Status of Asian Elephants in Bangladesh

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Status of Asian Elephants in Bangladesh

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Preface

Asian Elephant is an Endangered animal in its global ranges and categorized as ‘Critically Endangered’ in Bangladesh. It is also listed in the third schedule of the Bangladesh Wildlife (Conservation) Act (1974) and also included in the CITES Appendix 1. However, declining trend of its population throughout habitat ranges including Bangladesh indicates that meaningful and effective protection may not be easily attainable. As human population and its activities continue to grow at an alarming rate, wild elephants are forced to survive in increasingly smaller areas compared to the past. The corridors and routes that once offered a passage for wild elephants to travel are now subject to fragmentation because of human habitation and intrusion.

Due to habitat fragmentation, elephant ranges in Bangladesh have become confined to small patches occupied by a single or few small herds. Elephant movement routes and some corridors have been totally abandoned due to degradation of forest cover, extension of human settlements, intensification of agricultural practice, unsustainable slash and burn practices, unplanned road construction, establishment of monoculture plantation, and other development activities. Elephants come into conflict with humans because of the competition for space in the same habitat. This creates lack of compassion towards elephants among the people living in close proximity to elephant ranges. When elephants invade crops and settlements, humans defend their property by driving them away with fire, guns and bombs. As a result both elephants and people are killed and injured in such conflicts.

In the light of this situation, IUCN Bangladesh in association with Bangladesh Forest Department has implemented a project entitled ‘Status Survey and Development of Elephant Action Plan for Bangladesh’ a subproject of ‘Strengthening Regional Cooperation for Wildlife Protection’ project, funded by The World Bank. Under this subproject, initiatives were taken to find the present elephant population status, to map elephant movement routes and corridors, and to develop an elephant conservation action plan. In addition, transboundary elephant crossing points along the border areas of Bangladesh were also identified and mapped.

Current study found 268 resident wild elephants, 93 migratory elephants and 96 captive elephants in Bangladesh. Beside this, the study also produced 44 forest range wise route maps and identified and mapped 12 elephant corridors. Finally, a total of 57 transboundary elephant crossing points were identified, of which 39 points are natural crossing points through which elephants pass regularly, seven points are vagrant which elephants use occasionally, and 11 points are abandoned crossing points.
We believe that the information presented in this book will be a useful reference for the Government agencies, researchers, academics, and other stakeholders. We sincerely hope that this book will also be beneficial to policy and decision makers to act and think towards conserving this flagship species and combating the ongoing human-elephant conflict.

Md. Abdul Mabud
Project Director
Strengthening Regional Cooperation for Wildlife Protection Project
and
Conservator of Forests
Bangladesh Forest Department
Message

The Government of Bangladesh is committed to ensure a sustainable future for the country. In effort, the Government has taken up myriad programmes and initiatives with the support of different consortia. Bangladesh has recently achieved unprecedented success in biodiversity conservation. Honorable Prime Minister, Sheikh Hasina has been the recipient of the acclaimed ‘2015 Champions of the Earth’ award of the United Nations Environment Programme. This research to find out the present status of Asian Elephants, a ‘Critically Endangered’ species of Bangladesh, is yet another example of the commitment of by the Government of Bangladesh to protect the nature. This publication sets another milestone in biodiversity conservation of the country.

The overwhelming evidence of the loss of biodiversity worldwide calls for urgent action to conserve biodiversity. The Ministry of Environment and Forests has been playing a pivotal role in biodiversity conservation in Bangladesh through Bangladesh Forest Department, and other national and international organizations. This publication is one of many initiatives implemented by Bangladesh Forest Department through the ‘Strengthening Regional Cooperation for Wildlife Protection’ project. I would like to thank The World Bank for providing financial assistance and appreciate the efforts of IUCN Bangladesh Country Office in implementing the project.

I am confident that the ‘Status of Asian Elephants in Bangladesh’ book will help the Government of Bangladesh towards achieving the Aichi Biodiversity Targets, the Sustainable Development Goals, and the Vision 2021 objectives.

Finally, I hope that the information in this book will help protect the ‘Critically Endangered’ Asian Elephants and contribute to the conservation and protection of biodiversity in Bangladesh.

Dr. Kamal Uddin Ahmed
Secretary
Ministry of Environment and Forests
Government of the People’s Republic of Bangladesh
Biodiversity, the incredible variety of life on earth that sustains us, is in peril. Species are becoming threatened at unprecedented rates. Over the past few decades, this has become an issue of global concern. In Bangladesh, the rich wildlife of the country is also under tremendous pressure, as habitats are being altered and destroyed to meet the demands of the growing economy. We have already lost a number of charismatic species, which were icons of the wildlife heritage of the country. Fortunately, there are many iconic species that still survive in the wild, like the Asian Elephant, but they are facing the threat of extinction because of over-population and over-exploitation of natural resources.

The surviving populations of the Asian Elephant continue to get reduced because of frequent habitat loss and fragmentation, food scarcity, encroachment, human-elephant conflicts, and hunting and poaching. During the last 50 years of the last century, population of Asian Elephant dropped by more than half. Currently, Asian Elephants are spread across 13 countries and living in habitats that are too small and perilous for their survival. In Bangladesh, there is a small population of the Asian Elephant. Faced with threats and aggravating challenges, the survival of Asian Elephants is even more difficult compared to other Asian Elephant range countries. Therefore, Asian Elephants have been nationally categorized as ‘Critically Endangered’ and it is very important to gather information on the current status of Asian Elephants in the country.

In this context, Bangladesh Forest Department in association with IUCN Bangladesh Country Office has taken an initiative to learn the present status of Asian Elephants of the country, as a component of the ‘Strengthening Regional Cooperation for Wildlife Protection (SRCWP)’ project, with financial assistance from The World Bank. This publication provides the present elephant population of the country, their movement routes and corridors, and also the transboundary elephant crossing points. I believe information presented in this book will help future actions, to protect and conserve this flagship species and also to minimize the human-elephant conflicts.

I sincerely acknowledge the contribution of the Government of the People’s Republic of Bangladesh to initiate such a milestone project and The World Bank for providing financial support. I am also thankful to the passionate elephant conservation team of IUCN Bangladesh for their endeavours in creating this successful publication.

Md. Yunus Ali
Chief Conservator of Forests
Bangladesh Forest Department
Government of the People’s Republic of Bangladesh
It is now unequivocally established that there is a need for conserving the Asian Elephant and this is not receiving appropriate attention at the policy and implementation level though its conservation has both national and international significance.

In recent times, there has been increasing reports on elephant killing and rampaging because of human interventions and construction of settlements. The killing and poaching also happen because of the high value of tusks. Elephants and humans are in close encounter, where the remaining forests stand. With onslaught of deforestation and habitat loss, the elephant population is now being confined to isolated pockets in Chittagong, Cox’s Bazar and Chittagong Hill Tracts regions, the last refuge for elephants. Population pressure has pushed people to encroach more and more into marginal lands that cut across elephant habitats and corridors. Considering the situation, the current effort aims to identify the status of elephants and problems on the ground, and to take relevant conservation and protection measures in the future.

I would like to thank IUCN Bangladesh Country Office for taking this initiative, along with all the staff members and professionals who were involved in the process. I would also like to express my gratitude to Chief Conservator of Forests and Bangladesh Forest Department Officials for their support and collaboration and The World Bank for financing the initiative.

I hope this publication on the current status of elephant population in Bangladesh will be of relevance and useful to both professionals and researchers. Now it is time for us to review our previous initiatives and renew our plans, activities and implementation strategies to save Asian elephants of Bangladesh.

Ashit Ranjan Paul
Conservator of Forests
Wildlife and Nature Conservation Circle
and
Deputy Project Director
Strengthening Regional Cooperation for Wildlife Protection Project
Bangladesh Forest Department
Acknowledgements

The Asian Elephant is a unique keystone species of global significance that are ‘Critically Endangered’ in Bangladesh. IUCN Bangladesh first conducted the elephant population census in 2002. Twelve years later, IUCN Bangladesh has again conducted an elephant census by implementing ‘Status Survey and Development of Elephant Action Plan for Bangladesh’, under ‘Strengthening Regional Cooperation for Wildlife Protection (SRCWP)’ project. We would like to thank Bangladesh Forest Department and The World Bank for supporting IUCN Bangladesh to implement this subproject. In achieving the objectives of the project, a number of persons must be thanked whose contributions have been invaluable throughout the entire process.

Our sincere gratitude goes to Mr. Md. Yunus Ali, Chief Conservator of Forests and Chair, Peer Group of Elephant Project for his strategic guidance, along with the officials involved from Bangladesh Forest Department.

We extend heartfelt thanks to Dr. Aparup Chowdhury and Mr. Akbar Hossain, the former Project Directors of ‘Strengthening Regional Cooperation for Wildlife Protection’ project and also to current Project Director, Mr. Md. Abdul Mabud for their continued support during the implementation of this project. Thanks are also due to Mr. Ashit Ranjan Paul, Conservator of Forests, Wildlife and Nature Conservation Circle and his predecessor Dr. Tapan Kumar Dey, for their support and direction. We would like to recall the constant support of the relevant Conservator of Forests and Divisional Forest Officers who have provided much help during field work. Special thanks are also due to Mr. Md. Abdul Mabud, Mr. Rakibul Hasan Mukul, Mr. Abdul Khaleque Khan, the former Divisional Forest Officers of Wildlife and Nature Conservation Division of Chittagong and Mr. Golam Mowla, current Divisional Forest Officer of this division for their regular guidance.

We gratefully acknowledge all the respected Peer Group members (Annex 1) of Elephant Project for their invaluable contributions to the project. In addition, our sincere gratitude goes to all the Assistant Conservator of Forests, Range Officers, Beat Officers, and Forest Guards for their support during the field surveys. We would like to thank Mr. Md. Modinul Ahsan and Mr. Abu Naser Md. Mohsin Hossain of Bangladesh Forest Department and team leaders of the working group on transboundary elephant crossing points identification for their technical input, time in the field and guidance.

We are very much grateful to the task team members of The World Bank of SRCWP Project Ms. Nathalie W. Johnson, Dr. Sumith Pilpitiya, Ms. Marinela E. Dado and Dr. Farhat Jahan Chowdhury for providing necessary advice and suggestions to this project.

Thanks also go to Ms. Remeen Firoz who has worked on this book as a language editor. Special thanks to the IUCN Bangladesh elephant project team for their support to the creation of this publication: Mohammad Abdul Motaleb, Mohammad Sultan Ahmed, Md. Ashraful Haque, Zubair Hussni Fahad, Rajib Mahamud, Saikat Acharjee, Muhammad Mizanur Rahman, Hasibul Islam, Md. Emran Hasan, Nasim Aziz, Md. Ahsanul Wahed, Md. Fazlay Arafat, Md. Akhtar Hossain and Sanjoy Roy. Special thanks also given to Sheikh Asaduzzaman for his effort to preparation of this book.

We hope that the information of this book will help in the conservation and protection of Asian Elephants in Bangladesh.

Ishtiaq Uddin Ahmad
Country Representative
IUCN Bangladesh Country Office
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This chapter provides glimpses of the elephants in Bangladesh, why and where this study was conducted, and the major findings of the survey with way forward.
1.1. Elephants of Bangladesh and Their Conservation

Elephants, under the family Elephantidae, belong to two species, namely the Asian Elephant (*Elephas maximus*) and the African Elephant (*Loxodonta africana*). The Bangladeshi species is Asian Elephant, the flagship species of most of the tropical forests of Bangladesh. The IUCN Red List of Bangladesh (Khan, 2015) categorized this species as ‘Critically Endangered’ in Bangladesh, although globally this is categorized as ‘Endangered’ by IUCN Red List (IUCN, 2008).

According to the surveys carried out by IUCN during 2013-2016, three types of elephants are found in Bangladesh, i.e. resident, migratory and captive. The resident wild elephants are found in the hilly and non-hilly evergreen forests of Chittagong, Chittagong Hill Tracts (Bandarban, Khagrachari and Rangamati), and Cox’s Bazar regions. Non-resident or migratory elephants are found in the Kurigram, Jamalpur, Sherpur, Mymensingh, Netrokona, Sunamganj, Moulvibazar, Rangamati and Bandarban regions. In addition, elephants are also found in captivity in Bangladesh and used in log transportation, or found in zoos, safari parks and circus. The total elephant population of Bangladesh varied from time to time. Since 1978, different researchers have got different numbers during their investigations (Table 1.1).

Table 1.1. Records of Asian Elephant population estimation in Bangladesh since 1978.

<table>
<thead>
<tr>
<th>Resident</th>
<th>Migratory</th>
<th>Captive</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>150</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>250</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>348</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>-</td>
<td>60</td>
<td>-</td>
<td>200</td>
</tr>
<tr>
<td>151-170</td>
<td>42-54</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>195-239</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>151-344</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>196-227</td>
<td>83-100</td>
<td>94</td>
<td>-</td>
</tr>
</tbody>
</table>

About 100 years ago, elephants were apparently present in most of the forests of Bangladesh (Alam, 2008). Choudhury (2007) mentioned that there were more than 500 elephants present in their natural habitats throughout Bangladesh that are reducing at an alarming rate everyday. From field observations it was found that food shortage, habitat loss and fragmentation, and direct killing of elephants are the main threats to elephants in Bangladesh.

Lack of available food in the forests has led the elephants to enter into the crop fields and people’s households. On the one hand, people’s livelihoods are dependent on crops and they
always try to protect it. On the other hand, elephants need foods and this conflicting interests create severe human-elephant conflict. Moreover, a recent investigation shows that human settlements, agricultural lands, roads and highways, brick fields, army cantonments, village markets etc. were constructed within or near the elephant movement routes and corridors (Motaleb et al., 2016). This further created human-elephant conflicts and resulted in human casualties, elephant deaths, human injuries, damages to crops and so on. As elephants always follow their fixed routes and corridors during movement, construction of infrastructures have largely affected their mobility.

