north and southeast parts of the country. These habitats share many threats common with other elephant habitats of the region along with factors unique to the sociopolitical attributes of the respective landscapes (Hossen, 2013; Ramkumar *et al.,* 2014).

Among all threats to the forests, perhaps the most vivid and immediate one is encroachment (Shannon *et al.*, 2009). Most of the forests and elephant landscapes of Bangladesh are inhabited by fringe communities, and encroachment is occurring severely in many of these places. For instance, the Rohinga refugees from neighboring country Myanmar have settled temporarily in several bordering elephant habitats of Cox's Bazar and Bandarban districts. Historically, these areas were extensively used by the wild elephants to migrate from Bangladesh to Myanmar, and vice versa, and now a day their movement space got shrunk due to such settlements. In many

other areas, often human settlements and structures split up elephant habitats, and fragment the shelter, movement routes and corridors of wild elephants (Box 1).

Box 1. Route and Corridor Fragmentation

a

Elephant routes are referred as the movement paths that elephants use on a regular basis for foraging and day-to-day movement. Corridor, on the other hand, is a connecting trail that elephants use to move between neighboring patches of one or more habitats (Doyle *et al.*, 2010). Route and corridor fragmentation occurs when their natural settings get demolished mainly because of human activities (Zimmermann *et al.,* 2009; Kar *et al.*, 2016).

b

The movement pattern of elephants is directly linked to the availability of food and water, and the climatic conditions. Free living wild elephants spend up to 20 hours a day in foraging, exploring, socializing and searching for foods (Baskaran and Desai, 2013). This means that elephants need to travel a long distance to survive in their natural environment. Therefore, the fragmentation of routes and corridors hinder the free movement of elephants making their population isolated and ultimately affecting elephant survival.

c

In Bangladesh the elephant routes, corridors and habitats are commonly being fragmented by forest area encroachment, agricultural expansion, establishment of human settlements, and construction of huge structures. Even the wildlife sanctuaries are not ensuring a secured elephant existence. For example, the conversion of forest lands into agricultural lands and the establishment of human settlements surrounding the Pablakhali wildlife sanctuary have pocketed a population of resident elephants. Again, a number of brick fields are continuing their operations in the Protected Areas of the Chunati Wildlife Sanctuary threatening elephant environment. Furthermore, the establishment of border fences built around the international political boundary of Bangladesh with India and Myanmar also blocked the free movement of Asian elephants between its natural habitats across the countries (Motaleb *et al*., 2016).

d

In worst cases, fragmentation often leads to the permanent loss of habitat that eventually instigates elephants to travel in close proximity to the localities resulting conflict with human. Therefore, undamaged routes and corridors are very important for free movement of elephants and for their everlasting existence.

Photos: a. Elephant habitat of Rajarkul is fragmented by Ramu-Maricha road. © IUCN/ Sultan Ahmed; b. Obstruction on elephant route. © IUCN/ Sultan Ahmed; c. Construction work on elephant corridor. © IUCN/ Sultan Ahmed; Crop damage by elephant. © IUCN/ Mohammad Abdul Motaleb.

Local people collecting forest resources from Banshkhali Eco Park of Chittagong South Forest Division
© IUCN/ Sultan Ahmed

In the recent times, unplanned development interventions across and adjacent to the elephant landscapes have been a major threat. Although there is no human habitation permitted inside the forest, but a wide range of permanent and semi-permanent structures are common in many of the forests, including the Protected Areas and wildlife sanctuaries (Hanif & Khan, 2015). For example, more than 1780 acres of land from the Rajarkul Reserved Forest area under the Cox's Bazar South Forest Division have been allocated for establishing a cantonment. Rajarkul has been a major corridor for 30-35 elephants to migrate from Cox's Bazar to Bandarban to Myanmar, and vice-versa. Establishment of cantonment in this area fragmented the habitat and isolated the elephant herds into smaller pockets. Again, a few years back, a refugee camp named 'Kutupalong' and TV relay station has been built at Ukhia Upazilla of Cox's Bazar area that seriously blocked the elephant movement corridor, and created a severe barrier for the wild elephants to freely migrate from Cox's Bazar to Myanmar, and vice versa. Moreover, recently the construction plan of a single lane railway line from Chittagong to Cox's Bazar has been approved in the same region. The extent to which the proposed rail line will consider keeping the elephant movement corridor undisturbed is yet indefinite. For that reason it is extremely important to ensure that the biodiversity conservation as well as environmental considerations gets adequate attention while making decisions about any development intervention, especially around the forest areas.

Expansion of agricultural lands over the forest lands and change in land use pattern are also the key threats to the elephant habitats. People living adjacent to the forests cultivate agricultural crops in close proximity to the forest boundaries which are poorly demarcated or not demarcated at all in most cases. Furthermore, the Forest Department or other relevant authorities have limited control or monitoring over these activities. (Sarker & Røskaft, 2014).

Inappropriate cropping practices in hilly ecosystems have been posing threats to many of the elephant range forest areas (Khan, 2004). Shifting cultivation - a traditional method that includes slashing and burning as a land preparation technique is such an instance. Such land use practices have a long term impact over the soil as well as the health of forests because these areas get dominated by low quality grassland, mostly weedy plants without tree cover. This has been disastrous for elephants because the grasslands cannot meet their nutritional requirements and the absence of adequate shade may also be subjected to heat stress (Jha *et al*., 2014).

Slash and burn practice near elephant habitat in Cox's Bazar North Forest Division
© IUCN/ Sultan Ahmed

The prevailing trend of habitat fragmentation and loss have been alarming issue, and often leading to everlasting damage of habitats (Sukumar, 2003; Joshi & Singh, 2009). Currently, most of the habitats, routes, and corridors identified in Bangladesh are in jeopardy, and needs immediate protection. Regular patrolling should be carried out and enforcement of relevant laws needs to be strengthened so that habitats remain sheltered from encroachment, human settlements or agricultural expansion. Moreover, the elephant conservation needs to be mainstreamed into the wider development plans and strategies. This will enable the decision makers to remain positive enough and sensibly consider elephant conservation urgencies during decision making. Also, where possible, it is important to incorporate contingency plan e.g. underpass, overpass and sign posts for elephants, particularly while designing establishment of mega structures or settlements in close proximity to the elephant landscapes. Apart from these issues, the challenges of the transboundary elephant habitats in the central-north and southeast part of Bangladesh are even more complex (Box 2).

## Box 2. Transboundary Elephants

a

b

c

The number of transboundary migratory elephants in Bangladesh ranges from 79 to 107. A recent survey by IUCN discovered 39 active crossing points that elephants still uses to move between Bangladesh and the neighboring countries (IUCN Bangladesh, 2016). It is reported that elephants typically migrate on a seasonal basis in these areas to change their appetite (Sarker *et al.*, 2015). Bangladesh shares the international political boundary with India at the central-north and northeast, and with Myanmar in the southeast part of the country. A widespread movement of elephants crosswise these identified points indicate that they are simply a part of the larger contiguous population encompassing habitats across bordering countries (Choudhury, 2007; Hossen, 2013).

In the central-north part of Bangladesh, elephants migrate from Bangladesh to Meghalaya state of India, and vice-versa. Study report of IUCN Bangladesh suggested that with 30 active crossing points, the adjacent landscapes of Kurigram, Jamalpur, Sherpur, Mymensingh and Netrokona districts occupies the maximum number of transboundary migratory elephants. Elephants also actively migrate to and from the Mizoram state of India through two other crossing points situated in the bordering areas of the greater Sylhet region. Seven other crossing points are also identified along the international boundary between Bangladesh and Myanmar adjacent to the Rangamati and Cox's Bazar districts (IUCN Bangladesh, 2016).

The challenges toward the transboundary migratory elephants are multidimensional. The prevailing habitat conditions in these areas are not healthy enough to support the migratory elephant populations with sufficient foods and shelters in most cases. On the contrary, agricultural cropping is the main source of livelihoods for most of the people living in close proximity to these areas. The combination of insufficient habitat conditions and availability of agricultural crops in nearby areas often prompts elephants to raid on the crops and eventually get into conflict with the community. It was reported that at least 24 people were killed by elephant attacks and 17 elephants were killed by agitated people as a result of human elephant conflicts in these transboundary areas over the last 15 years (2000 to 2015) (WNCC, 2016).

It has been revealed that 11 transboundary elephants crossing points became inactive in the last couple of decades due to establishment of human settlements on their ways (IUCN Bangladesh, 2016). The international border fences built adjacent to the identified crossing points has also been severely affecting the movement of migratory elephants. These fences are not only fragmenting routes and corridors, but also forcing the migratory elephants to move beyond their natural habitats.

Photos: a. Barbed wire fence in Sherpur border area. © IUCN/ Rajib Mahamud; b. Elephant moving near the wire fence of Sherpur border area. © IUCN/ Rajib Mahamud; c. Broken border gate in Sherpur. © IUCN/ Sultan Ahmed

## 2.1.3 DIRECT KILLING OF ELEPHANTS

Direct killing of elephants can wipe out a population over a short period of time (Stewart & Ritthirat, 2007; Kart *et al*., 2016). In Bangladesh, direct killing of elephants takes place, usually either by the killing of stray elephants, mostly during the human-elephant conflict (HEC) situations, or by the illegal poaching for body parts or meat consumption. Very little is known about the possibility of elephants passing away from disease.

An elephant killed the agitated crowd while straying near localities in Sherpur area
© IUCN/ Rajib Mahamud

Elephant is perceived as a threat when it roams into a village where as this Action Plan intends a friendly human elephant relations. Their attack on human or raiding of crops resulted this negative feeling which is the driving force behind retribution killing which must be stopped because stray elephant killing associated with Human Elephant Conflict is severe in Bangladesh (Hossen, 2013). The belligerent mind-set in local communities is very problematic towards achieving the long-term elephant conservation objectives (Box 3).

The records of the BFD shows that, from 1992 to March 2016 Bangladesh lost at least 90 elephants by direct killing; that means on an average four to six elephants get killed per year (WNCC, 2016). Besides, there are also reports of unintentional incidents in the Human Elephant Conflict prone areas; the communities set up the electric fences around their crop lands to retard the livestock

or elephants away from their crop lands. At least two elephants were reported trapped and died in such fences in recent years. Such mishaps also indicate that the community preparedness lack the systematic dealing with elephants.

The international demand for the elephant tusks and other body parts is now recognized, but little is known about the status and trends of elephant poaching and relevant trades in Bangladesh (Barua, 2014). But the extensive poaching experiences in India and Myanmar (Hanif and Khan, 2015) may increase the vulnerability of the elephants in Bangladesh. Records indicated that among the 90 elephants that got killed since 1992, at least 7 were poached (WNCC, 2016). These furtive and unlawful activities are difficult to detect. However, illegal trades of elephant body parts are not the only reason for elephant poaching. A study stated that a tribal community called 'Pankhu' hunts wild elephants for meat in CHT south forest division (IUCN Bangladesh, 2004).

A herd of elephant raiding crops near the localities in Sherpur area
© IUCN/ Rajib Mahamud

Box 3. Human-Elephant Conflicts (HEC)

a

b

c

Human Elephant Conflict is the most pressing concern for the conservation and management of elephants in Bangladesh (Aziz *et al.,* 2005). Elephants come into conflict with humans because of inadequate space as they compete for the same habitat. As a result of this resentment, both elephants and people are killed and injured. Field observations suggest that Human Elephant Conflict typically culminate in the form of loss of elephants, human lives and damage of resources and properties.

Loss of resources and properties is one of the most common forms of conflict, and arises when elephants stray into the localities mostly for crop raiding. Studies suggested that elephants, being large bodied animals, are forced to raid crops to meet their nutritional requirements when their habitats get encroached (Yadav *et al*., 2012; Kar *et al*., 2016). The agricultural crop and household property damages are common in all major elephant ranges in Bangladesh with relatively high frequency in Sherpur, Jamalpur and Chittagong areas (Aziz *et al*., 2005; Sarker *et al*., 2015). According to the IUCN 2004, Human Elephant Conflict has claimed more than BDT 29 million as financial losses, although the site specific origins and potential solutions for such problems are yet to be explored.

Direct killing of elephants is a result of the antagonistic sentiment of people towards elephants; mostly occurs when people defend their property by driving elephants away with fire, blank gun shots and crude bombs (Hossen, 2013). The repeated straying of conflict elephants creates a panic in the respective community often lead to intentional killing. The record revealed that 62 elephants have been killed since 2003 until April 2016 in Bangladesh (WNCC, 2016).

The loss of human life by elephant attack is the most horrible consequence in a Human Elephant Conflict; usually occurs when people enter the forests to collect natural resources or when they encounter a straying elephant in the localities. On top of the personal grief, the loss of an earning family member or damage of crops causes a major economic impact to a family. Records suggest that since 2003, a total of 231 people were killed until March 2016 by elephants with an average of 30-40 incidents each year (WNCC, 2016).

Approaching support to the people suffered by elephants is an ethical responsibility in elephant conservation. Government of Bangladesh has formulated a compensation Policy for the victims of elephant attack in 2010. Additionally, to combat these immediate challenges, BFD in collaboration with partner agencies has mobilized ERT to aware the communities and buildup the capacity of the stakeholders on a pilot basis which should continue in the long-term management of elephants. Most alarming is the dealings of these Human Elephant Conflict which demand maximum priority because of the negative attitude in the communities towards elephants will ultimately disable elephant conservation in all aspects.

Photos: a. House damage in Sherpur. © IUCN/ Sultan Ahmed; b. Crop damage in Chunati. © IUCN/ Ashraful Haque; c. House damage in Sherpur. © IUCN/ Sultan Ahmed

## 2.2 CHALLENGES FOR ELEPHANT CONSERVATION

Elephant conservation and management in Bangladesh requires a multi-party efforts, sustainable sources of funding and relevant supports (Stewart & Ritthirat, 2007) because the challenges are also multifaceted (Khatun *et al*., 2013; Redpath *et al*., 2015). The work, finance and cares towards their conservation are not yet satisfactory compare to the necessity. Based on current knowledge and information, five major challenge areas have been identified that need substantial focus and improvements: 1) Research and Knowledge Management; 2) Policies and Institutional Strengthening; 3) Forest Protection and Enforcement; 4) Communication, Education and Public Awareness; and 5) Collaboration. The following sections outline the current state of these challenge areas.

### 2.2.1 RESEARCH AND KNOWLEDGE MANAGEMENT

Presently, very few research organizations are studying the ecology and conservation along with socioeconomic researches, and biodiversity conservation activities. Most of these organizations have limited field information and scientific data, technology and capacities to deal with a sensible approach to analyze the problems and recommend appropriate action this ecology and sociology; which are ever-changing and interdependent (Plotnik *et al*., 2014). Only fact-based knowledge helps placing binding role in policy formulation, strategy development, sorting priority and effective monitoring on elephant conservation in Bangladesh. While the information used in Bangladesh Elephant Conservation Action Plan are considered the very best available from the existing knowledge base.

Researchers collecting field data from elephant sites
© IUCN/ Sultan Ahmed

The research and educational institutes lack contemporary tools and techniques such as radio-collaring and satellite tracking to the elephant conservation panorama. That's why the research outcomes found from mostly personal initiatives are too inadequate to incorporate into the conservation action. However, the population survey has been conducted in 2004 and 2016 (IUCN Bangladesh, 2004; IUCN Bangladesh, 2016), and the elephant movement routes and corridors have been identified and mapped under different conservation projects (Motaleb *et al.,* 2016). But, no precise study has been conducted so far to understand the exact feeding behavior of Bangladeshi wild elephants which made difficult determining the precise degree of their threats. It is required to develop a platform of like-minded organization to extend the support (IUCN Bangladesh, 2004; ANCF, 2010) because the knowledge gap hindered understanding of the real on the ground situation, innovation, conflict mitigation techniques, policy intervention, and willingness of communities to pay for elephant conservation. Bangladesh still has a lot to achieve a sound knowledge exchange and development of elephants and its conservation (Hanif & Khan, 2015). Not only the knowledge base is too little, but also the dissemination system to build up the capacity of the stakeholder groups is weak.

To make appropriate conservation decisions it is particularly important to investigate and know the key ecological traits of elephants in terms of their status, feeding behavior, shelter, movement, and habitat levels (Sitompul *et al*., 2013; Jha *et al*., 2014). Similarly, without understanding the socioeconomic context in terms of natural resources, dependencies over the elephant landscapes, and revealing relevant human-elephant relationship dynamics referring to coexistence or conflicts, it is hardly possible to come up with a sustainable way out.

In Bangladesh, elephant conservation efforts have so far been supported by only a few agencies and amongst them USFWS is a major patron supporting elephant conservation initiatives in Bangladesh through IUCN Bangladesh in four successive phases until 2013. Elephant conservation first grew into a holistic form in 2013 by the World Bank funded SRCWP project through which a number of elephant conservation focused sub-projects were grounded into actions. Most of the activities are being implemented on a pilot basis and their continuation depends on the accessibility to funding so sustainability of these initiatives is not ensured.

### 2.2.2 POLICIES AND INSTITUTIONAL STRENGTHENING

Bangladesh doesn't have a complete policy to safeguard and manage elephants. For instance, Article 18A of the constitution ensures environment protection and the pursuit of sustainable development. The National Conservation Strategy drafted in late 1991 and submitted to the Government in early 1992, is still pending for the final approval by the cabinet. Although most of the policies and strategies obliquely contribute to the conservation of wildlife as a whole, but strategies and policies directly addressing the elephant conservation is needed.

Whatever policy exists require wide dissemination for practice in the grassroots reality to achieve a complete management policy. In-depth understanding of the tangible and intangible benefits derived from elephants and elephant ranged forests would help establish their significance among the country people – the politicians, administrators, relevant stakeholders and the community people. Strong political commitments for elephant conservation are inevitable as their supports act like the conservation backbone at national and local level.

Being the custodian of wildlife and forests of the country, BFD does not manage the entire elephant landscapes but the Protected or Reserved areas. In most cases the illegal wildlife trade and related crime incidents occur outside the operational jurisdiction areas which should be redefined for their conservation. A pragmatic modality should be developed where different Government agencies such as the Forest Department, Ministries, Administration and Local Governments can jointly work for elephant conservation.

### 2.2.3 FOREST PROTECTION AND ENFORCEMENT

Survival of elephants directly depends on its habitat condition so highest priority should be given to ensure the protection of elephant habitats which is the forests (Douglas & Hamilton, 2009). Forest protection and effective law enforcement are perhaps the most challenging job of entire wildlife conservation and management process. Field observations suggest that elephant conservation in Bangladesh is suffering from weak legislations, inadequate manpower and infrastructures, and fragile patrolling efforts at ground level.

Bangladesh is having forest coverage of only 6.7%, and losing some 2,000 hectares of forests each year due to limited execution of environmental legislations and the pressures of a growing population (ANCF, 2010). The forest areas of the southeast part of the country are the common roaming zone for the resident elephants, are facing similar declines over the last two decades; studies suggested alarming mode that the disappearance rates of the forest cover are manifested

Forest guards at the CHT south forest division
© IUCN/ Ashraful Haque

in encroachment, illegal extraction of forest resources, unplanned development interventions, detrimental land use practices, and lack of proper management initiatives (Sarker *et al*., 2015). It is indeed impractical to ensure quality habitat for wild elephants without preventing the forests from getting disappeared. Whereas the transboundary elephants migrate largely in the hilly areas of central-north Bangladesh which are common private agricultural lands and homesteads; people lack a precise training on elephant conservation techniques and a mechanism to be enforced (Sarker, 2010).

The experience of the Forest Department and WNCC should be given special attention to overcome identified challenges like insufficient manpower, resources and technology along with limited jurisdictions. They also lack coordination mechanism with territorial divisions. Field observations claimed that majority of the beat and range offices do not have required manpower and vehicles for patrolling, and in most cases are provided with insufficient budgetary allocations. Moreover, the Forest Department posts are neither established in response to the need of elephant conservation nor situated in close proximity to the elephant ranges. Their accommodation, infrastructures, or related amenities are also very basic. These factors cumulatively slowdown the regular performance and the ability to respond promptly during an urgent situation.

Elephants are mega species demanding a particular set of sensitive skills to manage by associated staff. The responsibilities of the WNCC staff should particularly include wildlife monitoring, wildlife offense inquiry, and human-wildlife conflict management at the grassroots level. To combat these challenges modern patrolling techniques, like Spatial Monitoring and Reporting Tool (SMART), Management Information System (MIST) should be provided with necessary resources and supports. On the contrary the frequent transfers among the staffs break the effectiveness of their particular conservation and wildlife management skills. It should be considered that the field level elephant conservation and management efforts involve exclusive risks and potential danger; but there is no particular allowance or incentive mechanism to compensate the staffs which could help them to deal with emergency situations.

The most challenging component of elephant protection process is perhaps, ensuring the effective prosecution (Zimmermann *et al*., 2009). It is revealed that the law enforcement efforts are mostly limited within filing a case against the killing or poaching of elephants with an extremely slow and tiring pace of legal prosecution process. It is expected to formalize a standard system to follow up older cases; inspect the gaps in existing legislations and the barriers for rapid prosecution and strengthened the WCCU for the overall protection and legislative safeguard of elephant conservation.

### 2.2.4 COMMUNICATION, EDUCATION AND PUBLIC AWARENESS

Communication, education and public awareness can be a powerful tool to facilitate changes towards elephant conservation practices (Mavatur & Singh, 2010). The Forest Department alone will not be able to protect elephants without the extended support across the stakeholders from the political leaders, policy makers, Government Bodies, practitioners, academic researchers and from the foremost important group which is the local communities. Elephant conservation demands regional and international cooperation for their migratory nature. Therefore, the

education and awareness programs should be designed to build up the capacity of each of the above target group. These programs must be creative enough in delivering the key messages in understandable languages according to their expected responsibilities and by showing evidences of local miss handlings along with successful conservation from international case studies.

The local communities are the integral part of most of the activities suggested in this Action Plan. It is, therefore, urgent to facilitate mechanisms to ensure community participation while implementing the activities. For example, offering active involvement of people affected in HEC in the HEC management processes, and engaging the communities with different events showing ways of involvements from international experiences.

Convincing the politicians is enormously crucial to achieve the expected elephant conservation efforts. Political support can take the wildlife conservation in the Government's list of priorities incorporating into the mainstream development policies and opening scopes for regional and international cooperation.

WNCC of BFD should establish an alliance for elephant conservation. A platform can easily communicate elephant conservation programs and activities to engage the stakeholders and organize need based support. The "Project Elephant" is a successful platform launched in 1992 by the Indian Government which is providing financial and technical support for the conservation of free ranging populations of wild Asian Elephants (Mitra, 2013; Mishra & Bisht, 2016). This Action Plan is suggesting establishment of similar platform to facilitate dedicated efforts for the intensive conservation and management of elephants in Bangladesh and to coordinate the activities of the Forest Department and related agencies, share experiences and support each other to overcome the challenges and carry out team work in elephant conservation.

Local communities celebrating the World Elephant Day
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## 2.2.5 COLLABORATION

Holistic elephant conservation efforts are multi-site, multi-party and multi-cultural in nature, and essentially require multi-stakeholders participations at local, national, and international level (Doyle *et al*., 2010). First it requires coordination among the local stakeholders e.g. Forest Department, Government bodies, administrations, communities, law-enforcement agencies, academic institutions, NGOs and conservation agencies; no elephant conservation endeavors could be a success without collaborating the responsible parties.

Collaboration should function with the people fascinated to conserve elephants, victims of HEC and the stakeholders who are directly connected to elephant conservation efforts. The Bangladesh Government has introduced a co-management framework across all the Protected Areas prioritizing community-based approach for holistic forest conservation and management.

The local level elephant conservation initiatives mainly consisted of affected people, communities and forest users should approach the relevant Government bodies for collaboration. Apart from the Government led initiatives, collaboration could also take place with the private sector as the mechanism should devise private sector engagement to the elephant conservation efforts.

The joint transboundary initiatives are required to conserve and manage the free ranging populations of wild Asian Elephants between Bangladesh and the neighboring countries (Mavatur & Singh, 2010). The elephant range is beyond the international boundary of Bangladesh shared with Meghalaya, India in its northeast part, with Mizoram, India in middle-east part, and with Myanmar in its southeast part. The working group represented by the BFD in collaboration with IUCN is expecting to develop regional coordination of joint activities on boundary corridor, wildlife research and anti-crime.

Delegates attending the 1st Bangladesh-India Transboundary meeting at Kolkata
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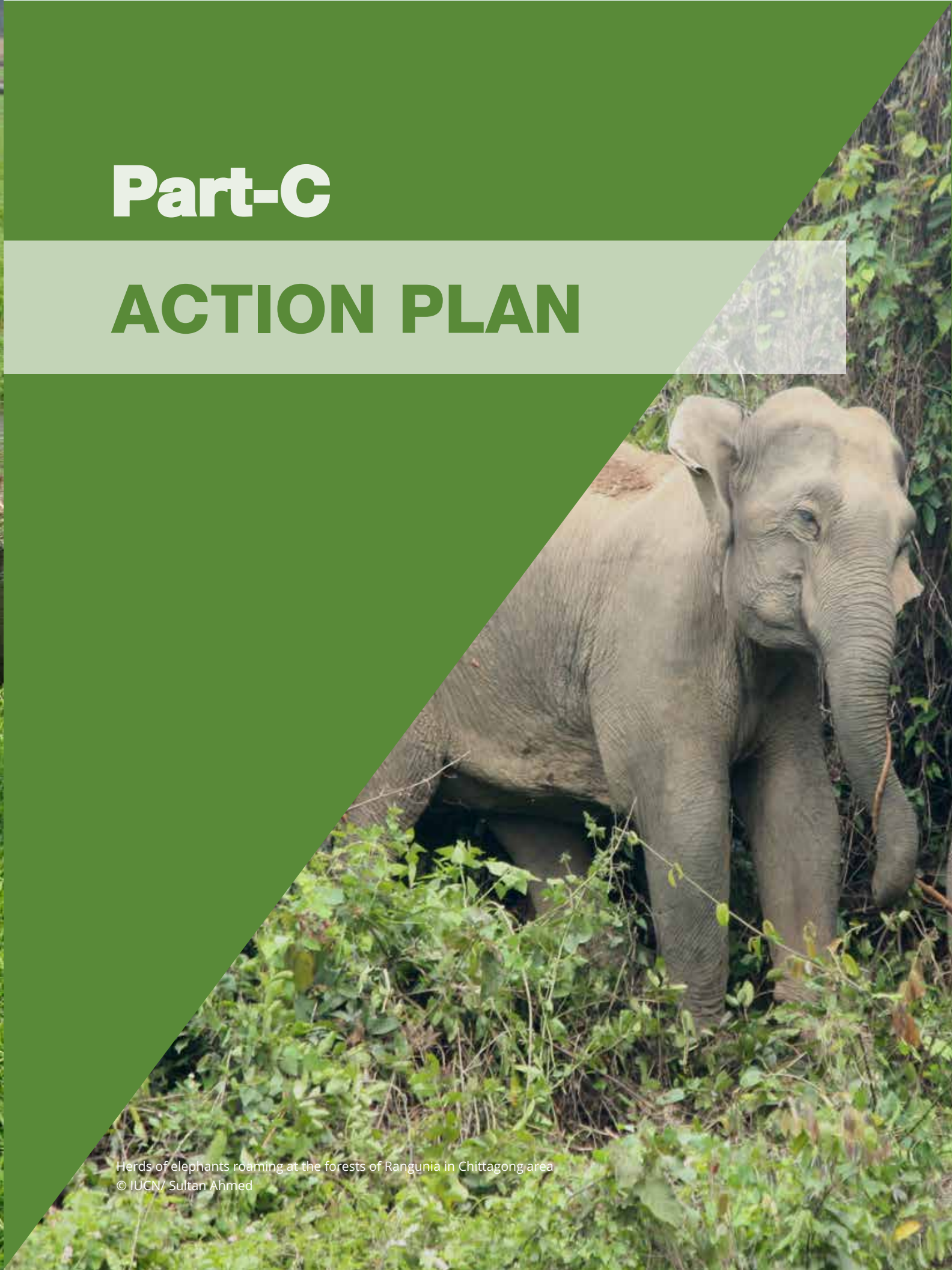
Crop damage in Chunati Wildlife Sanctuary
© IUCN/ Ashraful Haque

# Part-C

# ACTION PLAN



Herds of elephants roaming at the forests of Rangunia in Chittagong area
© IUCN/ Sultan Ahmed

## 3.1 OVERVIEW

This chapter illustrates the Action Plan for conservation of wild elephants in Bangladesh for ten years (2018-2027) and the goal of this Action Plan is referred as 'Vision 2027'. Being a strategic manuscript, this Action Plan aims to guide decision makers and implementers to undertake effective measures for elephant conservation. Six objectives are set to contribute Vision 2027 in line with established six problem pillars. Each objective is addressed through developing a number of programs, and under each program, there are strategic actions to combat the threats and challenges. Each strategic action is cited with the tag of concerned actors and the extent of priority to which it is urgent.