In the past, Bangladesh Forest Department, IUCN, conservation agencies, non-government organizations, and relevant bodies have conducted studies and taken initiatives for conservation of elephants in Bangladesh. Over the last few years, Bangladesh Forest Department has been engaging the local communities in the protection and management of forest through establishing co-management committees close to the Protected Areas (Sarker and Røskaft, 2014). Most recently, Bangladesh Forest Department and IUCN Bangladesh Country Office have formed and mobilized Elephant Response Teams across most of the human-elephant conflict prone areas of Bangladesh (Wahed et al., 2016). This is being considered as a pioneering initiative through which the grassroots communities are directly connected to the field level human-elephant conflict management and conservation of ‘Critically Endangered’ elephants. Side by side, a number of education and awareness programmes, e.g. trainings, street shows, stakeholder engagement events, and community dialogues, have been organized to involve and sensitize concerned stakeholders.
Bangladesh Forest Department and IUCN Bangladesh Country Office have also introduced a range of conflict management techniques at the grassroots level, e.g. alternative cropping practices, bio-fencing, solar powered fencing, and setting up early warning systems on a pilot basis in different conflict-prone areas (Wahed et al., 2016). Moreover, to enrich elephant habitats and secure the food sources for wild elephants, a couple of habitat improvement programmes have also been undertaken in the Chittagong, Chittagong Hill Tracts, Cox’s Bazar and Sherpur regions.

The Government of Bangladesh has developed a number of policies, regulations and legislations to protect the elephants of Bangladesh. Together with relevant acts and legislations, importance has been given to the conservation of biodiversity and natural resources in several national strategies. In late 2015, Bangladesh Forest Department and IUCN Bangladesh Country Office has taken an initiative to sign a protocol between Bangladesh and India to ensure safe and free movement of transboundary wild elephants across the international borders between these two countries. Conservation of wildlife, biodiversity and natural resources of Bangladesh has been prioritized by the 15th Amendment of the Constitution of Bangladesh. Currently, the elephant is legally protected by the ‘Wildlife (Conservation and Security) Act, 2012’.
1.2. Context of the Study

Bangladesh Forest Department, in association with IUCN Bangladesh Country Office, has taken few conservation initiatives through projects for conservation of elephants in Bangladesh. Few small projects on elephant conservation were also implemented by several non-government organizations. While a few exclusive conservation projects have been carried out, Bangladesh still lags far behind in terms of extensive research and knowledge regarding elephant conservation (Mitra, 2013; Plotnik and de Waal, 2014). IUCN Bangladesh Country Office conducted the first ever elephant population survey in Bangladesh (IUCN Bangladesh, 2004). Over the following decade, only a few further studies have been carried out mostly by discrete individual efforts. But the extent to which the knowledge produced from such studies can be incorporated in the systematic management of elephant conservation is yet to be determined.

Against this backdrop, IUCN Bangladesh Country Office in association with Bangladesh Forest Department has implemented a subproject entitled ‘Status Survey and Development of Elephant Action Plan for Bangladesh’ under the ‘Strengthening Regional Cooperation for Wildlife Protection (SRCWP)’ project for more than three years (June 2013 to November 2016). The aim of this initiative was to know the present elephant population status, mapping of elephant routes and corridors, finding out the elephant feeding habits, and recording the current scenario of human-elephant conflicts in Bangladesh.
Calf drinking milk from its mother. ©IUCN/ Rajib Mahamud
1.3. Study Area

The study was conducted in all the elephant ranges of Bangladesh. Nine forest divisions were investigated for estimating the resident and migratory elephant populations, mapping of elephant movement routes and corridors, and to know the present human-elephant conflict scenario (Map 1.1). The information of captive elephants was collected from Bangladesh Forest Department, zoo authorities, and safari parks. The transboundary elephant crossing points were identified by surveying along the borders of Bangladesh. Elephant defecation rate was investigated in the Dhaka Zoo and dung decay rate was investigated in Mymensingh Forest Division, Chittagong South Forest Division, Bandarban Forest Division, and Cox's Bazar South Forest Division.

Forest Divisions for Resident Elephant Census:
1. Cox's Bazar South Forest Division
2. Cox's Bazar North Forest Division
3. Chittagong South Forest Division
4. Lama Forest Division
5. Bandarban Forest Division
6. Chittagong Hill Tracts South Forest Division
7. Chittagong Hill Tracts North Forest Division

Forest Divisions for Migratory/Non-resident Elephant Census:
1. Mymensingh Forest Division
2. Sylhet Forest Division
3. Chittagong Hill Tracts North Forest Division
4. Bandarban Forest Division
Map 1.1. Distribution of Asian Elephants in Bangladesh

Source: Survey of Bangladesh and field survey
1.4. Major Findings

Present elephant population (resident, migratory and captive) of Bangladesh was investigated from August 2013 to April 2016. This is the first comprehensive survey that was conducted in two different seasons (Dry season: November to March and Wet season: April to October) by following dung count method. During the dry seasons, more than 3,600 km long recce-survey transect lines were surveyed and more than 13,000 dung piles were examined. During wet seasons, more than 3,100 km long recce-survey transect lines were surveyed and more than 17,000 dung piles were examined to estimate the number of elephants.

The results of this study are presented in the following three chapters. The second chapter gives the current elephant population status in Bangladesh. The third chapter illustrates the elephant routes and corridors, while the fourth chapter is on transboundary elephant crossing points.

The present resident wild elephant population ranges from 210 to 330, and the mean is 268. Sex ratio of resident wild elephant was also investigated through photo identification method and it shows that out of 268 elephants, males are 67, females are 172 and the number of calves is 29. The non-resident elephants range from 79 to 107, and the mean is 93. Total number of captive elephants is 96 that were found from Bangladesh Forest Department, zoos and safari parks.
Routes and corridors that are used frequently by elephants were also mapped for the whole of Bangladesh. A total of 52 route maps, including eight Divisional maps and 44 Range maps, were prepared and 12 elephant corridors were identified and mapped. Fifty-seven transboundary elephant crossing points were also identified and mapped under this study.

1.5. Way Forward

The current initiative has revealed elephant population, their distribution, movement patterns and conflict scenarios in Bangladesh. This also has created an opportunity to compare the findings of this study with the last one to determine any changes or to suggest any trends. It is, however, to note that the present study is the most comprehensive, extensive study ever conducted to estimate the status of Asian Elephants in Bangladesh. It is, therefore, suggested that, instead of any trend analysis, it is important to use the information of this publication to
design appropriate conservation actions to protect this flagship species. Bangladesh Forest Department and IUCN Bangladesh has recently prepared ‘Bangladesh Elephant Conservation Action Plan’ for 2016 to 2025. That document has clearly identified major challenges and threats to Asian Elephant conservation and management in Bangladesh, and suggest clear action points to be taken over a decade. The results captured in this book can lead to proper, site-specific actions those have been outlined in the ‘Bangladesh Elephant Conservation Action Plan’. In this way, our knowledge can work together with our planning processes and can lead towards effective conservation action.

Elephants playing with each other in an open area of Sherpur. © IUCN/ Rajib Mahamud
A tusker elephant standing near a crop field in Sherpur. © IUCN/Rajib Mahamud
Chapter Two

ELEPHANT POPULATION OF BANGLADESH

This chapter illustrates the details of present elephant population of Bangladesh, including resident, non-resident or migratory and captive elephants. Dung count method was followed for investigating the resident elephants. Dung count and focused group discussions were conducted for migratory elephants and Bangladesh Forest Department and other sources’ information was used for captive elephants. Mean number of resident elephants was found to be 268, non-resident was 93 and captive was 96. Seasonal variations were considered during population estimations. GAJAH software was used for data analysis.
2.1. Introduction

Elephants that permanently inhabit the natural forests of the country have been termed as resident elephants. In other words, we can call them resident wild elephants or wild elephants. Elephants that enter into Bangladesh from neighbouring countries in search of food, shelter and other reasons and stay for a short period of time are termed as the migratory/non-resident elephants. Elephants that are managed by different organizations (zoo, safari park etc.) and individuals (in circus, for logging etc.) with proper permission from authorities are termed as the captive elephants.

The first population census of resident, migratory and captive elephants of Bangladesh was held around a decade earlier in 2002 (IUCN Bangladesh, 2004). In recent times, Bangladesh Forest Department has realized that it is urgent to know the current status of elephants in Bangladesh in terms of occurrence, distribution and population status, for effective management of the species.

The present study attempts to know the existing elephant population of Bangladesh, including resident, non-resident or migratory and captive elephants. The survey was conducted over a period of three years, and standard methodology and software were used to estimate the elephant population. With support from Bangladesh Forest Department, the field research team made extensive visits to all the elephant ranges of Bangladesh. In the following sections of this chapter the details of the elephant census are illustrated.
2.2. Methods of Survey

2.2.1. Expert opinion
At the beginning of the survey a Peer Group, chaired by the Chief Conservator of Forests of Bangladesh and consisted of elephant experts was formed. The composition of the Peer Group is presented in Annex 1. The specific Terms of Reference of the Peer Group were to provide guidance during the elephant census, to select initial sites for elephant survey, and to provide necessary support during field operations. The survey findings and field activities were shared with the Peer Group every three months where necessary guidelines were provided by them.

2.2.2. Survey methodology
Globally, a number of methods are used to conduct elephant census, like indirect or dung count method, direct sighting method, and group count method. These methods are used considering the type of habitat (i.e. vegetation density and topography), the size of the area to be surveyed, the elephant density, and also the type of estimate required. Indirect or dung count method is the most practical means to determine elephant densities in dense forests where they are found at relatively low abundances and the other two methods are used where elephant sighting is very easy (Barnes et al., 1997).
Based on Bangladesh’s context and elephant habitat conditions, the current survey was conducted by applying the Hedges and Lawson (2006) dung count standard methods.

2.2.3. Training for the survey team
Before starting the field survey, a three-day training programme was organized at Chittagong University with participation of 30 persons (6 project team members and 24 university students), who later to be act as the survey team. The aim of the training was to familiarize the team members about the data collection format, data collection methods, Global Positioning System use in the field, dung sample preservation, and Participatory Rural Appraisal methods. An elephant expert, the Principal Investigator of the project, a Geographic Information System expert and a wildlife biologist gave the training.

2.2.4. Reconnaissance survey
To familiarize the sites, reconnaissance surveys were conducted in all the elephant ranges from July to October 2013. The survey team met with the Divisional Forest Officers to get current information on elephant occurrence in areas under specific Divisional Forest Officer. Divisional forest maps were collected for the respective forest offices and based on the maps, the team visited some of the sites randomly as part of the reconnaissance survey. The exercises were carried out on foot, in vehicles and in some cases in country boats in the hilly streams. A number of informal meetings with the local level forest officials, focused group discussions with the community, and one-to-one discussions with local knowledgeable persons were held to get an overview of the situation.
2.2.5. Field data collection

Samples and parameters
The survey was conducted in all wild elephant habitats of Bangladesh from August 2013 to April 2016. A total of 135 forest beats of 44 forest ranges under nine forest divisions were surveyed to find out the migratory and resident elephants. Seasonal variations were investigated by collecting data of two different seasons (Dry season: November to March and Wet season: April to October). From 658 km line transect lines, a total of 5,338 and 6,950 dung pile samples were examined during the dry and wet season, respectively, which was based on the recce-survey transect lines.

Dung data collection
Initially elephant inhabited forest beats were fixed in consultation with respective forest officials. Then recce-survey transect lines and line transect lines were laid in each beat to conduct dung surveys for all the forest divisions. Based on the size of the beat and dung availability, a number of line transect lines were drawn. On a given day, all transects were walked by survey teams comprised of local Bangladesh Forest Department staff, local guide and trained volunteers throughout the selected divisions (ranges and beats). Each team comprised of four trained volunteers: one to take notes and maintain the transect, one to spot the dung piles and take Global Positioning System points, while walking on the line and another to measure the perpendicular distance of the dung sample from the transect line.
As part of the methodology, each site was surveyed during dry (November to March) and wet (April to October) seasons to measure the seasonal variation. With the seasonal fluctuation of dung decay rate, dung pile number and distribution also varied seasonally. To get a more appropriate estimate of annual elephant density, the seasonal densities were calculated and their average was taken to establish the total population of the country.

**Dung decay rate estimation**

Fresh dung piles of three different forest divisions were marked for estimating dung decay rate at the beginning of each season. Care was taken to see that all habitat types were covered. Changes were noted every week. These were followed until the dung pile decomposed to the last stage (dung pile no longer visible). Thus decay rate was calculated separately for each season and for each habitat type. Dung decay rate was found 0.009/day from the field investigations and analysis.

**Dung defecation rate estimation**

The frequency of elephant defecation was estimated at Dhaka zoo. Twenty-four hours observation was made on 3 elephants for 4 days to estimate the defecation rate and standard error. Dung defecation rate was found 16.2/day from the field investigations and analysis.
Focused Group Discussion
This was done for estimating migratory elephants of Chittagong Hill Tracts North Forest Division, Sylhet Forest Division and Bandarban Forest Division. Areas where elephants come from neighbouring countries, but there is very limited or no forest areas, were chosen for focused group discussion with community people, local Forest Department staff, and Union Parishad (lowest tier of local government of Bangladesh) representatives.

Data for sex determination
Photographs, videos and direct observation were used as tools during the dung data collection to find out the sex of the male and female elephants and calves.

Captive elephant counting
With the information and records of Bangladesh Forest Department and relevant authorities, the number of captive elephants along with their locations and owners were identified.

2.2.6. Data processing
Dung data analysis
The data received from the field was primarily gathered using Microsoft Excel. The input was given to the spreadsheet as supportive for the GAJAH software that finally computes the
elephant density. These involved the following operations:

• Arranging the data in a format compatible for processing and analysis;
• Assembling the data in standardized units of measurements (kilometers and meters);
• Checking the data for errors by comparing with entered data in the sheets; and
• Arranging the data forest range-wise and forest division-wise.