Considering the strata, the actions prescribed in this Action Plan are more of strategic yet imperative. However, it doesn't include specific implementation plan, budget and responsibilities. Additional scrutiny and further planning are essential to take forward these strategic actions at the field level and break down into prioritized implementable activities.

## 3.2 ROAD TO BANGLADESH ELEPHANT CONSERVATION ACTION PLAN

The elephant conservation actions undertaken over the last decades were hardly planned. Bangladesh Elephant Conservation Action Plan makes way to recapitulate the necessary actions, priorities and actors in one volume. On the way of developing this Action Plan, it involved three careful steps, a) Situation Analysis; b) Problem Analysis and Target Setting; and c) Action Planning (Figure 3)

### 3.2.1 SITUATION ANALYSIS

Analyzing the present situation was the first step towards developing the BECAP by identifying threats and challenges for elephant conservation on the basis of field understandings, knowledge and available information. Whilst the primary insights gained from field level helped identifying the current problems, review of the secondary literatures authenticated those. The comments and feedback from experts and peer group members were also integrated. Finally, three threats and five challenges were identified (discussed in Part-B) that are most detrimental to the survival of elephants.

### 3.2.2 PROBLEM ANALYSIS AND TARGET SETTING

After identifying the threats of the Asian Elephants and the challenges to their conservation, the next step involved critical analysis to overcome the problems, and set targets to look forward. The broad analysis revealed crosscutting threats and challenges which were merged into six problem pillars based on their impact, relevance and practicability. The target was to set one objective against one problem pillar which brought six objectives versus six problem pillars.

## 3.2.3 ACTION PLANNING

Who will be implementing these objectives to resolve these problems? All stakeholders relevant to Asian Elephants in Bangladesh were involved in the formation of this Action Plan through a series of workshops organized in 12 forest divisions. There were total 426 participants present in these consultative workshops with stakeholders representing the local communities, BFD officials, local elites, Local Government bodies, local administration, co-management committees (CMC), NGOs, CBOs and the ethnic communities. The six problems pillars explained the participants how the elephant are threatened and why their conservation is challenged to provoke thoughts on possible solutions. They validated the identified threats, challenges and the problem pillars and suggested the actions required to combat those threats and challenges. These suggestions, comments and observations were carefully incorporated in this Action Plan.

Participants in group work during the national workshop held in Dhaka
© IUCN/ Abdul Motaleb

## 3.3 ACTION PLAN

This section prescribes ways to overcome the threats and challenges described in Part-B. It presents the goal and objectives, a set of suggested programs and strategic actions with their implementation scope, concerned actors, and indicators to monitor the progress.

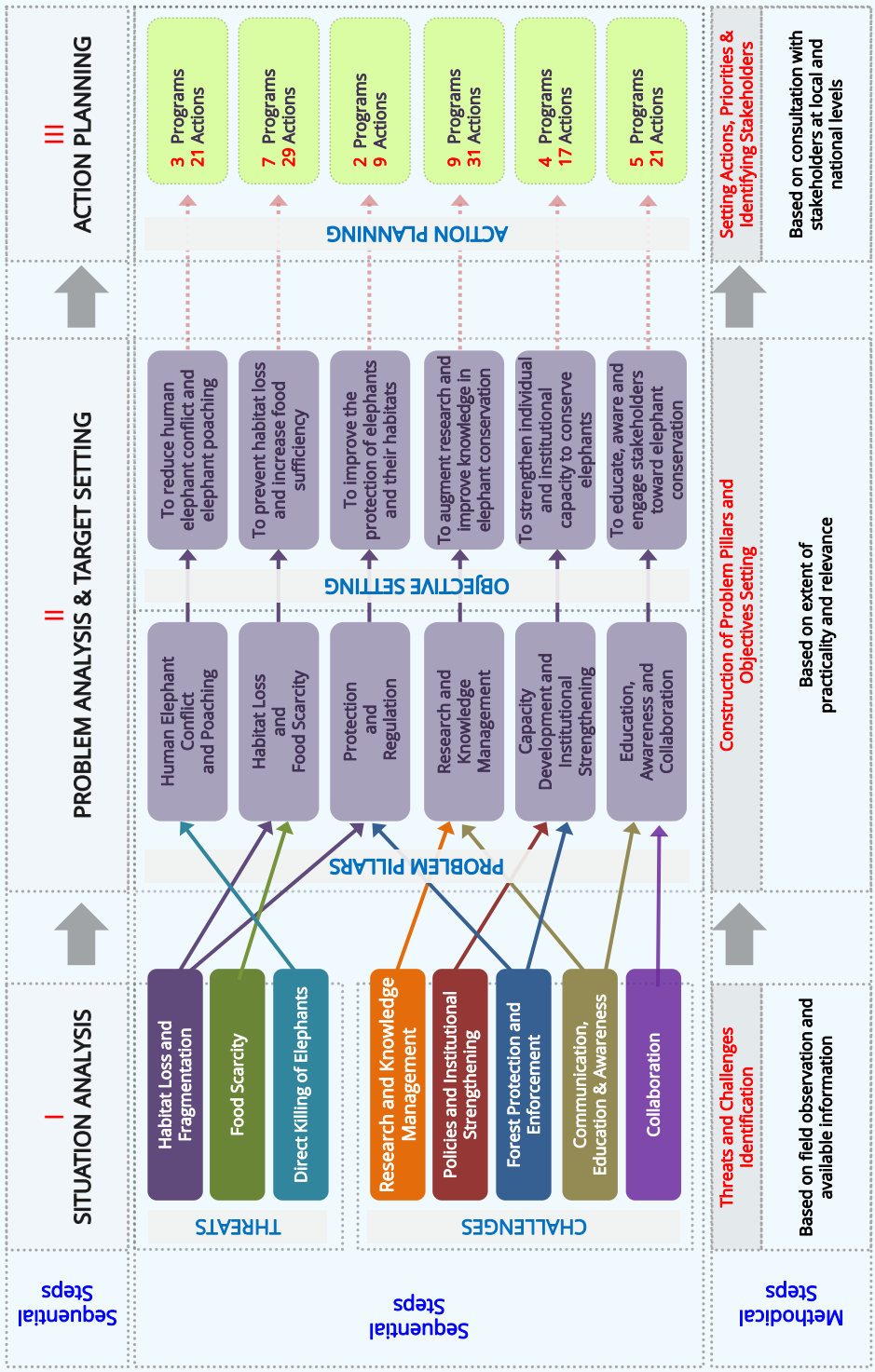



Figure 3: Road to Bangladesh Elephant Conservation Action Plan

Overall Goal and Objectives: The overall goal of this Action Plan is referred as "Vision 2027". To pull off this vision, there are six objectives, and these are set in line with six problem pillars.

***Actions and Programmes:*** The present knowledge qualified a strategic Actions Plan instead of an activity based Action Plan which requires area-specific research. For example, the strategic action to 'Build up a community based HEC mitigation initiatives' is meant to form community based elephant response teams in HEC prone areas; could not recommend specific number of teams with specific areal extent because the HEC intensity changes from area to area over time to time. However, in most cases, success can be evaluated by the achievement of the programs where strategic actions are bundled to resolve each problem pillar.

For the ease of use and to give the Action Plan a concise look, the suggested actions and programs are denoted at the table in a shortened form. Programs are mentioned as 'P'; and suggested actions are denoted by numeric order regardless of chronological sequence.

***Degree of necessity:*** Each suggested action is represented with Degree of necessity and timeline. The priorities were given into three categories, i.e. Short term, Medium term and Long term. 'Short term' means high priority actions that needs to be implemented within 0-2 years of Action Plan tenure. 'Medium term' means medium priority actions that needs to be implemented within 3-5 years of Action Plan tenure. And 'Long term' means low priority actions that needs to be implemented within 6-10 years of Action Plan tenure. Besides implementation scope for each of the activity was illustrated as high, medium and low considering their urgency of implementation.

It is important to keep in mind that the 'Degree of Necessity' just represents a timeline within which an action needs to be inaugurated, not the length of the implementation period of the action. For example, the strategic action to 'Build up a community based HEC mitigation initiatives' is marked

as 'High'; it means that this action should be started within 0-2 years of the Action Plan tenure. Depending on the extent, scale and funding the implementation period of an action may vary; might continue for a couple of years or even beyond. In a sum, the timeline whilst determining the degree of necessity is not related with the possible implementation length of an action.

***Concerned Actors:*** 'Concerned Actors' refer to the stakeholders who are relevant to the successful completion of a suggested action. The stakeholders were identified through consultations with the participants in the local and national workshops. However, it only indicates the individuals or groups who should be involved during the implementation, but it does not define specific responsibilities of the stakeholders' against suggested actions. The stakeholders are denoted concisely in the table with elaborations given in the Abbreviations and Acronyms section of this book.

***Indicators for Monitoring:*** The indicators are the marker of accomplishments for each strategic action. They represent a set of expected output after a successful completion of each action. Indicators are countable or measurable keeping effective track of this action plan over the next ten years. However, this plan included only broader indicators; additional specific indicators may be established by breaking down the actions further into activity or task level while implementing.

Elephant roaming at Inani National Park
© IUCN, Shamim Reza Rubel

# Bangladesh Elephant Conservation Action Plan

| Problem | Human-Elephant Conflict and Poaching |
|---|---|
| Programme | P1. Understand the present status & trends of human-elephant conflicts<br>P2. Minimize the human-elephant conflicts<br>P3. Understand and reduce elephant poaching and its trade |

| Problem | Habitat Loss and Food Scarcity |
|---|---|
| Programme | P1. Assessment of current and desired status of elephant habitats<br>P2. Reduction of unsustainable forest resource uses<br>P3. Habitat enrichment and rehabilitation programs<br>P4. Improvement of law enforcement relating to habitat destruction<br>P5. Education on and awareness of habitat conservation and sustainable forest use<br>P6. Alleviate affects of land use changes, e.g. agriculture, shifting cultivation<br>P7. Assess additional potential threats |

| Problem | Protection and Regulation |
|---|---|
| Programme | P1. Strengthen law enforcement scope and capacity of the Forest Department<br>P2. Strengthen and revise legislations relating to wildlife/elephant conservation |

| Problem | Research and Knowledge Management |
|---|---|
| Programme | P1. Undertake research activities based on field conservation needs<br>P2. Research on elephant ecology<br>P3. Research on habitat aspects of elephants<br>P4. Research on human/social dynamics relating to elephants<br>P5. Research on potential elephant diseases<br>P6. Research on captive elephants and their management<br>P7. Research on transboundary elephants management issues<br>P8. Research on human elephant conflict issues<br>P9. Research on law enforcement and crime management |

| Problem | Capacity Development and Institutional Strengthening |
|---|---|
| Programme | P1. Create management facilities to implement and monitor the Action Plan<br>P2. Strengthen grassroots capacity to manage urgent elephant conservation needs<br>P3. Develop long-term capacities and skills required for elephant conservation<br>P4. Integrate elephant conservation in national, sectoral & spatial development programmes |

| Problem | Education, Awareness and Collaboration |
|---|---|
| Programme | P1. Develop national capacity to implement elephant conservation, awareness and education programmes<br>P2. Boost cooperation among partners to increase available information and skills<br>P3. Build new and strengthen existing community awareness<br>P4. Engage other government bodies to enhance Action Plan implementation capacity<br>P5. Engage adjacent countries to implement transboundary elephant conservation initiatives |

**Problem :** Human Elephant Conflict and Poaching
**Objective:** To Reduce Human-Elephant Conflict (HEC) and Elephant Poaching

## P1. Understand the present status and trends of human-elephant conflicts

| | |
|---|---|
| Action | Develop a long-term HEC monitoring instrument |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, NGOs, RO |
| Key Indicator for Monitoring | • A long-term HEC monitoring mechanism in place |

| | |
|---|---|
| Action | Conduct HEC assessment in relevant areas based on HEC monitoring to determine the nature, scale and distribution |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, NGOs, RO |
| Key Indicator for Monitoring | • Periodic HEC monitoring report produced |

| | |
|---|---|
| Action | Revise the HEC reduction activities based on the assessment data |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, NGOs, RO |
| Key Indicator for Monitoring | • Number of actions prescribed for respective areas |

## P2. Minimize the human-elephant conflicts

| | |
|---|---|
| Action | Implement different types of barrier method, e.g. bio-fencing, solar-powered electric fencing, chili-rope, chili based olfactory repellents, etc. |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, CBO, ERT, NGOs, LG |
| Key Indicator for Monitoring | • Number and types of mitigation options implemented |

| | |
|---|---|
| Action | Encourage plantation in the interface zone with buffer crops and non-preferred crops e.g. lemon, chili, ginger, bitter gourd, okra, taro, and teasel gourd |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, CBO, ERT, NGOs, LG |
| Key Indicator for Monitoring | • Number of hectares planted with buffer/non-preferred crops |

| | |
|---|---|
| Action | Build up community based HEC mitigation initiatives in HEC prone areas e.g. formation and expansion of Elephant Response Teams (ERTs) |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, CBO, ERT, NGOs, LG |
| Key Indicator for Monitoring | • Number of ERTs formed<br>• Number of responses by ERT during emergency HEC situation |

| | |
|---|---|
| Action | Set up diverse early warning systems e.g. trip alarm, watch tower, flagging, patrolling, etc. |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, CBO, ERT, NGOs, LG |
| Key Indicator for Monitoring | • Number and types of early warning system installed<br>• Number of incidents alerted by early warning systems |

| | |
|---|---|
| Action | Develop and operationalize a national HEC management protocol |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | MoEF, GoB, BFD, RO, NGOs, LA |
| Key Indicator for Monitoring | • HEC protocol developed and approved<br>• Number of times HEC protocol being followed |

| | |
|---|---|
| Action | Update and simplify the existing “Compensation Policy for the Victims of Wildlife Attack 2010” |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | GoB, BFD, MoEF |
| Key Indicator for Monitoring | • Updated and simplified compensation policy approved by GoB |