The above spreadsheet data were used for estimation of dung density for each division. Dung density estimation was calculated by using perpendicular distance recorded in the line transect during the field survey. Dung decay and defecation rates were used as parameters for estimating elephant density from the dung density. The elephant density was calculated by using the stochastic simulation program GAJAH Ver. 2.0 (Prasad and Sukumar, 2007). In data presentation (Tables 2.1-2.5), the lower limit and upper limit refer to the 95% confidence limits to indicate the range of each estimation.

Sex categorization

Standard methodology (Varma et al., 2012) was followed for sex categorization. Photographs, videos and direct observation were the main means for this categorization. The category was done based on the presence or absence of tusks in the case of adults, sub-adults and juveniles. Individuals <2 years were not counted. Tuskless lone elephants were expected to be the male—the makhnas. Special care was taken to differentiate makhnas from the female using the body characteristics and shape of genitalia.
2.3. Survey Findings

2.3.1. Resident elephant density

Table 2.1 presents the forest division wise elephant density for two different seasons. It was noted that during the wet season, for resident elephant, the elephant density was highest in Chittagong Hill Tracts South Forest Division (0.49 /km$^2$), followed by Cox's Bazar North Forest Division (0.27 /km$^2$), and Cox's Bazar South Forest Division (0.21 /km$^2$) and the lowest elephant density was observed in Chittagong Hill Tracts North Forest Division (0.12 /km$^2$).

During the dry season, the elephant density was also highest in Chittagong Hill Tracts South Forest Division (0.35 /km$^2$), followed by Lama Forest Division (0.24 /km$^2$), and Cox's Bazar North Forest Division (0.21 /km$^2$) and the lowest elephant density was observed in Cox's Bazar South Forest Division (0.13 /km$^2$). In both the seasons, for migratory elephants, the elephant density was highest in Mymensingh Forest Division.

Table 2.1. Forest division wise elephant density during wet and dry seasons.

<table>
<thead>
<tr>
<th>Forest Division</th>
<th>Wet Season</th>
<th></th>
<th>Dry Season</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Elephant Density/km$^2$</td>
<td>Lower Limit</td>
<td>Upper Limit</td>
<td>Elephant Density/km$^2$</td>
</tr>
<tr>
<td>Chittagong South Forest Division</td>
<td>0.20</td>
<td>0.15</td>
<td>0.24</td>
<td>0.15</td>
</tr>
<tr>
<td>Cox's Bazar North Forest Division</td>
<td>0.27</td>
<td>0.24</td>
<td>0.35</td>
<td>0.21</td>
</tr>
<tr>
<td>Cox's Bazar South Forest Division</td>
<td>0.21</td>
<td>0.16</td>
<td>0.26</td>
<td>0.13</td>
</tr>
<tr>
<td>Lama Forest Division</td>
<td>0.18</td>
<td>0.13</td>
<td>0.25</td>
<td>0.24</td>
</tr>
<tr>
<td>Bandarban Forest Division</td>
<td>0.19</td>
<td>0.16</td>
<td>0.23</td>
<td>0.15</td>
</tr>
<tr>
<td>Chittagong Hill Tracts South Forest Division</td>
<td>0.49</td>
<td>0.41</td>
<td>0.57</td>
<td>0.35</td>
</tr>
<tr>
<td>Chittagong Hill Tracts North Forest Division</td>
<td>0.12</td>
<td>0.09</td>
<td>0.15</td>
<td>0.18</td>
</tr>
<tr>
<td>Mymensingh Forest Division</td>
<td>0.40</td>
<td>0.35</td>
<td>0.46</td>
<td>0.38</td>
</tr>
<tr>
<td>Sylhet Forest Division</td>
<td>0.25</td>
<td>0.20</td>
<td>0.3</td>
<td>0.19</td>
</tr>
</tbody>
</table>

2.3.2. Resident elephant populations

Table 2.2 presents the forest division wise resident elephants found during the dry and wet seasons' survey. During the wet season, the mean elephant number was highest in Chittagong South Forest Division (56), followed by Cox's Bazar South Forest Division (48), and Cox's Bazar North Forest Division (47), and the lowest number was found in Bandarban Forest Division (10).
During the dry season, the mean total elephant number was 238 and the range was between 184 and 290.

Table 2.2. Forest division wise resident elephants in wet and dry seasons.

<table>
<thead>
<tr>
<th>Forest Division</th>
<th>Wet Season</th>
<th></th>
<th>Dry Season</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Lower Limit</td>
<td>Upper Limit</td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td>Number</td>
<td></td>
<td></td>
<td>Number</td>
</tr>
<tr>
<td></td>
<td>of Elephants</td>
<td></td>
<td></td>
<td>of Elephants</td>
</tr>
<tr>
<td>Chittagong South</td>
<td>56</td>
<td>45</td>
<td>67</td>
<td>75</td>
</tr>
<tr>
<td>Forest Division</td>
<td></td>
<td></td>
<td></td>
<td>56</td>
</tr>
<tr>
<td>Cox’s Bazar North</td>
<td>47</td>
<td>38</td>
<td>56</td>
<td>61</td>
</tr>
<tr>
<td>Forest Division</td>
<td></td>
<td></td>
<td></td>
<td>54</td>
</tr>
<tr>
<td>Cox’s Bazar South</td>
<td>48</td>
<td>33</td>
<td>59</td>
<td>78</td>
</tr>
<tr>
<td>Forest Division</td>
<td></td>
<td></td>
<td></td>
<td>59</td>
</tr>
<tr>
<td>Lama Forest Division</td>
<td>35</td>
<td>27</td>
<td>42</td>
<td>26</td>
</tr>
<tr>
<td>Bandarban Forest Division</td>
<td>10</td>
<td>7</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Chittagong Hill Tracts South</td>
<td>23</td>
<td>18</td>
<td>28</td>
<td>32</td>
</tr>
<tr>
<td>Forest Division</td>
<td></td>
<td></td>
<td></td>
<td>27</td>
</tr>
<tr>
<td>Chittagong Hill Tracts North</td>
<td>19</td>
<td>14</td>
<td>25</td>
<td>13</td>
</tr>
<tr>
<td>Forest Division</td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>

During the dry season, the elephant number was highest in Cox’s Bazar South Forest Division (78), followed by Chittagong South Forest Division (75), and Cox’s Bazar North Forest Division (61), and the lowest elephant population was observed in Chittagong Hill Tracts North Forest Division and Bandarban Forest Division (13 each). During the wet season, the mean total elephant number was 297 and the range was 235 to 370.
Table 2.3 shows forest division wise mean number of resident elephants, i.e., the present elephant populations of Bangladesh. This is the average of dry and wet seasons. From this survey, the mean resident elephant population in Bangladesh is 268, which ranges from 210 to 330.

Table 2.3. Forest division wise resident elephant populations in Bangladesh (2013-2016).

<table>
<thead>
<tr>
<th>Forest Division</th>
<th>Mean Number of Elephants</th>
<th>Lower Limit</th>
<th>Upper Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chittagong South Forest Division</td>
<td>65</td>
<td>50</td>
<td>78</td>
</tr>
<tr>
<td>Cox's Bazar North Forest Division</td>
<td>54</td>
<td>46</td>
<td>67</td>
</tr>
<tr>
<td>Cox's Bazar South Forest Division</td>
<td>63</td>
<td>46</td>
<td>78</td>
</tr>
<tr>
<td>Lama Forest Division</td>
<td>30</td>
<td>23</td>
<td>39</td>
</tr>
<tr>
<td>Bandarban Forest Division</td>
<td>11</td>
<td>09</td>
<td>14</td>
</tr>
<tr>
<td>Chittagong Hill Tracts South Forest Division</td>
<td>28</td>
<td>22</td>
<td>33</td>
</tr>
<tr>
<td>Chittagong Hill Tracts North Forest Division</td>
<td>17</td>
<td>13</td>
<td>21</td>
</tr>
</tbody>
</table>
2.3.3. Sex ratio of resident elephants
The male-female ratio of elephants was 1:2.56. It was found that the total number of male elephants was 67 (25% of total population), female elephants were 172 (64% of total population) and calves were 29 (11%).

2.3.4. Non-resident/migratory elephant populations
Non-resident/migratory elephants were found in Mymensingh Forest Division, Sylhet Forest Division (Sunamganj), Sylhet Forest Division (Moulvibazar), Chittagong Hill Tracts North Forest Division (Kassalong), and Bandarban Forest Division (Sangu). Focused group discussions were conducted in Sunamganj, Kassalong and Sangu while rest of the areas were investigated by using dung count method. The mean number of migratory elephants was estimated as 93, where the range was 79-107. Table 2.4 shows the number of non-resident elephants found through dung count method. Table 2.5 shows the total number of non-resident elephants found through dung count method and focused group discussions.
Table 2.4. Non-resident/migratory elephant numbers estimated through dung count method.

<table>
<thead>
<tr>
<th>Forest Division</th>
<th>Dry Season</th>
<th>Wet Season</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Lower Limit</td>
</tr>
<tr>
<td></td>
<td>Number of Elephants</td>
<td></td>
</tr>
<tr>
<td>Mymensingh Forest Division</td>
<td>50</td>
<td>43</td>
</tr>
<tr>
<td>Sylhet Forest Division</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 2.5. Total non-resident/migratory elephant numbers estimated through dung count method and focused group discussions.

<table>
<thead>
<tr>
<th>Forest Division</th>
<th>Mean Number of Elephants</th>
<th>Lower Limit</th>
<th>Upper Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mymensingh Forest Division</td>
<td>51</td>
<td>44</td>
<td>58</td>
</tr>
<tr>
<td>Sylhet Forest Division (Moulvibazar)</td>
<td>7</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Sylhet Forest Division (Sunamganj)</td>
<td>5</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Chittagong Hill Tracts North Forest Division (Kassalong)</td>
<td>13</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Bandarban Forest Division (Sangu)</td>
<td>17</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total for Bangladesh</strong></td>
<td><strong>93</strong></td>
<td><strong>79</strong></td>
<td><strong>107</strong></td>
</tr>
</tbody>
</table>

2.3.5. Captive elephant populations

A total of 96 registered elephants were found in captivity, of which maximum numbers (82) were under private ownership (Table 2.6). The details of privately owned captive elephants are given in Annex 2.

Table 2.6. Captive elephants of Bangladesh (as of March 2016; source: Bangladesh Forest Department)

<table>
<thead>
<tr>
<th>Organization/ Owner</th>
<th>Elephant Number</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private owner</td>
<td>82</td>
<td>37</td>
<td>45</td>
</tr>
<tr>
<td>Safari Park</td>
<td>11</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Zoo</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total for Bangladesh</strong></td>
<td><strong>96</strong></td>
<td><strong>42</strong></td>
<td><strong>54</strong></td>
</tr>
</tbody>
</table>
A herd of elephant is attempting to climb a steep slope. An adult female is clearing the route and another is helping the calves. A juvenile also stands on the periphery of their group and guide young calves back to the centre. © IUCN/ Mohar Ali
Chapter Three

ELEPHANT ROUTES AND CORRIDORS

This chapter illustrates the elephant movement routes and corridors with detailed methodology. Forest range wise elephant movement routes for the whole Bangladesh as well as 12 elephant corridors are identified and mapped.
Elephant watering its body at Teknaf Wildlife Sanctuary. © IUCN/ Abu Huraira
3.1. Introduction
Elephant routes are the paths that elephants use on a regular basis for foraging and day-to-day movement (Doyle et al., 2010). 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 begin to depreciate during the summer season, and then the elephants look for and move to the other habitats where food and shelter are available (Varma, 2013). When elephant routes get damaged because of human activities, human-elephant conflict arises within that region (Zimmermann et al., 2009; Kar et al., 2016).

A corridor is an area used by elephants to go from one habitat patch to another. It is also defined as an area that connects two patches of suitable habitat by passing through a surrounding area of unsuitable habitat (Jones et al., 2009). Elephant habitat conditions deteriorate mainly because of increasing human population, new settlements in previously unpopulated areas, land use shift towards cultivation, changing infrastructure landscape, and people’s dependency on forest areas for the ecosystem services they provide (Zimmermann et al., 2009; Kar et al., 2016). All these interventions result in the fragmentation and degradation of elephant habitats that ultimately prevent elephants from moving about freely. Elephants are then forced to use the fragmented and degraded habitats to move from one forest patch to another for food, water, shelter and breeding. Elephant corridors are extremely important for the survival of elephant populations to maintain the genetic viability of an isolated population. They are also crucial for rescuing population from local extinction, increasing the area and diversity of two habitat patches that it connects, and transforms an unsuitable habitat into a more suitable one (Jones et al., 2009).

Before starting any development activities within or near forest areas or elephant habitats, it is important to know the elephant movement routes and corridors for conservation of this mega species. The present study attempts to identify the elephant movement routes and corridors for the whole Bangladesh. The study was conducted over a period of three years. With support from Bangladesh Forest Department, the field research team made extensive visits to all the elephant ranges of Bangladesh. In the followings sections of this chapter, the details of the elephant routes and corridors are illustrated. More information on these routes and corridors can be found in Motaleb et al. (2016).

3.2. Methods of Survey
3.2.1. Field data collection
Field data was collected through direct field visits, focused group discussions and one-to-one discussions from all the elephant ranges of Bangladesh. Standard data collection format was
prepared and field-tested before commencing the survey. With the help of local people and local Forest Department staff, the elephant habitats were identified. On the basis of different elephant signs, like footprints, dung piles, and associated marks, routes and corridors were identified. Handheld Global Positioning System was used to locate the spatial locations at the field level.

3.2.2. Route and corridor mapping
Several spatial layers, such as routes, human-elephant conflict areas, and corridor areas, were generated using Geographical Information System for mapping. In addition, contemporary Landsat5 Thematic Mapper and Operational Land Imager images retrieved from Earth Resources Observation and Science data center were used to identify forest, agricultural lands and human settlement areas in the project area. While doing this, images were re-projected to the Bangladesh Transverse Mercator projection system and converted to surface reflectance. Finally, maximum likelihood supervised classification algorithm was used to demarcate those land covers. Local Government Engineering Department’s road network and Bangladesh Forest Department’s vegetation cover spatial data were used to fine-tune extracted land cover information.
3.3. Survey Findings

3.3.1. Elephant routes

The surveys were carried out throughout nine forest divisions under the Bangladesh Forest Department’s jurisdiction. Throughout the survey (August 2013 - April 2016) elephants were recorded in 44 forest ranges, including reserved and protected forests, under nine forest divisions of the country (Table 3.1). The total range of elephants in the country was found to be 1,518 km$^2$. In each forest range/division, elephants use certain routes for their movement. Elephants not only use these routes, more often they use several feeder routes too. Along with their movement paths, apparent damage of croplands and homestead areas were also found, which tells that elephants damage human property that falls in or around their routes. Maximum damage occurs in the croplands and settlement areas that have expanded inside the forest ranges towards elephant habitats. As a result, elephants come in contact with humans and cause damage.

Elephant distribution and their habitat connectivity were also identified from route and corridor survey. Elephants use these connections to move from one forest division to the other. Division wise elephant habitat connectivity along with their routes, corridors and human-elephant conflict sites for whole Bangladesh is shown in the maps of the following pages.

Table 3.1. Forest division wise elephant distribution and habitat connectivity.

<table>
<thead>
<tr>
<th>Forest Division</th>
<th>Elephant Distribution and Habitat Connectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chittagong South Forest Division</td>
<td>• Baraitali-Harbang-Satgar-Chunati-Jaldi-Madarsha-Kalipur</td>
</tr>
<tr>
<td></td>
<td>• Satgar-Padua-Dohazari-Patiya-Khurushia-Rangunia-Kodala-Bangalhalia-Rajasthani</td>
</tr>
<tr>
<td>Cox’s Bazar North Forest Division</td>
<td>• Fashiakhali-Fulchari-Idgar-Idgaon-Mergerghona-Joarianala-Bagkhali</td>
</tr>
<tr>
<td>Cox’s Bazar South Forest Division</td>
<td>• Teknaf-Shikhali-Whykheong-Inani-Ukhia-Ghundhum-Myanmar</td>
</tr>
<tr>
<td></td>
<td>• Dhoapalong-Himchari-Panerchara-Rajarkul-Naikhongchari</td>
</tr>
<tr>
<td>Lama Forest Division</td>
<td>• Satgar-Daluchari-Faitang-Yancha-Fashiakhali</td>
</tr>
<tr>
<td></td>
<td>• Baishari-Naikhongchari-Myanmar</td>
</tr>
<tr>
<td>Bandarban Forest Division</td>
<td>• Barduara-Kadukhola-Vaggokul-Padua</td>
</tr>
<tr>
<td>Chittagong Hill Tracts South Forest Division</td>
<td>• Rajasthali-Karnafully-Kaptai-Rampahar</td>
</tr>
<tr>
<td>Chittagong Hill Tracts North Forest Division</td>
<td>• Pablakhali-Mahilla-Rangipara-Chailiatali-Amtali-Boiragibazar-Ghanamor</td>
</tr>
<tr>
<td>Mymensingh Forest Division</td>
<td>• Baliuri-Rangtia-Madhutila-India</td>
</tr>
<tr>
<td>Sylhet Forest Division (Moulvibazar)</td>
<td>• Lathitila-Juri-Samanbag-India</td>
</tr>
</tbody>
</table>
Forest Ranges and Beats of Cox's Bazar South Forest Division

1. Teknaf Sadar Range
   i. Teknaf Sadar Beat
   ii. Nhila Beat
   iii. Madhya Nhila Beat
   iv. Mochoni Beat

2. Shilkhal Range
   i. Shilkhal Beat
   ii. Mathabhanga Beat
   iii. Rajarchara Beat

3. Whykheong Range
   i. Shaplapur Beat
   ii. Monkhal Beat
   iii. Raikhiyong Beat
   iv. Whykheong Beat

4. Inani Range
   i. Swankhal Beat
   ii. Chota Inani Beat
   iii. Inani Beat
   iv. Rajapalong Beat
   v. Jaliapalong Beat

5. Ukhia Range
   i. Thainkhal Beat
   ii. Ukhia Ghat Beat
   iii. Ukhia Beat
   iv. Dochari Beat
   v. Haludiapalong Beat

6. Dhoapalong Range
   i. Dhoapalong Beat
   ii. Khuniapalong Beat

7. Cox's Bazar Sadar Range
   i. Himchari Beat
   ii. Kalatali Beat
   iii. Chainda Beat
   iv. Linkroad Beat
   v. Gilingja Beat

8. Panerchara Range
   i. Panerchara Beat
   ii. Tulabagan Beat

9. Rajarkul Range
   i. Dariardighi Beat
   ii. Upper Reju Beat
   iii. Rajarkul Beat
Forest Ranges and Beats of Cox's Bazar North Forest Division

1. Bagkhali Range
   i. Bagkhali Beat
   ii. Ghilatali Beat
   iii. Kassapia Beat

2. Joarianala Range
   i. Joarianala Beat
   ii. Bangdeba Beat

3. Meherghona Range
   i. Meherghona Sadar Beat
   ii. Kalirchara Beat
   iii. Dhalirchara Beat
   iv. Machuakhali Beat

4. Idgar Range
   i. Idgar Beat
   ii. Baishari Beat
   iii. Tulatali Beat

5. Idgaon Range
   i. Idgaon Beat
   ii. Bhomariaghona Beat
   iii. Punnogram Beat

6. Fulchari Range
   i. Fulchari Beat
   ii. Khuntakhal Beat
   iii. Medhakassapia Beat
   iv. Napitkhali Beat
   v. Rajghat Beat

7. Fashiakhali Range
   i. Dulaahazara Beat
   ii. Fashiakhali Beat
   iii. Manikpur Beat
   iv. Kakara Beat
   v. Nalbila Beat
Forest Ranges and Beats of Chittagong South Forest Division

1. Kalipur Range
   i. Kalipur Beat
   ii. Pukuria Beat
   iii. Sadhanpur Beat
   iv. Chechuria Beat

2. Madarsha Range
   i. Madarsha Beat
   ii. Bara Madarsha Beat
   iii. Churamoni Beat

3. Jaldi Range
   i. Puichari Beat
   ii. Chambal Beat
   iii. Napura Beat
   iv. Jaldi Beat

4. Chunati Wildlife Range
   i. Chunati Beat
   ii. Aziznagar Beat
   iii. Harbang Beat

5. Chunati Range
   i. Satgar Beat
   ii. Bara Hatia Beat
   iii. Harbang Beat
   iv. Baraitali Beat

6. Padua Range
   i. Dalu Beat
   ii. Tankawati Beat
   iii. Hangar Beat
   iv. Barduara Beat

7. Dohazari Range
   i. Lalutia Beat
   ii. Dhopachari Beat

8. Patiya Range
   i. Srimai Beat
   ii. Barguni Beat
   iii. Vondalchari Beat
   iv. Kelishahar Beat

9. Khurushia Range
   i. Khurushia Beat
   ii. Dudpukuria Beat
   iii. Kamalachari Beat
   iv. Sukhbibilash Beat

10. Rangunia Range
    i. Narischa Beat
    ii. Pomara Beat
    iii. Kodala Beat
    iv. Chiringa Beat
Forest Ranges and Beats of Lama Forest Division

1. Naikhongchari Range
   i. Naikhongchari Beat
   ii. Tulatali Beat
   iii. Reju Beat

2. Sangu Range
   i. Sangu Beat
   ii. Baishari Beat

3. Lama Sadar Range
   i. Yancha Beat

4. Daluchari Range
   i. Dalu Beat
   ii. Faitang Beat
   iii. Sarai Beat
Forest Range of Bandarban Forest Division

1. Bandarban Sadar Range
1. Kaptai Range
   i. Kaptai Sadar Beat
   ii. Shuknachari Beat
   iii. Kamilachari Beat
   iv. Bengchari Beat
   v. Rampahar Beat

2. Karnafuly Range
   i. Karnafully Sadar Beat
   ii. Kaptai Mukh Beat
   iii. Fringkheong Beat
   iv. Kalmichara Beat
   v. Brick Field Beat

3. Raikhali Range
   (Pulpwood Division, Kaptai)
Elephant Routes and Corridors

Legend
- Elephant Route
- Road / Highway
- International BND
- Union Boundary
- Water Bodies
- Upazila Boundary
- District Area
- Elephant Corridor
- Forest
- Crop Damage
- Household Damage

Features
- Beat Office
- Corridor Point
- Upazila Parishad

Chittagong Hill Tracts
South Forest Division

Data Source: Field Survey 2013-2016, SoD, Map Projection: Bangladesh Transverse Mercator (BTM)
1. Pablakhali Range (Bhasanya Adam Union)
2. Pablakhali Range (Baghachatar Union)
3. Pablakhali Range (Amtali and Gulshakhali Union)
Forest Ranges and Beats of Mymensingh Forest Division

1. Durgapur Range
   i. Durgapur Beat
   ii. Naluabari Beat

2. Mymensingh Sadar Range
   i. Gopalpur Beat

3. Madhutila Range
   i. Batkuchi Beat
   ii. Somashchura Beat
   iii. Sandhyakura Beat

4. Rangtia Range
   i. Rangtia Sadar Beat
   ii. Gazni Beat
   iii. Taokocha Beat

5. Balijuri Range
   i. Balijuri Sadar Beat
   ii. Karnajhora Beat
   iii. Malakocha Beat
   iv. Dumurtala Beat

6. Jamalpur Range (SFNTC)
Forest Range of Moulvibazar Forest Division

1. Juri Range
3.3.2. Elephant corridors
During the present survey, 12 elephant corridors were identified that were used by the wild elephants to pass from one habitat to another (Map 3.1). Among them five corridors were found in Cox’s Bazar North Forest Division, three in Cox’s Bazar South Forest Division, and four in Chittagong South Forest Division (Table 3.2). Using these corridors, elephants migrate from habitat to habitat within the country, they also migrate to and from neighbouring countries, like Myanmar, in search of food, shelter and for breeding purposes. Based on the frequency of the usage of corridors by the elephants two types of corridors, namely regular and seasonal, were identified. As we know, elephants require a large home and day range, and follow the same routes year after year, corridors therefore play a crucial role in the lives of elephants.

The survey revealed that the present condition of the corridors is not suitable for elephant movement due to human interventions. If this situation continues, the corridors will be blocked gradually, resulting in the elephants being pocketized and losing their genetic viability, which would ultimately lead to extinction of this species. Details of each of the corridor along with map are described in the following pages.
Table 3.2. Division wise elephant corridors of Bangladesh (Map 3.1).

<table>
<thead>
<tr>
<th>Forest Division</th>
<th>Corridor</th>
<th>Name of the Corridor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cox's Bazar South Forest Division</td>
<td>Corridor 1</td>
<td>Ukhia – Ghundhum</td>
</tr>
<tr>
<td>(3 corridors)</td>
<td>Corridor 2</td>
<td>Tulabagan – Panerchara</td>
</tr>
<tr>
<td></td>
<td>Corridor 3</td>
<td>Naikhogchari – Rajarkul</td>
</tr>
<tr>
<td>Cox's Bazar North Forest Division</td>
<td>Corridor 4</td>
<td>Bhomariaghona – Rajghat</td>
</tr>
<tr>
<td>(5 corridors)</td>
<td>Corridor 5</td>
<td>Tulatali – Idgar</td>
</tr>
<tr>
<td></td>
<td>Corridor 6</td>
<td>Khuntakhali – Medhakassapia</td>
</tr>
<tr>
<td></td>
<td>Corridor 7</td>
<td>Fashiakhali – Chairakhali</td>
</tr>
<tr>
<td></td>
<td>Corridor 8</td>
<td>Fashiakhali – Manikpur</td>
</tr>
<tr>
<td>Chittagong South Forest Division</td>
<td>Corridor 9</td>
<td>Chunati – Satgar</td>
</tr>
<tr>
<td>(4 corridors)</td>
<td>Corridor 10</td>
<td>Lalutia – Barduara</td>
</tr>
<tr>
<td></td>
<td>Corridor 11</td>
<td>Sukhbilash – Kodala</td>
</tr>
<tr>
<td></td>
<td>Corridor 12</td>
<td>Narischa – Kodala</td>
</tr>
</tbody>
</table>

Construction work in Rajarkul Corridor. © IUCN/ Sultan Ahmed
Map 3.1. Twelve elephant corridors in three forest divisions of Bangladesh.
CORRIDOR 1: UKHIA – GHUNDHUM

This corridor is located within Ukhia Range that connects the elephant habitat of Naikhongchari of Lama Forest Division and Ukhia of Cox’s Bazar South Forest Division. The two habitats are fragmented by Cox’s Bazar–Teknaf highway.