## P3. Understand and reduce elephant poaching and its trade

| | |
|---|---|
| Action | Evaluate the levels of elephant poaching, consumption, and trade in Bangladesh contributing to legislative decision making |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, LEA, RO, NGOs |
| Key Indicator for Monitoring | • Number of actions identified and acted upon |

| | |
|---|---|
| Action | Determine the priority anti-poaching actions based on collected and synthesized data on elephant poaching, trades and related crimes |
| Degree of Necessity | Medium term |

| | |
|---|---|
| Implementation Scope | Medium |
| Concerned Actors | BFD, LEA, GoB, RO, NGOs, CBO |
| Key Indicator for Monitoring | • Documents mentioning the scale and extent of elephants poaching and trade |

| | |
|---|---|
| Action | Develop and formalize an intelligence system relating to elephant poaching, trades and related crimes |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, LEA, GoB |
| Key Indicator for Monitoring | • Number of actionable information on elephant poaching received and acted upon |

| | |
|---|---|
| Action | Enhance the law enforcement actions against elephant as well as wildlife poaching, trades and related crimes, i.e. vigilance, patrolling, raids |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, LEA, LA, LG |
| Key Indicator for Monitoring | • Number of raids/ increased detection of crime |

| | |
|---|---|
| Action | Incorporate section empowering BFD officials with the power to arrest offenders in the Wildlife (Conservation and Security) Act, 2012 |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, MoEF, GoB |
| Key Indicator for Monitoring | • Wildlife (Conservation and Security) Act, 2012, amended |

| | |
|---|---|
| Action | Improve prosecution of claims related to poaching, consumption, and trade in elephant parts |
| Degree of Necessity | Long term |
| Implementation Scope | Low |
| Concerned Actors | BFD, LEA, GoB |
| Key Indicator for Monitoring | • Number of conviction increased |

| | |
|---|---|
| Action | Develop measures to contribute to the international battle against the cross-boundary trade of elephant parts |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | MoEF, BFD, LEA, INTERPOL, TRAFFIC, PAWS |
| Key Indicator for Monitoring | • Number of crime detection at air/sea/land ports increased |

| | |
|---|---|
| Action | Mobilize the ERT members towards community-based anti-poaching actions |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, NGO, CBO, ERT, LA, LG |
| Key Indicator for Monitoring | • Number of incidents detected by ERT members |

| | |
|---|---|
| Action | Establish a judicial court specifically to combat wildlife/forest crimes at district level |
| Degree of Necessity | Long term |
| Implementation Scope | Low |
| Concerned Actors | BFD, MoEF, GoB, MoL |
| Key Indicator for Monitoring | • A separate wildlife court established and operationalized |

| | |
|---|---|
| Action | Develop and mobilize a strong political commitment to stop illegal trades and poaching of elephants/wildlife parts |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, MoEF, GoB |
| Key Indicator for Monitoring | • Number of lobbying/ attempts/unfair directions to set offenders free reduced |

| | |
|---|---|
| Action | Workout ways to increase penalties in a mode that is sufficient to discourage poachers, traders and consumers |
| Degree of Necessity | Long term |
| Implementation Scope | Low |
| Concerned Actors | BFD, MoEF, MoL |
| Key Indicator for Monitoring | • Relevant sections are updated in the Wildlife (Conservation and Security) Act 2012 |

| | |
|---|---|
| Action | Identify the hunters/poachers and seize all types of illegal arms/guns |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, MoEF, MoL, CBO, NGOs |
| Key Indicator for Monitoring | • Database of poaching and hunting prepared<br>• Number of confiscation/ seizeure taken place |

**Problem :** Habitat Loss and Food Scarcity
**Objective:** To Prevent Habitat Loss and Increase Food Sufficiency

## P1. Assessment of current and desired status of elephant habitats

| | |
|---|---|
| Action | Develop a habitat monitoring instrument to assess area, cover, composition and relevant aspects of elephant habitats and populations |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, NGOs, RO |
| Key Indicator for Monitoring | • A standard monitoring method published and accepted |

| | |
|---|---|
| Action | Monitor changes in area, forest cover, composition of elephant habitats and distribution/occupancy, population size, and corridor connectivity of elephant populations |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, NGOs, RO |
| Key Indicator for Monitoring | • Number of elephants by year, by area<br>• Appropriate GIS maps produced |

| | |
|---|---|
| Action | Demarcate and declare (if necessary) reserved area/ new protected area and corridors of wildlife, especially of elephants |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, GoB, MoL, RO, NGOs, LA |
| Key Indicator for Monitoring | • GIS maps and documents produced<br>• Number of new Reserved area/Protected area declared |

## P2. Reduction of unsustainable forest resource uses

| | |
|---|---|
| Action | Develop and adopt an approach to know the pattern, nature and scale of forest resource uses |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, RO, NGOs, CBO |
| Key Indicator for Monitoring | • Pattern and nature of resource use known and documented |

| | |
|---|---|
| Action | Figure out the socio-economic dependencies of communities on the elephant range forests |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, RO, NGOs, LA |
| Key Indicator for Monitoring | • Area specific social mapping documents produced |

| | |
|---|---|
| Action | Develop alternative income opportunities through eco-friendly enterprise development for the forest dependent communities |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, NGOs |
| Key Indicator for Monitoring | • Number of people dependent on forest resources reduced |

| | |
|---|---|
| Action | Develop a local/national level socio-political commitment to ensure that elephant habitats are safe and undisturbed |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, LEA, LG, LA, LC, NGOs, RO |
| Key Indicator for Monitoring | • Number of any form of pledge documented |

## P3. Habitat enrichment and rehabilitation programmes

| | |
|---|---|
| Action | Introduce and carry out enrichment and reforestation programs in the fragmented elephant habitats |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, NGOs, CBO, LG |
| Key Indicator for Monitoring | • Areas done with reforestation increased |

| | |
|---|---|
| Action | Carry out massive fodder species plantation in denuded and degraded lands inside forest areas |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, NGOs, CBO, LG |
| Key Indicator for Monitoring | • Number of denuded and degraded areas done with fodder plantation |

| | |
|---|---|
| Action | Scrutinize the feasibility for maintaining corridors/connectivity among elephant habitats |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, NGOs, CBO, LG, MoL |
| Key Indicator for Monitoring | • Feasibility report produced |

| | |
|---|---|
| Action | Adjoin and improve active corridors of elephants |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |

| | |
|---|---|
| Concerned Actors | BFD, NGOs, LA, LG, MoL, RO |
| Key Indicator for Monitoring | • Number of corridors adjoined or improved |

| | |
|---|---|
| Action | Create new and maintain the existing water sources for elephants throughout the year |
| Degree of Necessity | Long term |
| Implementation Scope | Low |
| Concerned Actors | BFD, NGOs, CBO |
| Key Indicator for Monitoring | • Number of water sources increased |

| | |
|---|---|
| Action | Ensure area demarcation and resolve the unlawful land settlement |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, MoL, LA, LG |
| Key Indicator for Monitoring | • GIS map/satellite imageries produced |

## P4. Improvement of law enforcement relating to habitat destruction

| | |
|---|---|
| Action | Introduce and implement advanced patrolling and monitoring techniques in relation to elephant conservation challenges |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, LEA, LA, LC, CBO |
| Key Indicator for Monitoring | • Advanced patrolling techniques adopted |

| | |
|---|---|
| Action | Improve the facilities in field level BFD offices, e.g. manpower, set up watch tower, vehicle facilities and living conditions |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, MoEF, LA, LG |
| Key Indicator for Monitoring | • Number of facilities improved |

| | |
|---|---|
| Action | Improve the coordination between BFD and other relevant LEA agencies |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, MoEF, LEA |
| Key Indicator for Monitoring | • MoU/protocol between agencies signed |

| | |
|---|---|
| Action | Improve the effectiveness of existing laws and increase enforcement actions in relation to wildlife conservation |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, LEA, MoL, LA, LG, NGOs |
| Key Indicator for Monitoring | • Number of wildlife/elephant related cases filed and prosecuted |

| | |
|---|---|
| Action | Improve the authority and power of the BFD to enforce the Wildlife related laws |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, MoEF, MoL |
| Key Indicator for Monitoring | • Number of seizeure or confiscation conducted |

## P5. Education on and awareness of habitat conservation and sustainable forest use

| | |
|---|---|
| Action | Develop a long-term education and awareness movement in concerned areas |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, NGOs |
| Key Indicator for Monitoring | • A campaign plan produced |

| | |
|---|---|
| Action | Implement long-term awareness and education program in concerned areas |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, NGOs, LG, LA, LC, |
| Key Indicator for Monitoring | • Targeted education and awareness programmes in place |

| | |
|---|---|
| Action | Strengthen CBOs for sustainable forest resource management and utilization practices |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, NGOs, LA, CBO, LA, LG |
| Key Indicator for Monitoring | • Active participation by the CBOs in the conservation approaches increased |

## P6. Alleviate affects of land use changes, e.g. agriculture, shifting cultivation

| | |
|---|---|
| Action | Carry out constant monitoring of the changes in land use pattern e.g. agricultural expansion, shifting cultivation and encroachment in elephant habitat areas |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, NGOs, RO, LA |
| Key Indicator for Monitoring | • Report and GIS maps produced<br>• Encroachment in elephant habitat areas reduced |

| | |
|---|---|
| Action | Develop a strict land use policy for land adjacent to the forests and encourage adoption |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, MoEF, GoB, NGOs, MoL |
| Key Indicator for Monitoring | • A wildlife/elephant specific land use policy produced |

| | |
|---|---|
| Action | Explore feasibility of relocation/resettlement/eviction programs of illegal settlers |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, NGOs, LA |
| Key Indicator for Monitoring | • Feasibility study report produced |

## P7. Assess additional potential threats

| | |
|---|---|
| Action | Conduct a collective risk assessment and prioritize mitigation activities for infrastructure development, pollution, invasive species, and future extractions in elephant habitat areas |
| Degree of Necessity | Long term |
| Implementation Scope | Low |
| Concerned Actors | BFD, NGOs, RO, LC, LA |
| Key Indicator for Monitoring | • Risk assessment report produced |

| | |
|---|---|
| Action | Implement relevant regulations, e.g. Environmental Management Plan, Social Assessment etc. as mandatory for development activities in close proximity to elephant habitats |
| Degree of Necessity | Long term |
| Implementation Scope | Low |
| Concerned Actors | BFD, MoEF, GoB, LA |
| Key Indicator for Monitoring | • Number of development initiatives followed regulations |

| | |
|---|---|
| Action | Address the impact of Rohinga refugee intrusion in maintaining the habitat conditions in elephant range |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, GoB, NGOs, MoL, LA |
| Key Indicator for Monitoring | • Impact of Rohinga refugee intrusion understood and reduced |

| | |
|---|---|
| Action | Identify and abolish illegal dams in streams in elephant habitat |
| Degree of Necessity | Long term |
| Implementation Scope | Low |
| Concerned Actors | BFD, LA, LG |
| Key Indicator for Monitoring | • Number of illegal dams abolished |

| | |
|---|---|
| Action | Prohibit building of roads inside or adjacent to forest lands |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, MoEF, LA, MoL |
| Key Indicator for Monitoring | • Environment-friendly road construction practice in place |

**Problem :** Protection and Regulation
**Objective:** To Improve the Protection of Elephant and its Habitat

## P1. Strengthen law enforcement scope and capacity of the Forest Department

| | |
|---|---|
| Action | Improve efficiency of BFD staffs to improve forest protection through adequate staffing and effective patrolling |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, MoEF, LEA, NGOs |
| Key Indicator for Monitoring | • Number of staff member increased |

| | |
|---|---|
| Action | Incorporate diverse incentives, e.g. rewarding, medaling and certifications to motivate BFD staffs to increase performance |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, MoEF, NGOs, LA |
| Key Indicator for Monitoring | • Number of staff received incentives |

| | |
|---|---|
| Action | Provide improved logistics and equipment supports to the BFD i.e. patrolling jeep, modern equipments |
| Degree of Necessity | Medium term |

| | |
|---|---|
| Implementation Scope | Medium |
| Concerned Actors | BFD, MoEF, GoB |
| Key Indicator for Monitoring | • Number and types of logistics newly provided<br>• Quantity of facilities newely added |

| | |
|---|---|
| Action | Provide training to BFD officials on a regular basis on Wildlife and related Act and Rules |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, NGOs, LEA, RO |
| Key Indicator for Monitoring | • Number of staff members received training |

| | |
|---|---|
| Action | Restructure the law enforcement system within BFD following the successful models of other countries |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, MoEF |
| Key Indicator for Monitoring | • Report and guideline produced |

| | |
|---|---|
| Action | Establish a cell for monitoring law enforcement activities relating to wildlife crime |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, MoEF, GoB |
| Key Indicator for Monitoring | • Monitoring cell is functional |

| | |
|---|---|
| Action | Deport a WCCU officer in all kind of international ports, e.g. land, sea and air ports |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, MoEF, GoB |
| Key Indicator for Monitoring | • Number of WCCU officer appointed |

## P2. Strengthen and revise legislations relating to wildlife/elephant conservation

| | |
|---|---|
| Action | Carry out periodic review to update existing Acts, Laws, Policies and Orders relating to wildlife and elephants |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |

| | |
|---|---|
| Concerned Actors | BFD, NGOs, RO |
| Key Indicator for Monitoring | • Number of relevant Acts. Laws, Policies, and Orders updated |

| | |
|---|---|
| Action | Update and strengthen the existing Laws, Policies and Orders in light of agreed upon international Pledge and Treaties |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, LEA, MoEF, NGOs |
| Key Indicator for Monitoring | • Number of relevant Acts, Laws, Policies, and Orders adhered to the international Pledge sand Treaties |

**Problem :** Research and Knowledge Management
**Objective:** To Augment Research and Improve Knowledge in Elephant Conservation

## P1. Undertake research activities based on field conservation needs

| | |
|---|---|
| Action | Develop a prioritized elephant conservation research and monitoring plan |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, RO, NGOs, Universities |
| Key Indicator for Monitoring | • Research and monitoring agenda produced |

| | |
|---|---|
| Action | Conduct threat prioritization and challenge assessment for the elephant conservation |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, RO, NGOs |
| Key Indicator for Monitoring | • Threat Prioritized and documented |