Location:
- Forest Division: Cox’s Bazar South, Range: Ukhia, Beat: Ukhia
- Administrative location: District: Cox’s Bazar, Upazila: Ukhia, Union: Rajapalong

Connectivity: Naikhongchari-Kutupalong-Ghundhum-Tumru-Azuhaya to Madhurchara-Bottoligona-Balukhali-Palongkhali-Swankhali


Length (L) and width (W): 4.35km (L) and 1.13km (W)

Forest type/vegetation: Rubber and Acacia plantation

Legal status: Reserved Forest

Nearest forest office: Ukhia Sadar Beat

Nearest protected area: Inani National Park

Major land use inside the corridor: Plantation

Major habitation/settlement in the corridor: Refugee camp and human settlements are very close to the corridor

Corridor dependent villages: Kutupalong, Balukhali, Tumru, Refugee camp and Ghundhum

Human interventions in the corridor: Government Television station, Rubber garden office, Crocodile breeding center (private)

Frequency of usage of the corridor by the elephant: Regular

Threats to the corridor:
1. Cox’s Bazar–Teknaf highway
2. Refugee camp and human settlements
3. Television station and rubber garden office
4. Rubber and acacia plantations
5. Crop field
6. Fuel wood collection and cattle grazing
7. Crocodile breeding centre
8. Proposed railway line from Dohazari to Ghundhum

Suggested conservation actions:
1. Declaration, demarcation and legal protection of the corridor
2. Raising awareness of forest dependent people to reduce fuel wood collection and to stop cattle grazing within or near the corridor area
3. Conversion of plantations into natural forest and widening the corridor area
4. Relocation of the crocodile breeding centre, rubber garden office, television station, and refugee camp
5. Avoiding the use of forest land or elephant corridor for crop cultivation
6. Construction of underpass or overpass during the new railway line establishment
7. Raising awareness of drivers of driving within the forests and corridors
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CORRIDOR 2: TULABAGAN – PANERCHARA

This corridor is located within Panerchara Range that connects the elephant habitat of Tulabagan and Panerchara of Cox’s Bazar South Forest Division. The two habitats are fragmented by Cox’s Bazar-Teknaf highway. Both sides of this corridor are part of social forestry (Acacia plantation). Due to felling of trees on the north side, this habitat is now barren. A new road from Panerchara to Rajarkul Army camp has been constructed that has fallen within the corridor.

Location:
- Forest Division: Cox’s Bazar South Forest Division, Range: Panerchara, Beat: Panerchara
- Administrative location: District: Cox’s Bazar, Upazila: Ramu, Union: Dakshin Mithachari

Connectivity: Rajarkul-Tulabagan to Panerchara-Himchari
Length (L) and width (W): 2.36km (L) and 0.67km (W)
Forest type/vegetation: Acacia plantation
Legal status: Reserved Forest
Nearest forest office: Tulabagan Beat
Nearest protected area: Himchari National Park
Major land use inside the corridor: Social forestry
Major habitation/settlement in the corridor: Nil
Corridor dependent villages: Nil
Human interventions in the corridor: Cox’s Bazar-Teknaf highway and newly constructed road from Tulabagan to Rajarkul Army camp
Frequency of usage of the corridor by the elephant: Regular

Threats to the corridor:
1. Cox’s Bazar-Teknaf highway
2. Newly constructed road from Tulabagan to Rajarkul Army camp
3. Fuel wood collection and cattle grazing
4. Acacia plantation

Suggested conservation actions:
1. Declaration, demarcation and legal protection of the corridor
2. Raising awareness of forest dependent people to reduce fuel wood collection and to stop cattle grazing within or near the corridor area
3. Conversion of plantation into natural forest and widening the corridor area
4. Banning future construction work within the corridor
5. Raising awareness of drivers of driving within the forests and corridors
CORRIDOR 3: NAIKHONGCHARI – RAJARKUL

This corridor is located within Rajarkul Range that connects the elephant habitat of Naikhongchari of Lama Forest Division and Tulabagan of Cox's Bazar South Forest Division. Ramu-Mariccha road fragments these two habitats. The eastern part of the road is a bushy area, whereas the western part was under social forestry, which has now been acquired (around 1789 acres) by Bangladesh Army.

Location
- Forest Division: Cox's Bazar South Forest Division, Range: Rajarkul, Beat: Rajarkul
- Administrative location: District: Cox's Bazar, Upazila: Ramu, Union: Rajarkul

Connectivity: Naikhongchari-Sonaichari- Rajarkul to Tulabagan-Panerchara-Himchari

Geographical coordinates: Latitude: 21°22'41.649"N, Longitude: 92°7'8.164"E
Length (L) and width (W): 4.42km (L) and 1.00km (W)

Nearest protected area: Himchari National Park

Nearest forest office: Rajarkul Beat

Forest type/vegetation: Cane plantation, Acacia plantation and natural forest

Legal status: Reserved Forest

Major land use inside the corridor: Forest, botanical garden, settlement, agriculture, Border Guard Bangladesh camp, Army Cantonment, bazar, mosque, madrasah

Major habitation/settlement in the corridor: Army Cantonment and Border Guard Bangladesh camp

Corridor dependent villages: Villager para, Toingakata

Human interventions in the corridor: Wall of botanical garden and coconut garden, road, roadside shops, Army Cantonment, Border Guard Bangladesh camp

Frequency of usage of the corridor by the elephant: Regular

Threats to the corridor:
1. Wall of botanical garden and coconut garden
2. Ramu-Mariccha road
3. Human settlements and roadside shops
4. Fuel wood collection and cattle grazing
5. Crop field
6. Army Cantonment and Border Guard Bangladesh camp
7. Proposed railway line from Dohazari to Ghundhum

Suggested conservation actions:
1. Declaration, demarcation and legal protection of the corridor
2. Raising awareness of forest dependent people to reduce fuel wood collection and to stop cattle grazing within or near the corridor area
3. Avoiding use of forest land or elephant corridor for crop cultivation
4. Construction of an underpass or overpass during the new railway line construction
5. Setting up natural connectivity by removing man-made structures, like wall of botanical garden and camps
6. Relocation of newly constructed establishments from elephant corridor
7. Relocation of people from the corridor
8. Raising awareness of drivers of driving within the forests and corridors
CORRIDOR 4: BHMOMARIAGHONA – RAJGHT

This corridor connects the elephant habitat of Idgaon Range and Fulchari Range of Cox's Bazar North Forest Division. Idgaon-Baishari road goes through this corridor. Major land use inside this corridor is forest and agriculture.

Location:
- Forest Division: Cox's Bazar North Forest Division, Range: Idgaon, Beat: Bhomariaghona
- Administrative location: District: Cox's Bazar, Upazila: Ramu, Union: Idgar

Connectivity: Tulatali-Panerchara-Bhomariaghona to Rajghat-Khuntakhali


Length (L) and width (W): 1.88km (L) and 1.13km (W)

Forest type/vegetation: Shegun plantation and natural Garjan forest

Legal status: Reserved Forest

Nearest protected area: Medhakassapia National Park

Nearest forest office: Bhomariaghona Beat

Major land use inside the corridor: Forest, agriculture

Major habitation/settlement in corridor: Nil

Corridor dependent villages: Gajalia

Human interventions in the corridor: Road, culvert

Frequency of usage of the corridor by the elephant: Regular

Threats to the corridor:
1. Idgaon-Baishari road
2. Crop field
3. Cattle grazing and fuel wood collection
4. Police camp

Suggested conservation actions:
1. Declaration, demarcation and legal protection of the corridor
2. Raising awareness of forest dependent people to reduce fuel wood collection and to stop cattle grazing within or near the corridor area
3. Avoiding use of forest land or elephant corridor for crop cultivation
4. Relocation of the police camp
5. Raising awareness of drivers of driving within the forests and corridors
CORRIDOR 5: TULATALI – IDGAR

This corridor connects the elephant habitat of Tulatali Beat and Idgar Beat of Cox’s Bazar North Forest Division. Arakan/Suja road goes through this corridor. Acacia plantation is on the western side of the corridor and paddy fields are on the eastern side of the corridor.

Location:
- Forest Division: Cox’s Bazar North Forest Division, Range: Idgaon, Beat: Tulatali
- Administrative location: District: Cox’s Bazar, Upazila: Ramu, Union: Idgar

Connectivity: Idgar-Lama to Tulatali-Machuakhali-Kalirchara

Geographical coordinates: Latitude: 21°31’49.02”N, Longitude: 92°9’24.364”E

Length (L) and width (W): 3.95km (L) and 2.16km (W)

Forest type/vegetation: Acacia plantation and natural forest

Legal status: Reserved Forest

Nearest protected area: Medhakassapia National Park

Nearest forest office: Tulatali Beat

Major land use inside the corridor: Households and crop fields

Major habitation/Settlement in corridor: Nil

Corridor dependent villages: Shelter Centre, Sagirakata

Human interventions in the corridor: Shelter Centre

Frequency of usage of the corridor by the elephant: Seasonal (March-April and September-October)

Threats to the corridor:
1. Crop field
2. Cattle grazing and fuel wood collection
3. Road
4. Human settlements and Shelter Centre

Suggested conservation actions:
1. Declaration, demarcation and legal protection of the corridor
2. Raising awareness of forest dependent people to reduce fuel wood collection and to stop cattle grazing within or near the corridor area
3. Avoiding use of forest land or elephant corridor for crop cultivation
4. Relocation of Shelter Centre
5. Raising awareness of drivers of driving within the forests and corridors
CORRIDOR 6: KHUNTAKHALI – MEDHAKASSAPIA

Medhakassapia National Park is a Beat of Fulchari Range, a land mass having the last Garjan patch, an area that holds past forest resources. It has been divided by the Chittagong-Cox's Bazar highway. The western part of the corridor, less than 1km, is seasonally visited by elephant in search of food. The eastern part is connected with Lama through Khuntakhali and Dulahazara.

Location:
- Forest Division: Cox's Bazar North Forest Division, Range: Fulchari, Beat: Medhakassapia
- Administrative location: District: Cox's Bazar, Upazila: Chakaria, Union: Khuntakhali

Connectivity: Lama-Dulahazara-Bogachari-Khuntakhali-Medhakassapia to Bahaltali


Length (L) and width (W): 1.86km (L) and 0.63km (W)

Forest type/vegetation: Natural forest

Legal status: Protected forest

Nearest protected area: Medhakassapia National Park and Fashiakhali Wildlife Sanctuary

Nearest forest office: Medhakassapia Beat

Major land use inside the corridor: Forest and crop field

Major habitation/settlement in the corridor: Human settlement, small shops

Corridor dependent villages: Uttar and Madhya Medhakassapia

Human interventions in the corridor: Human settlement

Frequency of usage of the corridor by the elephant: Seasonal (March-April and September-October)

Threats to the corridor:
1. Hill cutting and sand trading
2. Human settlement
3. Cattle grazing and fuel wood collection
4. Crop field
5. Chittagong-Cox's Bazar highway
6. Temporary police camp
7. Park office
8. Proposed railway line from Dohazari to Ghundhum

Suggested conservation actions:
1. Declaration, demarcation and legal protection of the corridor
2. Raising awareness of forest dependent people to reduce fuel wood collection and to stop cattle grazing within or near the corridor area
3. Conversion of barren land to forest and stop logging and soil collection
4. Avoiding use of forest land or elephant corridor for crop cultivation
5. Construction of an underpass or overpass during the new railway line construction
6. Relocation of police camp, park office and human settlement
7. Raising awareness of drivers of driving within the forests and corridors
CORRIDOR 7: FASHIAKHALI – CHAIRAKHALI

It is also divided by Chittagong - Cox's Bazar highway. The western part of the corridor, not more than 1km, is seasonally visited by elephants in search of food. The eastern part, has good natural forest coverage is connected with Lama and Dulahazara.

Location:
- Forest Division: Cox's Bazar North Forest Division, Range: Fashiakhali, Beat: Fashiakhali
- Administrative location: District: Cox's Bazar, Upazila: Chakaria, Union: Fashiakhali

Connectivity: Fashiakhali-Dulahazara to Chairakhali-Ringvong-Sagirsaha kata

Geographical coordinates: Latitude: 21°42'13.486"N, Longitude: 92°4'44.254"E

Length (L) and width (W): 1.76km (L) and 0.6km (W)

Forest type/vegetation: Garjan forest, roadside plantation, Acacia plantation, medicinal plant and Agar plantation

Legal status: Protected forest

Nearest protected area: Fashiakhali Wildlife Sanctuary

Nearest forest office: Fashiakhali Beat

Major land use inside the corridor: Forest, Army establishment, crop field

Major habitation/settlement in the corridor: Human settlement, Army cantonment

Corridor dependent villages: Chairakhali, Ringvong, Sagirsha Kata, Fashiakhali

Human interventions in the corridor: Highway, cantonment wall, mosque, madrasah, road

Frequency of usage of the corridor by the elephant: Used regularly but during the cropping season (March-April and September-November) the frequency is high

Threats to the corridor:
1. Cantonment wall
2. Wire and bamboo fencing
3. Crop field
4. Fuel wood collection and cattle grazing
5. Forest fire in summer
6. Human settlement, fish culture, mosque and madrasah
7. Proposed railway line from Dohazari to Ghundhum

Suggested conservation actions:
1. Declaration, demarcation and legal protection of the corridor
2. Raising awareness of forest dependent people to reduce fuel wood collection and to stop cattle grazing within or near the corridor area
3. Avoiding use of forest land or elephant corridor for crop cultivation
4. Construction of an underpass or overpass during the new railway line constructions
5. Relocation of human settlement from the corridor
6. Raising awareness of drivers of driving within the forests and corridors
CORRIDOR 8: FASHIAKHALI – MANIKPUR

Lama to Cox's Bazar road goes through this corridor. Both parts of the corridor contains coverage of bush, scrubs, trees, Agar plantation etc.

Location:
- Forest Division: Cox's Bazar North Forest Division, Range: Fashiakhali, Beat: Fashiakhali
- Administrative location: District: Cox's Bazar, Upazila: Chakaria, Union: Fashiakhali

Connectivity: Fashiakhali-Dulahazara in the south, Kumari-Lama in the east and Manikpur-Kakara-Nolbila in the north

Geographical coordinates: Latitude: 21°42’13.486”N, Longitude: 92°4’44.254”E
Length (L) and width (W): 2.3km (L) and 0.53km (W)
Forest type/vegetation: Mixed vegetation, bush, shrubs, trees, Agar plantation
Legal status: Protected forest
Nearest protected area: Fashiakhali Wildlife Sanctuary
Nearest forest office: Fashiakhali Beat
Major land use inside the corridor: Forest
Major habitation/settlement in corridor: Nil
Corridor dependent villages: Fashiakhali, Kumari, Gonarpara
Human interventions in the corridor: Bridge, watchtower
Frequency of usage of the corridor by the elephant: Regular

Threats of the corridor:
1. Road
2. Fuel wood collection and cattle grazing
3. Sand mining
4. Temporary police camp

Suggested conservation actions:
1. Declaration, demarcation and legal protection of the corridor
2. Raising awareness of forest dependent people to reduce fuel wood collection and to stop cattle grazing within or near the corridor area
3. Stopping of soil mining near corridor
4. Establishment of good connectivity with Chunati Wildlife Sanctuary
5. Raising awareness of drivers of driving within the forests and corridors
CORRIDOR 9: CHUNATI – SATGAR

Chittagong-Cox's Bazar highway goes through this corridor. Elephants of Cox's Bazar South, Lama, Chittagong South and Bandarban Forest Division extensively use this corridor. One side of the corridor is comprised of Acacia and Pine plantations (Satgar Beat) and other side is natural forest (Chunati Beat).

Location:
- Forest Division: Chittagong Wildlife and Nature Conservation Division, Range: Chunati, Beat: Chunati
- Administrative location: District: Chittagong, Upazila: Lohagara, Union: Chunati


Geographical coordinates: Latitude: 21°55'43.268"N, Longitude: 92°3'22.626"E

Length (L) and width (W): 2.77km (L) and 0.57km (W)

Forest type/vegetation: Acacia and Pine plantation in the east and natural forest in the west comprised of Garjan, Boilam, Batna, Chapalis, Chalta, Gutguotta, Bansh, Dewa, Dumur, Rain tree, Jam, Hargaja, Cane, bush and road side plantation

Legal status: Protected forest

Nearest protected area: Chunati Wildlife Sanctuary

Nearest forest office: Chunati Range

Major land use inside the corridor: Forest, crop field, brick field, poultry farm, orchard, human settlement

Major habitation/settlement in corridor: Nil

Corridor dependent villages: Chunati, Banapukur, Aziznagar, Harbang

Human interventions in the corridor: Shrine, Mosque, Chunati range office, wire fencing, brick field, poultry farm

Frequency of usage of the corridor by the elephant: Regular

Threats to the corridor:
1. Chittagong-Cox's Bazar highway
2. Shrine, mosque and forest office
3. Human settlement
4. Brick field and poultry farm
5. Cattle grazing and fuel wood collection
6. Crop field, orchard and wire fence
7. Forest fire
8. Proposed railway line from Dohazari to Ghundhum

Suggested conservation actions:
1. Declaration, demarcation and legal protection of the corridor
2. Raising awareness of forest dependent people to reduce fuel wood collection and to stop cattle grazing within or near the corridor area
3. Avoiding use of forest land or elephant corridor for crop cultivation
4. Construction of an underpass or overpass during the new railway line construction
5. Raising awareness of drivers of driving within the forests and corridors
6. Removal of fences of mango orchard in the corridor
7. Relocation of brick field, poultry farm and human settlement from the corridor
CORRIDOR 10: LALUTIA – BARDUARA

This corridor connects elephant habitats of Dohazari Reserved Forest (Lalutia Beat) and Padua Reserved Forest (Barduara Beat) that facilitates the seasonal movement of elephants. Roadside plantation, homestead forest and agriculture are major land uses inside the corridor.

Location:
- Forest Division: Chittagong South Forest Division, Range: Padua, Beat: Barduara
- Administrative location: District: Chittagong, Upazila: Satkania, Union: Bajalia

Connectivity: Lalutia-Dohazari-Dudpukuria Dhopachari Wildlife Sanctuary-Patiya to Barduara-Hangur-Tankawati-Dalu


Length (L) and width (W): 9.48km (L) and 1.39km (W)

Forest type/vegetation: Roadside plantation and homestead forest

Legal status: Private land

Nearest protected area: Dudpukuria-Dhopachari Wildlife Sanctuary

Nearest forest office: Barduara Beat

Major land use inside the corridor: Forest, human settlement, crop field, beel

Major habitation/settlement in corridor: Settlement, markets, shrine, BGB training institute

Corridor dependent villages: Mahalia, Bazalia, Diakul, Kadukhola, Vaggakul, Keuchia

Human interventions in the corridor: Shrine, Border Guard Bangladesh boundary wall, mosque, mobile phone tower, house boundary wall, electric pole

Frequency of usage of the corridor by elephants: Irregular (2-3 months interval)

Threats to the corridor:
1. Bandarban-Keranirhat Road
2. Human settlements and markets
3. Crop field and cattle grazing
4. Electric pole and mobile phone tower
5. Border Guard Bangladesh camp
6. Encroachment
7. Army firing zone

Suggested conservation actions:
1. Declaration, demarcation and legal protection of the corridor
2. Raising awareness of forest dependent people to reduce fuel wood collection and to stop cattle grazing within or near the corridor area
3. Avoiding use of forest land or elephant corridor for crop cultivation
4. Raising awareness of drivers of driving within the forests and corridors
5. Relocation of human settlement, tower, shrine, and army firing zone from the corridor
6. Acquire private land to protect the connectivity
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CORRIDOR 11: SUKHBILASH – KODALA

This corridor connects elephant habitats of Sukhbilash Forest and Kodala Forest that facilitates seasonal movement of elephants. Roadside plantation, homestead forest and agriculture are major land uses inside this corridor.

Location:
- Forest Division: Chittagong South Forest Division, Range: Khurushia, Beat: Sukhbilash
- Administrative location: District: Chittagong, Upazila: Rangunia, Union: Padua

Connectivity: Srimai-Kamalachari-Khurushia-Sukhbilash to Shilok-Kodala-Kaptai

Length (L) and width (W): 1.72km (L) and 0.77km (W)

Forest type/vegetation: Roadside plantation and homestead forest
Legal status: Private land

Nearest protected area: Dudpukuria-Dhopachari Wildlife Sanctuary
Nearest forest office: Sukhbilash Beat
Major land use inside the corridor: Human settlement and crop field
Major habitation/settlement in corridor: Houses, mosque
Corridor dependent villages: Sukhbilash

Human interventions in the corridor: Houses, mosque
Frequency of usage of the corridor by the elephant: Regular

Threats to the corridor:
1. Roads
2. Human settlement
3. Crop field and cattle grazing

Suggested conservation actions:
1. Declaration, demarcation and legal protection of the corridor
2. Raising awareness of forest dependent people to reduce fuel wood collection and to stop cattle grazing within or near the corridor area
3. Acquire private land to protect the connectivity
4. Avoiding use of forest land or elephant corridor for crop cultivation
5. Raising awareness of drivers of driving within the forests and corridors
6. Relocation of human settlement from the corridor
CORRIDOR 12: NARISCHA– KODALA

This corridor connects the forests of Narischa and Kodala. A road from Rajarhat to Godown goes along this area. Road side plantation, homestead forest, human settlements are the major land uses inside the corridor.

Location:
- Forest Division: Chittagong South Forest Division, Range: Rangunia, Beat: Narischa
- Administrative location: District: Chittagong, Upazila: Rangunia, Union: Padua

Connectivity: Srimai-Kamalachari-Narischa to Kodala-Kaptai
Geographical coordinates: Latitude: 22°23′46.21″N, Longitude: 92°4′41.684″E
Length (L) and width (W): 3.22km (L) and 0.98km (W)
Forest type/vegetation: Road side plantation and homestead vegetation
Legal status: Private land
Nearest protected area: Dudpukuria-Dhopachari Wildlife Sanctuary
Nearest forest office: Narischa Beat
Major land use inside the corridor: Crop field
Major habitation/settlement in corridor: Nil
Corridor dependent villages: Narischa notun para, Padua, Horigor
Human interventions in the corridor: Road, bridge
Frequency of usage of the corridor by elephants: Regular

Threats to the corridor:
1. Roads
2. Human settlement
3. Crop field and cattle grazing

Suggested conservation actions:
1. Declaration, demarcation and legal protection of the corridor
2. Raising awareness of forest dependent people to reduce fuel wood collection and to stop cattle grazing within or near the corridor area
3. Detailed ground survey on the legal status of the corridor and acquire private land to protect the connectivity
4. Avoiding use of forest land or elephant corridor for crop cultivation
5. Relocation of human settlement from the corridor
6. Raising awareness of drivers of driving within the forests and corridors
Elephants regularly travel from Bangladesh to India and Myanmar and vice versa. This chapter illustrates the transboundary elephant crossing points. Fifty-seven elephant crossing points are identified and categorized as natural, vagrant and abandoned crossing points through direct field visits and focused group discussions.
4.1. Introduction

Asian Elephants are migratory animals. They can cover considerable distance within a short period of time (Sukumar, 1989). In the wild, elephant herds follow a well-defined migration route. The survival of this mega species largely depends on corridors and routes because they allow elephants to safely migrate, access food sources, and establish crucial genetic links between herds (Joshi and Singh, 2009). The presence of traffic on the road, construction of steep retaining walls, barbed wire fences, and the presence of human population along the corridor and routes can limit the migration of elephants (Johnsingh and Williams, 1999) that ultimately hinders the genetic diversity.

Bangladesh shares its borders with India and Myanmar marked by recently installed barbed wire fences. All three countries have started development initiatives, such as road networks, sand mining, stone mining, coal mining, and conversion of forest land to crop fields and orchards near the border areas. Some parts of Bangladesh near the border, especially in Mymensingh, Kurigram, Sherpur, Jamalpur, Netrokona, Sunamganj, Moulvibazar, and Chittagong Hill Tracts are frequently used by transboundary elephants. Due to development work, the natural routes of the migratory elephants have been blocked recently and they have tried to shift their routes in a few cases. On the other hand, in a few areas elephants enter Bangladesh where there is no forest or natural elephant route causing human-elephant conflict to arise. In Bangladesh, there is no information available on transboundary elephant crossing points and this needs to be resolved to minimize human-elephant conflicts.

Bangladesh Forest Department, in association with IUCN Bangladesh, organized a bilateral meeting with the Indian Forest Department in August 2015 in Kolkata, India. In that meeting both countries agreed to take proper management options to minimize human-elephant conflict and enhance elephant protection. One of the decisions of the meeting was that both countries would find out the natural elephant crossing points along the international borders for their free movement and to support their genetic diversity. Accordingly, an intensive field survey was conducted by IUCN Bangladesh and Bangladesh Forest Department along the borders of Bangladesh to find out the transboundary elephant crossing points. The following sections of this chapter illustrate the details of the transboundary crossing points.
4.2. Methods of Survey

The survey was conducted in 303 unions (lowest local government unit of Bangladesh) of 105 upazilas (sub-districts) under 31 districts of Bangladesh with international border with either India or Myanmar. The survey was conducted through direct field visits, one-to-one discussions, and focused group discussions along the international borders.

The following information was collected from the field survey:

a) Transboundary crossing points (village/union/upazila name with Global Positioning System points, border pillar number, nearest forest office, and Indian side name);

b) Crossing points: active or not;

c) Last elephant sightings;

d) Herd size, number of herds, reason of movements;

e) Current conflict status, intensity and type;

f) Barbed wire fence establishment year; and

g) Status of the crossing points (Land use: Forest coverage, cropland etc.).

4.3. Survey Findings

A total of 57 transboundary elephant crossing points were identified which were mostly concentrated in the eastern, southeastern, northern, northeastern and northwestern borders of the country (Map 4.1). Among these points, 39 points are natural crossing points through which elephants pass regularly, seven points are vagrant which elephants use occasionally, and 11 points were once used by elephants or abandoned crossing points. Further information on these crossing points can be found in Motaleb et al. (2016).
Map 4.1. Natural, vagrant, and abandoned transboundary elephant crossing points.
4.3.1. Natural transboundary elephant crossing points

Present study revealed a total of 39 natural crossing points (Table 4.1) that elephants use regularly to migrate between Bangladesh and neighbouring countries. Among them, 33 crossing points are along the Indian border and remaining six are on the Myanmar border. Most of the crossing points fall in the northern part of the country (Map 4.1).

According to local people's observations, Kassalong Reserved Forest are visited by a small herd of 10 to 15 elephants, whereas the Sangu Reserved Forest is visited by 15 to 20 elephants. Elephants of Arakan State are directly connected to our resident population through Naikhongchari. Table 4.1 shows the details of all the natural crossing points, including their locations, forest divisions, Global Positioning System coordinates, land use, and year of barbed wire fence installation.