## P2. Research on elephant ecology

| | |
|---|---|
| Action | Carry out periodic assessment to monitor the changes in elephant population in terms of abundance and distribution |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, RO, NGOs |
| Key Indicator for Monitoring | • Regular estimation of elephant population conducted<br>• Periodic reports produced |

| | |
|---|---|
| Action | Understand social structure, sex-ratio, population dynamics, home range, feeding behavior, and reproductive pattern of elephants |
| Degree of Necessity | Short term |

| | |
|---|---|
| Implementation Scope | High |
| Concerned Actors | BFD, RO, NGOs |
| Key Indicator for Monitoring | • Available information on ecology of elephants |

| | |
|---|---|
| Action | Understand and monitor the behavior of the problem elephants |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, RO, NGOs |
| Key Indicator for Monitoring | • Number of problem elephants studied |

| | |
|---|---|
| Action | Understand the genetic diversity of elephants |
| Degree of Necessity | Long term |
| Implementation Scope | Low |
| Concerned Actors | BFD, RO, NGOs |
| Key Indicator for Monitoring | • Genetic information on elephants available |

| | |
|---|---|
| Action | Understand the stress and reproductive hormones of elephants |
| Degree of Necessity | Long term |
| Implementation Scope | Low |
| Concerned Actors | BFD, RO, NGOs, Universities |
| Key Indicator for Monitoring | • Information on stress and reproductive hormones available |

## P3. Research on habitat aspects of elephants

| | |
|---|---|
| Action | Develop a habitat suitability map including the site preferences and related features |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, LEA, GoB, CBO, RO, NGOs |
| Key Indicator for Monitoring | • Habitat suitability map and report produced |

| | |
|---|---|
| Action | Carry out studies to understand the elephant movement routes, corridors and habitat connectivity pattern |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, LEA, GoB, CBO, RO, NGOs |
| Key Indicator for Monitoring | • GIS maps of elephant movement routes and corridors produced |

| | |
|---|---|
| Action | Carry out impact assessment of development activities on elephant, its routes and corridors and provide mitigation measures |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, MoEF, GoB, NGOs, MoL, RO |
| Key Indicator for Monitoring | • Impact assessment report produced |

| | |
|---|---|
| Action | Carry out research to understand the scale and nature of habitat loss and degradation pattern |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, MoEF, GoB, NGOs, RO |
| Key Indicator for Monitoring | • Habitat loss and degradation report produced |

| | |
|---|---|
| Action | Carry out study to understand the feasibility of building underpass/ tunnel/ overpass across elephant habitats; wherever feasible; and monitor effectiveness of such infrastructure |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, LEA, GoB, NGOs, RO |
| Key Indicator for Monitoring | • Number of such infrastructures developed |

| | |
|---|---|
| Action | Understand the impact of climate change on elephant habitat and population |
| Degree of Necessity | Long term |
| Implementation Scope | Low |
| Concerned Actors | BFD, NGOs, RO |
| Key Indicator for Monitoring | • Information on impact of climate change on elephants available |

| | |
|---|---|
| Action | Conduct assessment to monitor the effects of biodiversity change on elephant habitat and ecosystems |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, NGOs, CBO, LC, LA, RO |
| Key Indicator for Monitoring | • Information on effects of biodiversity change over elephants available |

| | |
|---|---|
| Action | Conduct assessment to monitor the effects of human impact, i.e. changes in land use pattern, agricultural expansion, shifting cultivation and encroachment on elephant habitat and forest resources |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, NGOs, LA, LG, RO |
| Key Indicator for Monitoring | • Information of human impact over elephants and habitats available |

| | |
|---|---|
| Action | Develop an elephant habitat management model |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, MoEF, NGOs, RO |
| Key Indicator for Monitoring | • Habitat management model prepared |

| | |
|---|---|
| Action | Conduct study on ecosystem services and valuation of elephant habitat and ecosystems |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, MoEF, GoB, NGOs, RO |
| Key Indicator for Monitoring | • Number of study report produced |

## P4. Research on human/social dynamics relating to elephants

| | |
|---|---|
| Action | Conduct study to understand the knowledge, attitude and practice of concerned communities relating to elephants and its conservation |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, RO, NGOs |
| Key Indicator for Monitoring | • Study report published<br>• Knowledge, attitude and practice of communities on elephant conservation known |

| | |
|---|---|
| Action | Conduct research to understand the cultural heritage among communities relating to elephants and its conservation |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, NGOs, RO, CBO |
| Key Indicator for Monitoring | • Study report published<br>• Cultural aspects of communities relating to elephant conservation known |

| | |
|---|---|
| Action | Conduct study to assess the feasibility of relocating the human settlements from and around the elephant habitats |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, LA, LG, RO, NGOs |
| Key Indicator for Monitoring | • Study report published |

| | |
|---|---|
| Action | Conduct research on the community engagement factors such as willingness of the community to pay for conservation |
| Degree of Necessity | Short term |
| Implementation Scope | High |

| | |
|---|---|
| Concerned Actors | BFD, NGOs, CBO, LG |
| Key Indicator for Monitoring | • Number of study report published |

## P5. Research on potential elephant diseases

| | |
|---|---|
| Action | Conduct study on disease prevalence in elephants |
| Degree of Necessity | Long term |
| Implementation Scope | Low |
| Concerned Actors | BFD, RO, NGOs |
| Key Indicator for Monitoring | • Number of study conducted and reports published |

| | |
|---|---|
| Action | Prioritize mitigation activities for the potential elephant disease |
| Degree of Necessity | Long term |
| Implementation Scope | Low |
| Concerned Actors | BFD, RO, NGOs |
| Key Indicator for Monitoring | • Number of mitigation initiatives undertaken |

| | |
|---|---|
| Action | Study on contagious diseases of captive elephant and precautionary measures |
| Degree of Necessity | Long term |
| Implementation Scope | Low |
| Concerned Actors | BFD, RO, NGOs |
| Key Indicator for Monitoring | • Number of study conducted and reports published |

## P6. Research on captive elephants and their management

| | |
|---|---|
| Action | Prepare a comprehensive management guideline for captive elephant management (status, health care, study book, etc.) |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, RO, NGOs |
| Key Indicator for Monitoring | • Comprehensive captive elephant management guideline produced |

## P7. Research on transboundary elephants management issues

| | |
|---|---|
| Action | Assess the of transboundary elephant population, their ranging patterns and implications for management |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, RO, NGOs |
| Key Indicator for Monitoring | • Assessment report published |

| | |
|---|---|
| Action | Monitor the changes in transboundary elephant population, their ranging patterns due to the human impact |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, RO, NGOs |
| Key Indicator for Monitoring | • Monitoring report published on a regular basis |

## P8. Research on human elephant conflict issues

| | |
|---|---|
| Action | Conduct constant monitoring of changing nature, scale and necessary attributes of human elephant conflicts |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, RO, NGOs, CBO |
| Key Indicator for Monitoring | • Monitoring reports published |
| | |
| Action | Conduct investigative study to understand the social aspects of human elephant conflicts |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, RO, NGOs, CBO |
| Key Indicator for Monitoring | • Number of investigative study conducted<br>• Number of study reports produced |

## P9. Research on law enforcement and crime management

| | |
|---|---|
| Action | Conduct study to investigate the levels of elephant poaching, consumption and trade in Bangladesh |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, LEA, RO, NGOs |
| Key Indicator for Monitoring | • Number of investigative study conducted and reports produced |

| | |
|---|---|
| Action | Conduct study to assess loopholes in the relevant Laws, Acts, Regulations and Policies |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, RO, NGOs |
| Key Indicator for Monitoring | • Number of investigative study conducted and reports produced |

**Problem:** Capacity Development and Institutional Strengthening
**Objective:** To Strengthen Individual and Institutional Capacity to Conserve Elephants

## P1. Create management facilities to implement and monitor BECAP

| | |
|---|---|
| Action | Recruit and assign dedicated BFD officials to direct implementation of the Action Plan and coordinate collaboration efforts |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, MoEF, GoB |
| Key Indicator for Monitoring | • Number of staffs recruited and assigned<br>• A body formed for the BECAP implementation and monitoring |

| | |
|---|---|
| Action | Develop a BECAP monitoring and adaptive management process |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, RO, NGOs |
| Key Indicator for Monitoring | • A monitoring and adaptive management roadmap produced |

| | |
|---|---|
| Action | Establish research and training stations in close proximity to elephant range areas |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, MoEF, NGOs, LA, LG |
| Key Indicator for Monitoring | • Number of research and training stations established |

| | |
|---|---|
| Action | Strengthen BFD with necessary infrastructures, logistics and relevant skills |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, MoEF, GoB |
| Key Indicator for Monitoring | • Number of BFD staff provided with new logistics |

## P2. Strengthen grassroots capacity to manage urgent elephant conservation needs

| | |
|---|---|
| Action | Educate and train all concerned stakeholders to effectively mobilize the human elephant conflict protocol |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, LA, LG, GO, NGOs |
| Key Indicator for Monitoring | • Number of trainings held to educate stakeholder about protocol |
| | |

| | |
|---|---|
| Action | Strengthen Wildlife Crime Control Unit to tackle elephant poaching and related crimes |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, NGOs, LC, LEA, LA, CBO |
| Key Indicator for Monitoring | • Strengthen Wildlife Crime Control Unit at local level |

| | |
|---|---|
| Action | Establish an specialized research unit to undertake elephant and habitat monitoring programs in long-term |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, RO, NGOs |
| Key Indicator for Monitoring | • Extent of specialized unit/team established |

| | |
|---|---|
| Action | Build capacity of BFD staff and relevant stakeholders on elephant population survey and relevant monitoring techniques |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, NGOs, RO, CBO |
| Key Indicator for Monitoring | • Number of stakeholders received training<br>• Number of techniques adopted |

| | |
|---|---|
| Action | Train to develop the skills of the villagers and local stakeholders on emergency conflict management and basic elephant conservation techniques |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, NGOs, LC, CBO |
| Key Indicator for Monitoring | • Number of stakeholders received training<br>• Number of techniques adopted |

## P3. Develop long-term capacities and skills required for elephant conservation

| | |
|---|---|
| Action | Ensure regular higher studies or training program for BFD officials on wildlife conservation and management |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, MoEF, RO, NGOs |
| Key Indicator for Monitoring | • Number of officials trained (PhD., M.Sc., short-course) on wildlife conservation |

| | |
|---|---|
| Action | Develop a sustainable financing mechanism for elephant conservation |
| Degree of Necessity | Medium term |

| | |
|---|---|
| Implementation Scope | Medium |
| Concerned Actors | FD, MoEF, GoB, NGOs |
| Key Indicator for Monitoring | • A sustainable financing mechanism in place |

| | |
|---|---|
| Action | Increase period of retention of trained BFD officials on wildlife within Wildlife and Nature Conservation Circle (WNCC) and/or within the elephant range areas |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, MoEF, GoB |
| Key Indicator for Monitoring | • Government order in place<br>• Number of staffs retained in WNCC |

| | |
|---|---|
| Action | Develop and institutionalize a wildlife conservation training program for BFD staff |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, MoEF, RO, NGOs |
| Key Indicator for Monitoring | • Training program for BFD staff institutionalized<br>• Number of training received by staff |

| | |
|---|---|
| Action | Redistribution of command area, and strengthen the existing wildlife divisions |
| Degree of Necessity | Long term |
| Implementation Scope | Low |
| Concerned Actors | MoEF, BFD, GoB |
| Key Indicator for Monitoring | • Number of redistributed wildlife divisions |

| | |
|---|---|
| Action | Development of veterinary skills for emergency support of elephants |
| Degree of Necessity | Long term |
| Implementation Scope | Low |
| Concerned Actors | MoEF, BFD, GoB, DoL |
| Key Indicator for Monitoring | • Number of trainings held on this topic |

## P4. Integrate elephant conservation in national, sectoral & spatial development programmes

| | |
|---|---|
| Action | Develop and put into practice an approach to integrate elephant and biodiversity conservation into wider development policy and actions |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, MoEF, GoB |
| Key Indicator for Monitoring | • An integration or mainstreaming mechanism is in place |

| | |
|---|---|
| Action | Ensure the forest management system is conservation friendly |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | MoF, BFD, MoEF, CBO, NGOs |
| Key Indicator for Monitoring | • A mechanism is agreed upon and in place |

**Problem:** Education, Awareness and Collaboration
**Objective:** To Educate, Aware and Engage Stakeholders to Elephant Conservation

## P1. Develop national capacity to implement elephant conservation, awareness and education programmes

| | |
|---|---|
| Action | Develop a national elephant conservation education and awareness strategy |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, MoEF, NGOs, LA, LG |
| Key Indicator for Monitoring | • National elephant conservation education and awareness strategy formulated |

| | |
|---|---|
| Action | Develop the national capacity of sector stakeholders relating to conservation communication |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, RO, NGOs |
| Key Indicator for Monitoring | • Number of capacity development sessions organized<br>• Number of stakeholders received training |

| | |
|---|---|
| Action | Include specific chapter on wildlife conservation in primary level/ secondary level education |
| Degree of Necessity | Long term |
| Implementation Scope | Low |
| Concerned Actors | BFD, MoPE, NGOs |
| Key Indicator for Monitoring | • Number of contents relating to the importance of wildlife conservation in text book |

## P2. Boost cooperation among partners to increase available information and skills

| | |
|---|---|
| Action | Develop a platform to build collaboration between BFD and other parties for technical and funding support to implement BECAP activities |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, MoEF , NGOs, Donors |
| Key Indicator for Monitoring | • Number of funding supports received<br>• Standard operating procedure is in place |

| | |
|---|---|
| Action | Complete gap assessment of conservation skills to determine national and international collaboration requirements |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, RO, NGOs |
| Key Indicator for Monitoring | • Skill gap assessment study conducted and report published |

| | |
|---|---|
| Action | Engage relevant collaborators to help BFD achieve BECAP objectives |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, NGOs, Donors |
| Key Indicator for Monitoring | • Extent of participation by the collaborators |

| | |
|---|---|
| Action | Include regional policy makers in conservation decision making for creation of regional mandate |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, NGOs, MoPA |
| Key Indicator for Monitoring | • Number of dialogues/events held<br>• Number of declarations supporting elephant conservation held |