Table 4.1. Natural transboundary elephant crossing points.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Forest Division (Upazila, District)</th>
<th>GPS Coordinates</th>
<th>Land Use</th>
<th>Year of Barbed Wire Fence Installation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Rangpur Forest Division (Rowmari, Kurigram)</td>
<td>N 25.458315 E 89.844522</td>
<td>Cropland</td>
<td>2000-01</td>
</tr>
<tr>
<td>2.</td>
<td>Rangpur Forest Division (Rajibpur, Kurigram)</td>
<td>N 25.443833 E 89.823250</td>
<td>Cropland</td>
<td>1998</td>
</tr>
<tr>
<td>3.</td>
<td>Mymensingh Forest Division (Pathorerchar, Dewanganj)</td>
<td>N 25.364000 E 89.816722</td>
<td>Cropland</td>
<td>2013</td>
</tr>
<tr>
<td>4.</td>
<td>Mymensingh Forest Division (East Pathorerchar, Dewanganj)</td>
<td>N 25.348500 E 89.816194</td>
<td>BGB camp, cropland</td>
<td>1997-98</td>
</tr>
<tr>
<td>5.</td>
<td>Mymensingh Forest Division (Danuakamalpur, Bakshigonj)</td>
<td>N 25.282972 E 89.903611</td>
<td>Croplands, stream</td>
<td>2005</td>
</tr>
<tr>
<td>6.</td>
<td>Mymensingh Forest Division (Bakshiganj, Jamalpur)</td>
<td>N 25.294056 E 89.921222</td>
<td>Forest</td>
<td>2012-13</td>
</tr>
<tr>
<td>7.</td>
<td>Mymensingh Forest Division (Sreebordi, Sherpur)</td>
<td>N 25.294278 E 89.978306</td>
<td>Cropland</td>
<td>2012-13</td>
</tr>
<tr>
<td>8.</td>
<td>Mymensingh Forest Division (Sreebordi, Sherpur)</td>
<td>N 25.268000 E 89.980861</td>
<td>Forest</td>
<td>2011-13</td>
</tr>
<tr>
<td>9.</td>
<td>Mymensingh Forest Division (Sreebordi, Sherpur)</td>
<td>N 25.261639 E 89.993639</td>
<td>Barren land, scattered vegetation</td>
<td>2011</td>
</tr>
<tr>
<td>10.</td>
<td>Mymensingh Forest Division (Sreebordi, Sherpur)</td>
<td>N 25.242250 E 90.029500</td>
<td>Cropland</td>
<td>2014</td>
</tr>
<tr>
<td>11.</td>
<td>Mymensingh Forest Division (Jhinaigati, Sherpur)</td>
<td>N 25.261250 E 90.048556</td>
<td>Cropland</td>
<td>2014</td>
</tr>
<tr>
<td>12.</td>
<td>Mymensingh Forest Division (Jhinaigati, Sherpur)</td>
<td>N 25.250222 E 90.065861</td>
<td>Crop land, Acacia plantation</td>
<td>2014</td>
</tr>
<tr>
<td>Sl. No.</td>
<td>Forest Division (Upazila, District)</td>
<td>GPS Coordinates</td>
<td>Land Use</td>
<td>Year of Barbed Wire Fence Installation</td>
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<td>----------------------------------------</td>
</tr>
<tr>
<td>13</td>
<td>Mymensingh Forest Division (Jhinaigati, Sherpur)</td>
<td>N 25.225194 E 90.121500</td>
<td>Cropland, forest</td>
<td>2012-13</td>
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<tr>
<td>14</td>
<td>Mymensingh Forest Division (Jhinaigati, Sherpur)</td>
<td>N 25.224361 E 90.140583</td>
<td>Cropland</td>
<td>2008</td>
</tr>
<tr>
<td>15</td>
<td>Mymensingh Forest Division (Nalitabari, Sherpur)</td>
<td>N 25.223730 E 90.147453</td>
<td>Cropland</td>
<td>2008-09</td>
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<tr>
<td>16</td>
<td>Mymensingh Forest Division (Nalitabari, Sherpur)</td>
<td>N 25.197792 E 90.250244</td>
<td>Cropland, forest</td>
<td>2012-13</td>
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<tr>
<td>17</td>
<td>Mymensingh Forest Division (Nalitabari, Sherpur)</td>
<td>N 25.196611 E 90.263028</td>
<td>Cropland, forest</td>
<td>2010</td>
</tr>
<tr>
<td>18</td>
<td>Mymensingh Forest Division (Nalitabari, Sherpur)</td>
<td>N 25.182806 E 90.268889</td>
<td>Cropland, forest</td>
<td>2012-13</td>
</tr>
<tr>
<td>19</td>
<td>Mymensingh Forest Division (Haluaghat, Mymensingh)</td>
<td>N 25.176639 E 90.321000</td>
<td>Cropland, forest</td>
<td>2012</td>
</tr>
<tr>
<td>20</td>
<td>Mymensingh Forest Division (Haluaghat, Mymensingh)</td>
<td>N 25.178500 E 90.344306</td>
<td>Cropland, forest</td>
<td>2012-13</td>
</tr>
<tr>
<td>21</td>
<td>Mymensingh Forest Division (Haluaghat, Mymensingh)</td>
<td>N 25.160889 E 90.363611</td>
<td>Cropland, forest</td>
<td>2012-13</td>
</tr>
<tr>
<td>22</td>
<td>Mymensingh Forest Division (Haluaghat, Mymensingh)</td>
<td>N 25.139028 E 90.386111</td>
<td>Cropland, forest</td>
<td>2012-13</td>
</tr>
<tr>
<td>23</td>
<td>Mymensingh Forest Division (Haluaghat, Mymensingh)</td>
<td>N 25.101194 E 90.662944</td>
<td>Cropland, forest</td>
<td>2012-13</td>
</tr>
<tr>
<td>24</td>
<td>Mymensingh Forest Division (Haluaghat, Mymensingh)</td>
<td>N 25.158944 E 90.694028</td>
<td>Cropland, forest</td>
<td>2010</td>
</tr>
<tr>
<td>25</td>
<td>Mymensingh Forest Division (Kolmakanda, Netrokona)</td>
<td>N 25.155083 E 90.731806</td>
<td>Cropland, forest</td>
<td>2010</td>
</tr>
<tr>
<td>26</td>
<td>Mymensingh Forest Division (Durgapur, Netrokona)</td>
<td>N 25.164083 E 90.747528</td>
<td>Cropland, Acacia plantation</td>
<td>2010</td>
</tr>
<tr>
<td>27</td>
<td>Mymensingh Forest Division (Durgapur, Netrokona)</td>
<td>N 25.168167 E 90.752667</td>
<td>Cropland, human settlement</td>
<td>2010</td>
</tr>
<tr>
<td>28</td>
<td>Mymensingh Forest Division (Durgapur, Netrokona)</td>
<td>N 25.164389 E 90.785250</td>
<td>Cropland</td>
<td>2010</td>
</tr>
<tr>
<td>29</td>
<td>Mymensingh Forest Division (Durgapur, Netrokona)</td>
<td>N 25.160905 E 90.837152</td>
<td>Cropland</td>
<td>2010</td>
</tr>
<tr>
<td>30</td>
<td>Mymensingh Forest Division (Durgapur, Netrokona)</td>
<td>N 25.189561 E 91.054349</td>
<td>Cropland</td>
<td>2010</td>
</tr>
<tr>
<td>31</td>
<td>Sylhet Forest Division (Tahirpur, Sunamganj)</td>
<td>N 25.171092 E 92.018613</td>
<td>Cropland</td>
<td>2005-06</td>
</tr>
<tr>
<td>32</td>
<td>Moulvibazar Wildlife and Nature Conservation Division (Juri, Moulvibazar)</td>
<td>N 24.57099 E 92.232297</td>
<td>Forest</td>
<td>2007-08</td>
</tr>
<tr>
<td>Sl. No.</td>
<td>Forest Division (Upazila, District)</td>
<td>GPS Coordinates</td>
<td>Land Use</td>
<td>Year of Barbed Wire Fence Installation</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------</td>
<td>-----------------</td>
<td>-----------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>33.</td>
<td>Rangamati North Forest Division (Bagaichari, Rangamati)</td>
<td>N 23.627646 E 92.295097</td>
<td>Forest</td>
<td>Under construction</td>
</tr>
<tr>
<td>34.</td>
<td>Bandarban Forest Division (Thanchi, Bandarban)*</td>
<td>N 21.419763 E 92.642284</td>
<td>Forest</td>
<td>Under construction</td>
</tr>
<tr>
<td>35.</td>
<td>Lama Forest Division (Naikhongchari, Bandarban)*</td>
<td>N 21.430882 E 92.284288</td>
<td>Forest, cropland</td>
<td>2011-12</td>
</tr>
<tr>
<td>36.</td>
<td>Lama Forest Division (Naikhongchari, Bandarban)*</td>
<td>N 21.399114 E 92.272115</td>
<td>Forest</td>
<td>2011-12</td>
</tr>
<tr>
<td>37.</td>
<td>Lama Forest Division (Naikhongchari, Bandarban)*</td>
<td>N 21.376006 E 92.258801</td>
<td>Forest</td>
<td>2011-12</td>
</tr>
<tr>
<td>38.</td>
<td>Lama Forest Division (Naikhongchari, Bandarban)*</td>
<td>N 21.348236 E 92.232275</td>
<td>Forest</td>
<td>2011-12</td>
</tr>
<tr>
<td>39.</td>
<td>Lama Forest Division (Naikhongchari, Bandarban)*</td>
<td>N 21.213159 E 92.209566</td>
<td>Forest</td>
<td>2011-12</td>
</tr>
</tbody>
</table>

*Crossing points on Bangladesh-Myanmar border.

4.3.2. Vagrant transboundary elephant crossing points

A total of seven vagrant elephant crossing points were identified along the international boundary of northeastern districts of Bangladesh (Map 4.1). Stray elephants from India inadvertently entered into Bangladesh by breaking the barbed wire fences or crossing the rivers. There are no records of resident wild elephants and its habitats in those regions. Till date, due to vagrant elephant attacks, four people were killed, one was injured, four elephants died, and a number of households and croplands were damaged. Table 4.2 gives the details of the vagrant transboundary crossing points, including their locations, forest divisions, GPS coordinates, year of last crossing, land use, and year of barbed wire fence installation.
Table 4.2. Vagrant transboundary elephant crossing points.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Forest Division (Upazila, District)</th>
<th>GPS Coordinates</th>
<th>Last Year of Crossing</th>
<th>Land Use</th>
<th>Year of Barbed Wire Fence Installation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Rajshahi Wildlife and Nature Conservation Division (Shibganj, Chapainawabganj)</td>
<td>N 24.663382 E 88.050425</td>
<td>2015</td>
<td>Cropland</td>
<td>No fence/Padma River</td>
</tr>
</tbody>
</table>

4.3.3. Abandoned transboundary elephant crossing points

Present survey found a total of 11 abandoned transboundary elephant crossing points located in Khagrachari and Rangamati (Map 4.1). Local people said that once elephants moved between India and Rangamati through Khagrachari. IUCN (2004) stated an elephant movement route as India-Ramgarh-Nakapa-Dhakaya colony-Batna-Datmarasapmara-Kalapani-Neptune tea garden-Fatikchari. People also stated that, around 20 years ago, an elephant was killed by electrocution and was buried in Ramgarh of Khagrachari. But during this study no evidence of elephants was found. Table 4.3 gives the details of abandoned transboundary crossing points including their locations, forest divisions, GPS coordinates, year of last crossing, land use, and year of barbed wire fence installation.
Table 4.3. Abandoned transboundary elephant crossing points.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Forest Division (Upazila, District)</th>
<th>GPS Coordinates</th>
<th>Last Year of Crossing</th>
<th>Land Use</th>
<th>Year of Barbed Wire Fence Installation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Khagrachari Forest Division (Ramgarh, Khagrachari)</td>
<td>N 23.010917 E 91.746528</td>
<td>10-15 years ago</td>
<td>Forest, human settlement</td>
<td>No fence</td>
</tr>
<tr>
<td>2.</td>
<td>Khagrachari Forest Division (Matiranga, Khagrachari)</td>
<td>N 23.102141 E 91.839625</td>
<td>20-30 years ago</td>
<td>Private plantation, cropland</td>
<td>2008-09</td>
</tr>
<tr>
<td>3.</td>
<td>Khagrachari Forest Division (Matiranga, Khagrachari)</td>
<td>N 23.140681 E 91.825083</td>
<td>20-30 years ago</td>
<td>Private plantation, cropland, human settlements</td>
<td>2008-09</td>
</tr>
<tr>
<td>4.</td>
<td>Khagrachari Forest Division (Matiranga, Khagrachari)</td>
<td>N 23.248219 E 91.791076</td>
<td>20-30 years ago</td>
<td>Private plantation, cropland, human settlements</td>
<td>2008-09</td>
</tr>
<tr>
<td>5.</td>
<td>Khagrachari Forest Division (Matiranga, Khagrachari)</td>
<td>N 23.288567 E 91.783370</td>
<td>20-30 years ago</td>
<td>Private plantation, cropland, human settlements</td>
<td>2008-09</td>
</tr>
<tr>
<td>6.</td>
<td>Khagrachari Forest Division (Matiranga, Khagrachari)</td>
<td>N 23.318462 E 91.802109</td>
<td>20-30 years ago</td>
<td>Private plantation, cropland, human settlements</td>
<td>2010-12</td>
</tr>
<tr>
<td>7.</td>
<td>Khagrachari Forest Division (Panchari, Khagrachari)</td>
<td>N 23.393166 E 91.869150</td>
<td>20-30 years ago</td>
<td>Private plantation, cropland, human settlements</td>
<td>2007-08</td>
</tr>
<tr>
<td>8.</td>
<td>Khagrachari Forest Division (Dighinala, Khagrachari)</td>
<td>N 23.564618 E 91.979238</td>
<td>20-30 years ago</td>
<td>Private plantation, cropland, human settlements</td>
<td>2007-08</td>
</tr>
<tr>
<td>9.</td>
<td>Chittagong Hill Tracts North Forest Division (Baghaichari, Rangamati)</td>
<td>N 23.125591 E 92.370250</td>
<td>20 years ago</td>
<td>Human settlement, natural forest</td>
<td>Under construction</td>
</tr>
<tr>
<td>10.</td>
<td>Chittagong Hill Tracts North Forest Division (Barkal, Rangamati)</td>
<td>N 22.515949 E 92.546484</td>
<td>10-15 years ago</td>
<td>Natural and plantation forest</td>
<td>Under construction</td>
</tr>
<tr>
<td>11.</td>
<td>Chittagong Hill Tracts North Forest Division (Bilaichari, Rangamati)</td>
<td>N 22.383632 E 92.564014</td>
<td>Many years ago</td>
<td>Natural and plantation forest</td>
<td>Under construction</td>
</tr>
</tbody>
</table>
This small stand of old-growth Garjon forest in Medhakassapia National Park reminds the rich past of tropical rainforest in Bangladesh. © IUCN Sultan Ahmed
REFERENCES