## P3. Build new and strengthen existing community awareness

| | |
|---|---|
| Action | Raise awareness among target audience of significance of the elephant and its conservation |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, NGOs, LC, LA, LG |
| Key Indicator for Monitoring | • Number of people participated in the awareness events<br>• Number of events |

| | |
|---|---|
| Action | Raise awareness among concerned communities to encourage them to ensure the sustainable use of forest resources |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, NGOs, LA, LG, LC |
| Key Indicator for Monitoring | • Number of people participated in the awareness events<br>• Number of events |

| | |
|---|---|
| Action | Undertake massive awareness programs to reduce the human elephant conflict regarding the mitigation options |
| Degree of Necessity | Short term |

| | |
|---|---|
| Implementation Scope | High |
| Concerned Actors | BFD, NGOs, LA, LG, LC |
| Key Indicator for Monitoring | • Number of people participated in the awareness events<br>• Number of mitigation options practiced on ground |

| | |
|---|---|
| Action | Raise awareness to resist illegal poaching and trade of elephants as well as wildlife |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, NGOs, LEA, LA, LG, LC |
| Key Indicator for Monitoring | • Number of people participated in the awareness events<br>• Number of poaching or illegal killing incidents reduced |

| | |
|---|---|
| Action | Motivate the mass-people towards elephant conservation through social mobilizations, e.g. elephant conservation clubs |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, NGOs, LA, LG, LC |
| Key Indicator for Monitoring | • Number of people involved in conservation practices and social mobilzation<br>• Number of club formed |

## P4. Engage other Government bodies to enhance BECAP implementation capacity

| | |
|---|---|
| Action | Develop an approach to integrate elephant and biodiversity conservation into wider development policy and action all through the Government agencies |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, MoEF, GoB, NGOs |
| Key Indicator for Monitoring | • Wildlife/elephant conservation mainstreamed into the national development agenda |

| | |
|---|---|
| Action | Raise awareness in high and mid-level officials of different Government ministries about elephant and biodiversity conservation and its relationship to sustainable development |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, GoB, MoEF |
| Key Indicator for Monitoring | • Number of events held for officials<br>• Involvement of other Government bodies other than BFD into elephant conservation increased |

| | |
|---|---|
| Action | Sensitize the high and mid-level officials of different Government ministries about elephant and its habitat conservation and its relationship to development policy |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | GoB, MoPA, BFD, MoEF |
| Key Indicator for Monitoring | • Number of meetings / workshop / training held on this topic |

| | |
|---|---|
| Action | Raise public awareness across the country by main-streaming elephant conservation issues into the media |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, GoB, MoEF, NGOs |
| Key Indicator for Monitoring | • Presence of wildlife and elephant conservation issues in media in-creased |

| | |
|---|---|
| Action | Build visibility and public awareness by mainstreaming elephant and its habitat conservation issue through media |
| Degree of Necessity | Medium term |
| Implementation Scope | Medium |
| Concerned Actors | BFD, NGOs, LA, LG, LC, Media |
| Key Indicator for Monitoring | • Number of policies and strategies where elephants were prioritized |

| | |
|---|---|
| Action | Facilitate training and skill sharing between collaborators to increase national capacity for elephant conservation |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, NGOs, LA, LG |
| Key Indicator for Monitoring | • Number of people participated in the training/capacity development events |

## P5. Engage adjacent countries to implement transboundary elephant conservation initiatives

| | |
|---|---|
| Action | Initiate and formalize a communication platform between countries for transboundary elephant management including migratory elephants and illegal trade issues |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, MoEF, MoFA, NGOs, BGB, GoB |
| Key Indicator for Monitoring | • A stable and clear communication mechanism established<br>• MoU signed |

| | |
|---|---|
| Action | Develop joint management plan(s) for transboundary elephant management |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, MoEF, MoFA, NGOs, GoB |
| Key Indicator for Monitoring | • A long-term joint management plan developed<br>• Number of action implemented |

| | |
|---|---|
| Action | Develop links and networks for sharing research results and conducting collaborative transboundary research |
| Degree of Necessity | Short term |
| Implementation Scope | High |
| Concerned Actors | BFD, NGOs, GoB |
| Key Indicator for Monitoring | • Number of formal network/platforms developed and operationalized |

# 3.4 IMPLEMENTING THE ACTION PLAN

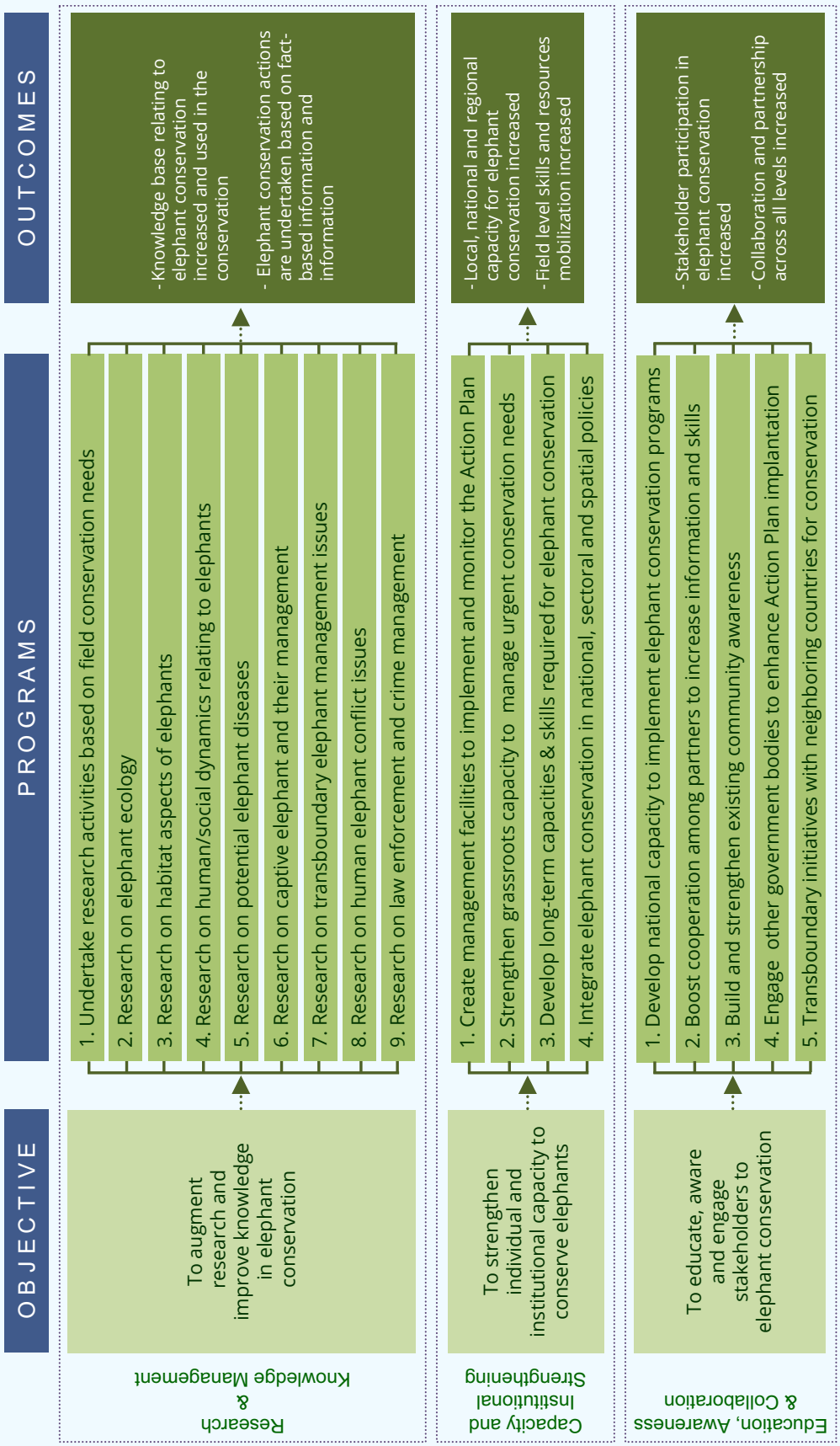
## 3.4.1 COORDINATION

The success of this Action Plan would depend highly on the timely implementation. While breaking down the suggested actions of this Action Plan into an operational level, the interventions should also be prioritized in terms of their necessity, relative benefit, cost, feasibility and impact. Timely implementation of this Action Plan would be difficult without adequate financial, logistical and institutional arrangements. The Bangladesh Forest Department should work out on ways to facilitate such arrangements and incorporate the elephant conservation interventions strongly in their agenda. Equilibrium must be maintained between resources allocated for more research against the need for more direct conservation actions. The time to time prioritization of threats and challenges would contribute to the development of a pragmatic ten year implementation road map.

Even if the implementation is timely, the meaningful accomplishment of this Action Plan could not be ensured without effective coordination among the relevant policies, strategies and actors. Some actions are likely to be common with other ecosystem based holistic national plans like the Forestry Master Plan, National Conservation Strategy, National Biodiversity and Strategic Action Plan and 7th-Fifth Year Plan. Therefore, coordination with other implementing agencies would enhance the cost effectiveness. To do so, Bangladesh Forest Department should develop the mechanism to coordinate with other agencies at the earliest phase of implementing this Action Plan.

To keep track of the implementation of Bangladesh Elephant Conservation Action Plan (2018-2027), an outcome matrix is provided following this paragraph:

BANGLADESH ELEPHANT CONSERVATION ACTION PLAN
OUTCOME MATRIX
GOAL
To conserve wild elephants in their natural habitat in Bangladesh
IMPACT
Conservation of wild elephants in their natural habitats ensured in Bangladesh
OBJECTIVE
PROGRAMS
OUTCOMES
Human Elephant Conflict and Poaching
To reduce human elephant conflict and elephant poaching
1. Understand the present status & trends of human elephant conflicts
2. Minimize the Human Elephant Conflicts
3. Understand and Reduce elephant poaching and its trade
- Loss of human lives, property damages, and direct killing of elephants significantly reduced
- Levels of elephant poaching understood & pragmatic actions taken
Habitat Loss and Food Scarcity
To prevent habitat loss and increase food sufficiency
1. Assessment of current and desired status of elephants
2. Reduction of unsustainable forest use
3. Habitat enrichment and rehabilitation programs
4. Improvement of law enforcement relating to law enforcement
5. Education and awareness on habitat conservation
6. Alleviate affects of land use change e.g. agriculture, shifting cultivation
7. Assess additional potential threats
- Health of the elephant habitats improved and adequate food sources increased
- People's dependency over the forest resources reduced and tendency of sustainable use of forests increased
Protection & Enforcement
To improve the protection of elephants and its habitat
1. Strengthen law enforcement scope and capacity of Forest Department
2. Strengthen and revise legislations relating to wildlife conservation
- Legal protection of elephant increased significantly
- Law enforcement relating to elephant conservation enhanced


OBJECTIVE
PROGRAMS
OUTCOMES
Research & Knowledge Management
To augment research and improve knowledge in elephant conservation
1. Undertake research activities based on field conservation needs
2. Research on elephant ecology
3. Research on habitat aspects of elephants
4. Research on human/social dynamics relating to elephants
5. Research on potential elephant diseases
6. Research on captive elephant and their management
7. Research on transboundary elephant management issues
8. Research on human elephant conflict issues
9. Research on law enforcement and crime management
- Knowledge base relating to elephant conservation increased and used in the conservation
- Elephant conservation actions are undertaken based on fact-based information and information
Capacity and Institutional Strengthening
To strengthen individual and institutional capacity to conserve elephants
1. Create management facilities to implement and monitor the Action Plan
2. Strengthen grassroots capacity to manage urgent conservation needs
3. Develop long-term capacities & skills required for elephant conservation
4. Integrate elephant conservation in national, sectoral and spatial policies
- Local, national and regional capacity for elephant conservation increased
- Field level skills and resources mobilization increased
Education, Awareness & Collaboration
To educate, aware and engage stakeholders to elephant conservation
1. Develop national capacity to implement elephant conservation programs
2. Boost cooperation among partners to increase information and skills
3. Build and strengthen existing community awareness
4. Engage other government bodies to enhance Action Plan implantation
5. Transboundary initiatives with neighboring countries for conservation
- Stakeholder participation in elephant conservation increased
- Collaboration and partnership across all levels increased

### 3.4.2 MONITORING AND EVALUATION

Proper monitoring of the recommended actions is essential to evaluate the progress along with the incorporation of the new learning into this Action Plan. This will ensure the ultimate achievement of the elephant conservation endeavors. In this Action Plan, each of the action is mentioned with one or two indicator for monitoring. However, more specific monitoring approach should be established to weigh up the progress at activities level according to their associated indicators. Evaluations from regular monitoring will open a scope to adopt the new knowledge in the changing situations. For instance, it would be a good idea to review this Action Plan in the middle of its tenure with a thorough comparison between the planned milestones and the real progress, in 2020 before the Aichi Biodiversity Targets would mark to its end. Similarly, the Government of Bangladesh may set new vision after achieving the 'Perspective Plan of Bangladesh Government (2010-2021) and this Action Plan might be reviewed accordingly.

### 3.4.3 PARTNERSHIP

Partnership with local, national, regional and global parties is the key to confront the multifaceted issues and challenges of elephant conservation. The dynamic leadership of Bangladesh Forest Department along with the strong socio-political commitment will thrive the implementation of this Action Plan as well as the fate of the Critically Endangered elephants in Bangladesh. The Bangladesh Forest Department could direct the collaboration process providing legal and institutional support towards the implementation of this Action Plan. The Wildlife Act could be updated by declaring new Protected Areas and increasing commitments to the overall biodiversity conservation. Long-term partnership should be developed with the neighboring countries for the conservation and management of transboundary elephants. Government of Bangladesh should enable a favorable political environment for elephant as well as biodiversity conservation by strengthening partnership with the international bodies and adherence to the international agreements, e.g. Convention on Biodiversity, The Aichi Biodiversity Targets and Sustainable Development Goals 2030. A collaboration platform led by the Bangladesh Forest Department can bring all the stakeholders on a same ground and enable them to play their appropriate roles.

### 3.4.4 FUNDING

Adequate and continuous funding could enable the timely execution of the BECAP. There are opportunities for government of Bangladesh to support the elephant conservation initiatives from the internal funding sources, e.g. Annual Development Plan, General Revenue Fund and Bangladesh Climate Change Trust Fund. The Government could also secure the external funding for elephant conservation by specifically guiding the relevant donors, the bilateral and multilateral funding agencies. However, integration of elephant conservation in the mainstream sustainable development is the pre-condition to get access to most of these funds. The Ministry of Environment and Forests could boost up the process by introducing a separate fund management body led by the Bangladesh Forest Department to mobilize the elephant or biodiversity conservation endowment. Such a body would set a mechanism to inform and involve the interested donors by ensure the proper management of the elephant conservation funds and showcasing this Action Plan and the conservation needs of Asian Elephants in Bangladesh. The cumulative total cost for implementing this action plan is BDT 24,960 Lakh. The Matrix of Actions of BECAP along with phase of implementation, Indicative Resource Requirement, Human Resources and Possible source of funding is illustrated in the table bellow:

| The Matrix of Actions of Bangladesh Elephant Conservation Action Plan (BECAP) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Problem/Programme/Actions | Implementation scope/Phase of Implementation | | | | | | | | | | Indicative Resource Require-ment (in Lack Tk.) | Manpower/ Human Resources | Possible source of funding |
| | High | | Medium | | | Low | | | | | | | |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | | | |
| **Human-Elephant Conflict and Poaching** | | | | | | | | | | | | | |
| **Programme 1: Understand the present status and trends of human-elephant conflicts** | | | | | | | | | | | | | |
| **Action 1:** Develop a long-term HEC monitoring instrument | | | | | | | | | | | 25.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Conduct HEC assessment in relevant areas based on HEC monitoring to determine the nature, scale and distribution | | | | | | | | | | | 15.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Revise the HEC reduction activities based on the assessment data | | | | | | | | | | | 20.00 | Govt./Other organizations | Govt./ Donor |
| **Programme 2: Minimize the human-elephant conflicts** | | | | | | | | | | | | | |
| **Action 1:** Implement different types of barrier method, e.g. bio-fencing, solar powered electric fencing, chili-rope, chili based olfactory repellents, etc. | | | | | | | | | | | 1000.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Encourage plantation in the interface zone with buffer crops and nonpreferred crops e.g. lemon, chili, ginger, bitter gourd, okra, taro, and teasel gourd | | | | | | | | | | | 300.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Build up community based HEC mitigation initiatives in HEC prone areas e.g. formation and expansion of Elephant Response Teams (ERTs) | | | | | | | | | | | 200.00 | Govt./Other organizations | Govt./ Donor |
| **Action 4:** Set up diverse early warning systems e.g. trip alarm, watch tower, flagging, patrolling, etc. | | | | | | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |

| The Matrix of Actions of Bangladesh Elephant Conservation Action Plan (BECAP) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Problem/Programme/Actions | Implementation scope/Phase of Implementation | | | | | | | | | | Indicative Resource Requirement (in Lack Tk.) | Manpower/ Human Resources | Possible source of funding |
| | High | | Medium | | | Low | | | | | | | |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | | | |
| **Action 5:** Develop and operationalize a national HEC management protocol | | | | | | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |
| **Action 6:** Update and simplify the existing "Compensation Policy for the Victims of Wildlife Attack 2010" | | | | | | | | | | | 5.00 | Govt./Other organizations | Govt./ Donor |
| **Programme 3: Understand and reduce elephant poaching and its trade** | | | | | | | | | | | | Govt./Other organizations | Govt./ Donor |
| **Action 1:** Evaluate the levels of elephant poaching, consumption, and trade in Bangladesh contributing to legislative decision making | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Determine the priority anti-poaching actions based on collected and synthesized data on elephant poaching, trades and related crimes | | | | | | | | | | | 15.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Develop and formalize an intelligence system relating to elephant poaching, trades and related crimes | | | | | | | | | | | 25.00 | Govt./Other organizations | Govt./ Donor |
| **Action 4:** Enhance the law enforcement actions against elephant as well as wildlife poaching, trades and related crimes, i.e. vigilance, patrolling, raids | | | | | | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |
| **Action 5:** Incorporate section empowering BFD officials with the power to arrest offenders in the Wildlife (Conservation and Security) Act, 2012 | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |
| **Action 6:** Improve prosecution of claims related to poaching, consumption, and trade in elephant parts | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |

| The Matrix of Actions of Bangladesh Elephant Conservation Action Plan (BECAP) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Problem/Programme/Actions | Implementation scope/Phase of Implementation | | | | | | | | | | Indicative Resource Require-ment (in Lack Tk.) | Manpower/ Human Resources | Possible source of funding |
| | High | | Medium | | | Low | | | | | | | |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | | | |
| **Action 7:** Develop measures to contribute to the international battle against the cross-boundary trade of elephant parts | | | | | | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |
| **Action 8:** Mobilize the ERT members towards community-based anti-poaching actions | | | | | | | | | | | 25.00 | Govt./Other organizations | Govt./ Donor |
| **Action 9:** Establish a judicial court specifically to combat wildlife/forest crimes at district level | | | | | | | | | | | 25.00 | Govt./Other organizations | Govt./ Donor |
| **Action 10:** Develop and mobilize a strong political commitment to stop illegal trades and poaching of elephants/ wildlife parts | | | | | | | | | | | 15.00 | Govt./Other organizations | Govt./ Donor |
| **Action 11:** Workout ways to increase penalties in a mode that is sufficient to discourage poachers, traders and consumers | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |
| **Action 12:** Identify the hunters/poachers and seize all types of illegal arms/guns | | | | | | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |
| Problem: Habitat Loss and Food Scarcity | | | | | | | | | | | | | |
| **Programme 1: Assessment of current and desired status of elephant habitats** | | | | | | | | | | | | | |
| **Action 1:** Develop a habitat monitoring instrument to assess area, cover, composition and relevant aspects of elephant habitats and populations | | | | | | | | | | | 300.00 | Govt./Other organizations | Govt./ Donor |

| The Matrix of Actions of Bangladesh Elephant Conservation Action Plan (BECAP) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Problem/Programme/Actions | Implementation scope/Phase of Implementation | | | | | | | | | | Indicative Resource Require-ment (in Lack Tk.) | Manpower/ Human Resources | Possible source of funding |
| | High | | Medium | | | Low | | | | | | | |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | | | |
| **Action 2:** Monitor changes in area, forest cover, composition of elephant habitats and distribution/ occupancy, population size, and corridor connectivity of elephant populations | | | | | | | | | | | 500.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Demarcate and declare (if necessary) reserved area/ new protected area and corridors of wildlife, especially of elephants | | | | | | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |
| **Programme 2: Reduction of unsustainable forest resource uses** | | | | | | | | | | | | | |
| **Action 1:** Develop and adopt an approach to know the pattern, nature and scale of forest resource uses | | | | | | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Figure out the socio-economic dependencies of communities on the elephant range forests | | | | | | | | | | | 25.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Develop alternative income opportunities through eco-friendly enterprise development for the forest dependent communities | | | | | | | | | | | 1000.00 | Govt./Other organizations | Govt./ Donor |
| **Action 4:** Develop a local/national level socio-political commitment to ensure that elephant habitats are safe and undisturbed | | | | | | | | | | | 25.00 | Govt./Other organizations | Govt./ Donor |
| **Programme 3: Habitat enrichment and rehabilitation programs** | | | | | | | | | | | | | |
| **Action 1:** Introduce and carry out enrichment and reforestation programs in the fragmented elephant habitats | | | | | | | | | | | 3000.00 | Govt./Other organizations | Govt./ Donor |

| The Matrix of Actions of Bangladesh Elephant Conservation Action Plan (BECAP) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Problem/Programme/Actions | Implementation scope/Phase of Implementation | | | | | | | | | | Indicative Resource Require-ment (in Lack Tk.) | Manpower/ Human Resources | Possible source of funding |
| | High | | Medium | | | Low | | | | | | | |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | | | |
| **Action 2:** Carry out massive fodder species plantation in denuded and degraded lands inside forest areas | | | | | | | | | | | 3000.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Scrutinize the feasibility for maintaining corridors/connectivity among elephant habitats | | | | | | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |
| **Action 4:** Adjoin and improve active corridors of elephants | | | | | | | | | | | 2000.00 | Govt./Other organizations | Govt./ Donor |
| **Action 5:** Create new and maintain the existing water sources for elephants throughout the year | | | | | | | | | | | 300.00 | Govt./Other organizations | Govt./ Donor |
| **Action 6:** Ensure area demarcation and resolve the unlawful land settlement | | | | | | | | | | | 5000.00 | Govt./Other organizations | Govt./ Donor |
| **Programme 4: Improvement of law enforcement relating to habitat destruction** | | | | | | | | | | | | | |
| **Action 1:** Introduce and implement advanced patrolling and monitoring techniques in relation to elephant conservation challenges | | | | | | | | | | | 25.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Improve the facilities in field level BFD offices, e.g. manpower, set up watch tower, vehicle facilities and living conditions | | | | | | | | | | | 500.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Improve the coordination between BFD and other relevant LEA agencies | | | | | | | | | | | 20.00 | Govt./Other organizations | Govt./ Donor |
| **Action 4:** Improve the effectiveness of existing laws and increase enforcement actions in relation to wildlife conservation | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |

| The Matrix of Actions of Bangladesh Elephant Conservation Action Plan (BECAP) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Problem/Programme/Actions | Implementation scope/Phase of Implementation | | | | | | | | | | Indicative Resource Require-ment (in Lack Tk.) | Manpower/ Human Resources | Possible source of funding |
| | High | | Medium | | | Low | | | | | | | |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | | | |
| **Action 5:** Improve the authority and power of the BFD to enforce the Wildlife related laws | | | | | | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |
| **Programme 5: Education on and awareness of habitat conservation and sustainable forest use** | | | | | | | | | | | | | |
| **Action 1:** Develop a long-term education and awareness movement in concerned areas | | | | | | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Implement long-term awareness and education program in concerned areas | | | | | | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Strengthen CBOs for sustainable forest resource management and utilization practices | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |
| **Programme 6: Alleviate affects of land use changes, e.g. agriculture, shifting cultivation** | | | | | | | | | | | | | |
| **Action 1:** Carry out constant monitoring of the changes in land use pattern e.g. agricultural expansion, shifting cultivation and encroachment in elephant habitat areas | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Develop a strict land use policy for land adjacent to the forests and encourage adoption | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Explore feasibility of relocation/ resettlement/eviction programs of illegal settlers | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |

| The Matrix of Actions of Bangladesh Elephant Conservation Action Plan (BECAP) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Problem/Programme/Actions | Implementation scope/Phase of Implementation | | | | | | | | | | Indicative Resource Require-ment (in Lack Tk.) | Manpower/ Human Resources | Possible source of funding |
| | High | | Medium | | | Low | | | | | | | |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | | | |
| **Programme 7: Assess additional potential threats** | | | | | | | | | | | | | |
| **Action 1:** Conduct a collective risk assessment and prioritize mitigation activities for infrastructure development, pollution, invasive species, and future extractions in elephant habitat areas | | | | | | | | | | | 20.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Implement relevant regulations, e.g. Environmental Management Plan, Social Assessment etc. as mandatory for development activities in close proximity to elephant habitats | | | | | | | | | | | 15.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Address the impact of Rohinga refugee intrusion in maintaining the habitat conditions in elephant range | | | | | | | | | | | 15.00 | Govt./Other organizations | Govt./ Donor |
| **Action 4:** Identify and abolish illegal dams in streams in elephant habitat | | | | | | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |
| **Action 5:** Prohibit building of roads inside or adjacent to forest lands | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |
| Problem: Protection and Regulation | | | | | | | | | | | | | |
| **Programme 1: Strengthen law enforcement scope and capacity of the Forest Department** | | | | | | | | | | | | | |
| **Action 1:** Improve efficiency of BFD staffs to improve forest protection through adequate staffing and effective patrolling | | | | | | | | | | | 100.00 | Govt./Other organizations | Govt./ Donor |

| The Matrix of Actions of Bangladesh Elephant Conservation Action Plan (BECAP) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Problem/Programme/Actions | Implementation scope/Phase of Implementation | | | | | | | | | | Indicative Resource Require-ment (in Lack Tk.) | Manpower/ Human Resources | Possible source of funding |
| | High | | Medium | | | Low | | | | | | | |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | | | |
| **Action 2:** Incorporate diverse incentives, e.g. rewarding, medaling and certifications to motivate BFD staffs to increase performance | | | | | | | | | | | 200.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Provide improved logistics and equipment supports to the BFD i.e. patrolling jeep, modern equipments | | | | | | | | | | | 200.00 | Govt./Other organizations | Govt./ Donor |
| **Action 4:** Provide training to BFD officials on a regular basis on Wildlife and related Act and Rules | | | | | | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |
| **Action 5:** Restructure the law enforcement system within BFD following the successful models of other countries | | | | | | | | | | | 100.00 | Govt./Other organizations | Govt./ Donor |
| **Action 6:** Establish a cell for monitoring law enforcement activities relating to wildlife crime | | | | | | | | | | | 20.00 | Govt./Other organizations | Govt./ Donor |
| **Action 7:** Deport a WCCU officer in all kind of international ports, e.g. land, sea and air ports | | | | | | | | | | | 20.00 | Govt./Other organizations | Govt./ Donor |
| **Programme 2: Strengthen and revise legislations relating to wildlife/elephant conservation** | | | | | | | | | | | | | |
| **Action 1:** Carry out periodic review to update existing Acts, Laws, Policies and Orders relating to wildlife and elephants | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Update and strengthen the existing Laws, Policies and Orders in light of agreed upon international Pledge and Treaties | | | | | | | | | | | 20.00 | Govt./Other organizations | Govt./ Donor |

| The Matrix of Actions of Bangladesh Elephant Conservation Action Plan (BECAP) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Problem/Programme/Actions | Implementation scope/Phase of Implementation | | | | | | | | | | Indicative Resource Require-ment (in Lack Tk.) | Manpower/ Human Resources | Possible source of funding |
| | High | | Medium | | | Low | | | | | | | |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | | | |
| Problem: Research and Knowledge Management | | | | | | | | | | | | | |
| **Programme 1: Undertake research activities based on field conservation needs** | | | | | | | | | | | | | |
| **Action 1:** Develop a prioritized elephant conservation research and monitoring plan | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Conduct threat prioritization and challenge assessment for the elephant conservation | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |
| **Programme 2: Research on elephant ecology** | | | | | | | | | | | | | |
| **Action 1:** Carry out periodic assessment to monitor the changes in elephant population in terms of abundance and distribution | | | | | | | | | | | 1000.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Understand social structure, sex-ratio, population dynamics, home range, feeding behavior, and reproductive pattern of elephants | | | | | | | | | | | 500.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Understand and monitor the behavior of the problem elephants | | | | | | | | | | | 300.00 | Govt./Other organizations | Govt./ Donor |
| **Action 4:** Understand the genetic diversity of elephants | | | | | | | | | | | 200.00 | Govt./Other organizations | Govt./ Donor |
| **Action 5:** Understand the stress and reproductive hormones of elephants | | | | | | | | | | | 200.00 | Govt./Other organizations | Govt./ Donor |
| **Programme 3: Research on habitat aspects of elephants** | | | | | | | | | | | | | |

| The Matrix of Actions of Bangladesh Elephant Conservation Action Plan (BECAP) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Problem/Programme/Actions | Implementation scope/Phase of Implementation | | | | | | | | | | Indicative Resource Requirement (in Lack Tk.) | Manpower/ Human Resources | Possible source of funding |
| | High | | Medium | | | Low | | | | | | | |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | | | |
| **Action 1:** Develop a habitat suitability map including the site preferences and related features | ■ | ■ | | | | | | | | | 200.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Carry out studies to understand the elephant movement routes, corridors and habitat connectivity pattern | ■ | ■ | | | | | | | | | 500.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Carry out impact assessment of development activities on elephant, its routes and corridors and provide mitigation measures | | | ■ | ■ | ■ | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |
| **Action 4:** Carry out research to understand the scale and nature of habitat loss and degradation pattern | | | ■ | ■ | ■ | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |
| **Action 5:** Carry out study to understand the feasibility of building underpass/ tunnel/ overpass across elephant habitats; wherever feasible; and monitor effectiveness of such infrastructure | | | ■ | ■ | ■ | | | | | | 500.00 | Govt./Other organizations | Govt./ Donor |
| **Action 6:** Understand the impact of climate change on elephant habitat and population | | | | | | ■ | ■ | ■ | ■ | ■ | 30.00 | Govt./Other organizations | Govt./ Donor |
| **Action 7:** Conduct assessment to monitor the effects of biodiversity change on elephant habitat and ecosystems | ■ | ■ | | | | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |
| **Action 8:** Conduct assessment to monitor the effects of human impact, i.e. changes in land use pattern, agricultural expansion, shifting cultivation and encroachment on elephant habitat and forest resources | | | ■ | ■ | ■ | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |

| The Matrix of Actions of Bangladesh Elephant Conservation Action Plan (BECAP) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Problem/Programme/Actions | Implementation scope/Phase of Implementation | | | | | | | | | | Indicative Resource Require-ment (in Lack Tk.) | Manpower/ Human Resources | Possible source of funding |
| | High | | Medium | | | Low | | | | | | | |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | | | |
| **Action 9:** Develop an elephant habitat management model | | | | | | | | | | | 25.00 | Govt./Other organizations | Govt./ Donor |
| **Action 10:** Conduct study on ecosystem services and valuation of elephant habitat and ecosystems | | | | | | | | | | | 25.00 | Govt./Other organizations | Govt./ Donor |
| **Programme 4: Research on human/ social dynamics relating to elephants** | | | | | | | | | | | | | |
| **Action 1:** Conduct study to understand the knowledge, attitude and practice of concerned communities relating to elephants and its conservation | | | | | | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Conduct research to understand the cultural heritage among communities relating to elephants and its conservation | | | | | | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Conduct study to assess the feasibility of relocating the human settlements from and around the elephant habitats | | | | | | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |
| **Action 4:** Conduct research on the community engagement factors such as willingness of the community to pay for conservation | | | | | | | | | | | 25.00 | Govt./Other organizations | Govt./ Donor |
| **Programme 5: Research on potential elephant diseases** | | | | | | | | | | | | | |
| **Action 1:** Conduct study on disease prevalence in elephants | | | | | | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Prioritize mitigation activities for the potential elephant disease | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |

| The Matrix of Actions of Bangladesh Elephant Conservation Action Plan (BECAP) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Problem/Programme/Actions | Implementation scope/Phase of Implementation | | | | | | | | | | Indicative Resource Requirement (in Lack Tk.) | Manpower/ Human Resources | Possible source of funding |
| | High | | Medium | | | Low | | | | | | | |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | | | |
| **Action 3:** Study on contagious diseases of captive elephant and precautionary measures | | | | | | | | | | | 100.00 | Govt./Other organizations | Govt./ Donor |
| **Programme 6: Research on captive elephants and their management** | | | | | | | | | | | | | |
| **Action 1:** Prepare a comprehensive management guideline for captive elephant management (status, health care, study book, etc.) | | | | | | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |
| **Programme 7: Research on transboundary elephants management issues** | | | | | | | | | | | | | |
| **Action 1:** Assess the of transboundary elephant population, their ranging patterns and implications for management | | | | | | | | | | | 300.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Monitor the changes in transboundary elephant population, their ranging patterns due to the human impact | | | | | | | | | | | 200.00 | Govt./Other organizations | Govt./ Donor |
| **Programme 8: Research on human elephant conflict issues** | | | | | | | | | | | | | |
| **Action 1:** Conduct constant monitoring of changing nature, scale and necessary attributes of human elephant conflicts | | | | | | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Conduct investigative study to understand the social aspects of human elephant conflicts | | | | | | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |
| **Programme 9: Research on law enforcement and crime management** | | | | | | | | | | | | | |

| The Matrix of Actions of Bangladesh Elephant Conservation Action Plan (BECAP) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Problem/Programme/Actions | Implementation scope/Phase of Implementation | | | | | | | | | | Indicative Resource Require-ment (in Lack Tk.) | Manpower/ Human Resources | Possible source of funding |
| | High | | Medium | | | Low | | | | | | | |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | | | |
| **Action 1:** Conduct study to investigate the levels of elephant poaching, consumption and trade in Bangladesh | | | | | | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Conduct study to assess loopholes in the relevant Laws, Acts, Regulations and Policies | | | | | | | | | | | 20.00 | Govt./Other organizations | Govt./ Donor |
| Problem: Capacity Development and Institutional Strengthening | | | | | | | | | | | | | |
| **Programme 1: Create management facilities to implement and monitor the Action Plan** | | | | | | | | | | | | | |
| **Action 1:** Recruit and assign dedicated BFD officials to direct implementation of the Action Plan and coordinate collaboration efforts | | | | | | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Develop a BECAP monitoring and adaptive management process | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Establish research and training stations in close proximity to elephant range areas | | | | | | | | | | | 300.00 | Govt./Other organizations | Govt./ Donor |
| **Action 4:** Strengthen BFD with necessary infrastructures, logistics and relevant skills | | | | | | | | | | | 200.00 | Govt./Other organizations | Govt./ Donor |
| **Programme 2: Strengthen grassroots capacity to manage urgent elephant conservation needs** | | | | | | | | | | | | | |
| **Action 1:** Educate and train all concerned stakeholders to effectively mobilize the human elephant conflict protocol | | | | | | | | | | | 100.00 | Govt./Other organizations | Govt./ Donor |

| The Matrix of Actions of Bangladesh Elephant Conservation Action Plan (BECAP) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Problem/Programme/Actions | Implementation scope/Phase of Implementation | | | | | | | | | | Indicative Resource Requirement (in Lack Tk.) | Manpower/ Human Resources | Possible source of funding |
| | High | | Medium | | | Low | | | | | | | |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | | | |
| **Action 2:** Strengthen Wildlife Crime Control Unit to tackle elephant poaching and related crimes | | | | | | | | | | | 20.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Establish an specialized research unit to undertake elephant and habitat monitoring programs in long-term | | | | | | | | | | | 20.00 | Govt./Other organizations | Govt./ Donor |
| **Action 4:** Build capacity of BFD staff and relevant stakeholders on elephant population survey and relevant monitoring techniques | | | | | | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |
| **Action 5:** Train to develop the skills of the villagers and local stakeholders on emergency conflict management and basic elephant conservation techniques | | | | | | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |
| **Programme 3: Develop longterm capacities and skills required for elephant conservation** | | | | | | | | | | | | | |
| **Action 1:** Ensure regular higher studies or training program for BFD officials on wildlife conservation and management | | | | | | | | | | | 100.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Develop a sustainable financing mechanism for elephant conservation | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Increase period of retention of trained BFD officials on wildlife within Wildlife and Nature Conservation Circle (WNCC) and/or within the elephant range areas | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |
| **Action 4:** Develop and institutionalize a wildlife conservation training program for BFD staff | | | | | | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |

| The Matrix of Actions of Bangladesh Elephant Conservation Action Plan (BECAP) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Problem/Programme/Actions | Implementation scope/Phase of Implementation | | | | | | | | | | Indicative Resource Require-ment (in Lack Tk.) | Manpower/ Human Resources | Possible source of funding |
| | High | | Medium | | | Low | | | | | | | |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | | | |
| **Action 5:** Redistribution of command area, and strengthen the existing wildlife divisions | | | | | | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |
| **Action 6:** Development of veterinary skills for emergency support of elephants | | | | | | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |
| **Programme 4: Integrate elephant conservation in national, sectoral & spatial development programmes** | | | | | | | | | | | | | |
| **Action 1:** Develop and put into practice an approach to integrate elephant and biodiversity conservation into wider development policy and actions | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Ensure the forest management system is conservation friendly | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |
| Problem: Education, Awareness and Collaboration | | | | | | | | | | | | | |
| **P1. Develop national capacity to implement elephant conservation, awareness and education programmes** | | | | | | | | | | | | | |
| **Action 1:** Develop a national elephant conservation education and awareness strategy | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Develop the national capacity of sector stakeholders relating to conservation communication | | | | | | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Include specific chapter on wildlife conservation in primary level/ secondary level education | | | | | | | | | | | 5.00 | Govt./Other organizations | Govt./ Donor |

| The Matrix of Actions of Bangladesh Elephant Conservation Action Plan (BECAP) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Problem/Programme/Actions | Implementation scope/Phase of Implementation | | | | | | | | | | Indicative Resource Requirement (in Lack Tk.) | Manpower/ Human Resources | Possible source of funding |
| | High | | Medium | | | Low | | | | | | | |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | | | |
| **P2. Boost cooperation among partners to increase available information and skills** | | | | | | | | | | | | | |
| **Action 1:** Develop a platform to build collaboration between BFD and other parties for technical and funding support to implement BECAP activities | | | | | | | | | | | 5.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Complete gap assessment of conservation skills to determine national and international collaboration requirements | | | | | | | | | | | 5.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Engage relevant collaborators to help BFD achieve BECAP objectives | | | | | | | | | | | 5.00 | Govt./Other organizations | Govt./ Donor |
| **Action 4:** Include regional policy makers in conservation decision making for creation of regional mandate | | | | | | | | | | | 10.00 | Govt./Other organizations | Govt./ Donor |
| **P3. Build new and strengthen existing community awareness** | | | | | | | | | | | | | |
| **Action 1:** Raise awareness among target audience of significance of the elephant and its conservation | | | | | | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Raise awareness among concerned communities to encourage them to ensure the sustainable use of forest resources | | | | | | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Undertake massive awareness programs to reduce the human elephant conflict regarding the mitigation options | | | | | | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |

| The Matrix of Actions of Bangladesh Elephant Conservation Action Plan (BECAP) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Problem/Programme/Actions | Implementation scope/Phase of Implementation | | | | | | | | | | Indicative Resource Require-ment (in Lack Tk.) | Manpower/ Human Resources | Possible source of funding |
| | High | | Medium | | | Low | | | | | | | |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | | | |
| **Action 4:** Raise awareness to resist illegal poaching and trade of elephants as well as wildlife | | | | | | | | | | | 20.00 | Govt./Other organizations | Govt./ Donor |
| **Action 5:** Motivate the mass-people towards elephant conservation through social mobilizations, e.g. elephant conservation clubs | | | | | | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |
| **P4. Engage other government bodies to enhance Action Plan implementation capacity** | | | | | | | | | | | | | |
| **Action 1:** Develop an approach to integrate elephant and biodiversity conservation into wider development policy and action all through the Government agencies | | | | | | | | | | | 20.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Raise awareness in high and mid-level officials of different Government ministries about elephant and biodiversity conservation and its relationship to sustainable development | | | | | | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Sensitize the high and mid-level officials of different Government ministries about elephant and its habitat conservation and its relationship to development policy | | | | | | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |
| **Action 4:** Raise public awareness across the country by main-streaming elephant conservation issues into the media | | | | | | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |

| The Matrix of Actions of Bangladesh Elephant Conservation Action Plan (BECAP) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Problem/Programme/Actions | Implementation scope/Phase of Implementation | | | | | | | | | | Indicative Resource Require-ment (in Lack Tk.) | Manpower/ Human Resources | Possible source of funding |
| | High | | Medium | | | Low | | | | | | | |
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | | | |
| **Action 5:** Build visibility and public awareness by mainstreaming elephant and its habitat conservation issue through media | | | | | | | | | | | 30.00 | Govt./Other organizations | Govt./ Donor |
| **Action 6:** Facilitate training and skill sharing between collaborators to increase national capacity for elephant conservation | | | | | | | | | | | 40.00 | Govt./Other organizations | Govt./ Donor |
| **P5. Engage adjacent countries to implement transboundary elephant conservation initiatives** | | | | | | | | | | | | | |
| **Action 1:** Initiate and formalize a communication platform between countries for transboundary elephant management including migratory elephants and illegal trade issues | | | | | | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |
| **Action 2:** Develop joint management plan(s) for transboundary elephant management | | | | | | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |
| **Action 3:** Develop links and networks for sharing research results and conducting collaborative transboundary research | | | | | | | | | | | 50.00 | Govt./Other organizations | Govt./ Donor |

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## STRENGTHENING REGIONAL CO-OPERATION FOR WILDLIFE PROTECTION (SRCWP) PROJECT

The Strengthening Regional Co-operation 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 programmes for staff responsible for enforcement of wildlife law and regulations. The project is also supporting the strengthening of the South Asia Wildlife Enforcement Network (SAWEN) which was established by SAARC countries in 2011 to combat wildlife crime in 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 Center to undertake training, research, education and awareness on the issues of wildlife conservation and protection.

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