## Annex 1: Composition of the Peer Group (from August 2013 to June 2015)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name, Designation and Address</th>
<th>Position in the Peer Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Mr. Md. Yunus Ali</td>
<td>Chairperson</td>
</tr>
<tr>
<td></td>
<td>Chief Conservator of Forests</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bangladesh Forest Department</td>
<td></td>
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<tr>
<td></td>
<td>Ban Bhaban, Agargaon, Dhaka</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Mr. Ishtiaq Uddin Ahmad</td>
<td>Member Secretary</td>
</tr>
<tr>
<td></td>
<td>Country Representative</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IUCN Bangladesh Country Office</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Mr. Ratan Kumar Mazumder</td>
<td>Member</td>
</tr>
<tr>
<td></td>
<td>Deputy Chief Conservator of Forests</td>
<td></td>
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<tr>
<td></td>
<td>Forest Management Wing</td>
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<td>Ban Bhaban, Agargaon, Dhaka</td>
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<tr>
<td>4.</td>
<td>Dr. Tapan Kumar Dey</td>
<td>Member</td>
</tr>
<tr>
<td></td>
<td>Conservator of Forests</td>
<td></td>
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<tr>
<td></td>
<td>Wildlife Management and Nature Conservation Circle</td>
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<tr>
<td></td>
<td>Ban Bhaban</td>
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<tr>
<td>5.</td>
<td>Mr. Md. Shafiul Alam Chowdhury-1</td>
<td>Member</td>
</tr>
<tr>
<td></td>
<td>Conservator of Forests</td>
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</tr>
<tr>
<td></td>
<td>Central Circle, Ban Bhaban (old), Mohakhali, Dhaka</td>
<td></td>
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<tr>
<td>6.</td>
<td>Mr. Md. Akbar Hossain</td>
<td>Member</td>
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<td></td>
<td>Chittagong Circle, Chittagong</td>
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<td>7.</td>
<td>Mr. Rezaul Sikder</td>
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<tr>
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<td></td>
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<tr>
<td></td>
<td>Rangamati Circle, Rangamati</td>
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<td>8.</td>
<td>Mr. Mohammad Shamsul Azam</td>
<td>Member</td>
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<td>Deputy Conservator of Forests</td>
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<td>Wildlife Circle, Ban Bhaban</td>
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<td>Rangamati, Rangamati</td>
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<td>9.</td>
<td>Mr. A. S. M. Jahir Uddin Akon</td>
<td>Member</td>
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<td>Education and Training Wing, Ban Bhaban, Mohakhali, Dhaka</td>
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<td>10.</td>
<td>Mr. Gobinda Roy</td>
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<td>Monitoring Unit, Ban Bhaban, Mohakhali, Dhaka</td>
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<tr>
<td>11.</td>
<td>Mr. Abdul Mabud</td>
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<tr>
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<td>Legal Unit, Ban Bhaban, Mohakhali, Dhaka</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Ms. Begum Fatima Tuz Zohora</td>
<td>Member</td>
</tr>
<tr>
<td></td>
<td>Deputy Conservator of Forests</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Planning Wing, Ban Bhaban, Agargaon, Dhaka</td>
<td></td>
</tr>
<tr>
<td>Sl. No.</td>
<td>Name, Designation and Address</td>
<td>Position in the Peer Group</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------------------------------</td>
<td>----------------------------</td>
</tr>
</tbody>
</table>
| 13.    | Mr. Md. Khaleque Khan  
Divisional Forest Officer  
Wildlife Management and Nature Conservation Division, Chittagong | Member                     |
| 14.    | Mr. Hossain Mohammad Nishad  
Divisional Forest Officer  
Chittagong Hill Tracts South Division, Rangamati | Member                     |
| 15.    | Mr. S. M. Kaiser  
Divisional Forest Officer  
Chittagong Hill Tracts North Division | Member                     |
| 16.    | Mr. Md. Sayed Ali  
Divisional Forest Officer, Lama | Member                     |
| 17.    | Mr. Mohammad Shah-E-Alam  
Divisional Forest Officer  
Cox's Bazar North Forest Division, Cox's Bazar | Member                     |
| 18.    | Mr. Md. Moyeen Uddin Khan  
Divisional Forest Officer, Mymensingh Forest Division, Mymensingh | Member                     |
| 19.    | Mr. Md. Baktiar Nur Siddiqui  
Divisional Forest Officer  
Chittagong South Forest Division, Chittagong | Member                     |
| 20.    | Mr. Md. Abu Naser Khan  
Divisional Forest Officer  
Dhaka Social Forest Division, Dhaka | Member                     |
| 21.    | Mr. Md. Shahab Uddin  
Divisional Forest Officer  
Dhaka Wildlife Division, Bana Bhaban, Mohakhali, Dhaka | Member                     |
| 22.    | Dr. Mohammed Mostafa Feeroz  
Professor, Department of Zoology  
Jahangirnagar University | Member                     |
| 23.    | Dr. A N M Aminoo Rahman  
Professor, Dept. of Gynecology, Obstetrics and Reproductive Health  
Bangabandhu Sheikh Mujibur Rahman Agricultural University | Member                     |
| 24.    | Dr. AHM Raihan Sarker  
Associate Professor  
Institute of Forestry and Environmental Sciences  
University of Chittagong | Member                     |
| 25.    | Dr. Haseeb Md. Irfanullah  
Team Leader  
Reducing Vulnerability and Natural Resource Management  
Practical Action Bangladesh | Member                     |
| 26.    | Mr. Musfiq Ahmed  
Program Coordinator  
Prokriti O Jibon Foundation | Member                     |
## Annex 2: Details of privately owned captive elephants of Bangladesh (as of March 2016, Source: Bangladesh Forest Department)

<table>
<thead>
<tr>
<th>Registration date</th>
<th>Name and address of owner of the elephant</th>
<th>Address (Village/Upazila/District)</th>
<th>Name of elephant</th>
<th>Registration no</th>
<th>Sex (Male/Female)</th>
<th>Date of birth of elephant</th>
<th>Source of elephant collection</th>
<th>Purpose of elephant collection</th>
<th>Name and address of Mahout</th>
</tr>
</thead>
</table>
| 24/04/06          | 1. Mr. Md. Abdul Motin 2. Mr. Abdul Mukit 3. Mr. Abdul Mojid  
| 22/06/08          | 1. Mr. Md. Abdul Kasir,  
Father: Late Alfu Mia 2. Mrs. Jahur Nema Khanom,  
Father: Late Abdus Sobuj 3. Mr. Md. Abdur Rokib,  
Father: Late Ahmad Ali | Valubil/Komolgonj/Moulvibazar | Rajlokhi | 004/08 | Female | 40/42 years old | Inherited | Circus and wood (Log) transport | Mr. Md. Haider Ali, Father: Late Sona Mia, Village: Bazkali, Post: Islampur, Thana: Komolgonj, District: Moulvibazar. |
| 22/06/08          | Mr. Md. Mijanur Rohman,  
Chairman, 7 No Ajampur Union/  
Komolgonj/Moulvibazar | North Kanaideshi/Komolgonj/Moulvibazar | Sokina | 006/08 | Female | About 22/23 years old | Bought | Circus and wood (Log) transport | Mr. Md Nojir Mia, Father: Md. Suruj Mia, Village: Adhakani, Post: Ajampur, District: Moulvibazar |
|                   |                                           | Golap Bahadur | 007/08 | Male | About 20/22 years old | Bought | Circus and wood (Log) transport | Mr. Md. Niaj Mia, Father: Late Siraj Mia, Village: Adhakani, Post: Ajampur, District: Moulvibazar |
| 22/06/08          | Mr. Md. Jufikar Ali Siddique,  
| 22/06/08          | Mr. Md. Koisar Roshid,  
Father: Late Shofikul Haque | Borokher (Bazar Tila)/Kanaighat/Sylhet/ | Rong Mala | 009/08 | Female | About 30 years old | Bought | Circus and wood (Log) transport | Mr. Mujib Uddin, Father: Late Mojammel, Village: Small Moij, Post: Laochora, Thana: Kanaighat, District: Sylhet |
|                   |                                           | Rani Mala | 010/08 | Female | About 5 years 4 month | Bought | Circus and wood (Log) transport | Mr. Mujib Uddin, Father: Late Mojammel, Village: Small Moij, Post: Laochora, Thana: Kanaighat, District: Sylhet |

Note: The table provides detailed information about privately owned captive elephants in Bangladesh as of March 2016. It includes registration dates, names and addresses of the owners, addresses of the elephants, names of the elephants, registration numbers, sex, date of birth, source of elephant collection, purpose of elephant collection, and names and addresses of the mahouts.
<table>
<thead>
<tr>
<th>Registration date</th>
<th>Name and address of owner of the elephant</th>
<th>Name of elephant</th>
<th>Source of elephant collection</th>
<th>Date of birth of elephant</th>
<th>Sex (Male/Female)</th>
<th>Date of birth of elephant</th>
<th>Purpose of elephant collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/9/08</td>
<td>Mr. Abu Taher, Father: Late Moni Ullah, Village: Rajbong, Thana: Korgon, District: Moulibazar</td>
<td>Rohman Bahadur</td>
<td>Bought</td>
<td>3/4/01</td>
<td>Male</td>
<td>7/15/01</td>
<td>Circus and wood (Log) transport</td>
</tr>
<tr>
<td>4/9/08</td>
<td>Mr. Nurul Amin, Father: Late Moni Ullah, Village: Rajbong, Thana: Korgon, District: Moulibazar</td>
<td>Kajuri</td>
<td>Bought</td>
<td>3/14/01</td>
<td>Female</td>
<td>7/15/01</td>
<td>Circus and wood (Log) transport</td>
</tr>
<tr>
<td>01/11/08</td>
<td>Mr. Md. Surajul Islam, Father: Late Moni Ullah, Village: Rajbong, Thana: Korgon, District: Moulibazar</td>
<td>Infant of Sophura</td>
<td>By birth</td>
<td>18/02/08</td>
<td>Female</td>
<td>15/04/86</td>
<td>Circus and wood (Log) transport</td>
</tr>
<tr>
<td>01/11/08</td>
<td>Mr. Md. Monirul Islam, Father: Late Moni Ullah, Village: Rajbong, Thana: Korgon, District: Moulibazar</td>
<td>Aesha</td>
<td>By birth</td>
<td>2/11/93</td>
<td>Male</td>
<td>15/04/86</td>
<td>Circus and wood (Log) transport</td>
</tr>
<tr>
<td>01/11/08</td>
<td>Mr. Md. Monirul Islam, Father: Late Moni Ullah, Village: Rajbong, Thana: Korgon, District: Moulibazar</td>
<td>Nur Bahadur</td>
<td>By birth</td>
<td>02/11/98</td>
<td>Female</td>
<td>15/04/86</td>
<td>Circus and wood (Log) transport</td>
</tr>
<tr>
<td>01/11/08</td>
<td>Mr. Md. Monirul Islam, Father: Late Moni Ullah, Village: Rajbong, Thana: Korgon, District: Moulibazar</td>
<td>Surma Rani</td>
<td>By birth</td>
<td>02/11/98</td>
<td>Male</td>
<td>15/04/86</td>
<td>Circus and wood (Log) transport</td>
</tr>
<tr>
<td>Registration date</td>
<td>Name and address of owner of the elephant</td>
<td>Address (Village/Upazila/District)</td>
<td>Name of elephant</td>
<td>Registration no</td>
<td>Sex (Male/Female)</td>
<td>Date of birth of elephant</td>
<td>Source of elephant collection</td>
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</tr>
<tr>
<td>4/9/08</td>
<td>Mr. Md. Yusuf, Father: Haji Aminul Haque</td>
<td>Bazartola/Solosahar/Chittagong</td>
<td>Moni Mala</td>
<td>021/08</td>
<td>Female</td>
<td>42 years old</td>
<td>Bought</td>
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<td></td>
<td></td>
<td></td>
<td>Protag Sing</td>
<td>022/08</td>
<td>Male</td>
<td>26 years old</td>
<td>Bought</td>
</tr>
<tr>
<td>4/9/08</td>
<td>Mr. Md. Ali Soadagar, Father: Late Mofijur Rohman</td>
<td>9 no new market/Kaptai/Rangamati</td>
<td>Rani Nagor (Aesha)</td>
<td>023/08</td>
<td>Female</td>
<td>25 years old</td>
<td>Bought</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Shahi Forid Bahadur</td>
<td>024/08</td>
<td>Male</td>
<td>3 years old</td>
<td>By birth</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ali Bahadur</td>
<td>025/08</td>
<td>Male</td>
<td>18 years old</td>
<td>Bought</td>
</tr>
<tr>
<td>18/12/08</td>
<td>Mr. Md. Hamidur Rahman, Father: Late Abdur Roshid</td>
<td>Amirabad/Lohagara/Chittagong</td>
<td>Raj Bahadur</td>
<td>026/08</td>
<td>Male</td>
<td>About 33 years old</td>
<td>Bought</td>
</tr>
<tr>
<td>20/05/10</td>
<td>Mr. Md. Abdul Malek, Father: Late Haji Abdul Ali</td>
<td>Dhiteshor/Komolgonj/Moulvibazar</td>
<td>Joy Mala Kunfi</td>
<td>028/10</td>
<td>Female</td>
<td>1963</td>
<td>Parental source</td>
</tr>
<tr>
<td>20/05/10</td>
<td>Mr. Md. Abdul Malek, Father: Late Haji Abdul Ali</td>
<td>Dhiteshor/Komolgonj/Moulvibazar</td>
<td>Rong Mala Kunfi</td>
<td>029/10</td>
<td>Female</td>
<td>1970</td>
<td>Parental source</td>
</tr>
<tr>
<td>20/05/10</td>
<td>Mr. Md. Abdul Malek, Father: Late Haji Abdul Ali</td>
<td>Dhiteshor/Komolgonj/Moulvibazar</td>
<td>Sundor Mala Kunfi</td>
<td>030/10</td>
<td>Female</td>
<td>1977</td>
<td>Parental source</td>
</tr>
<tr>
<td>Registration date</td>
<td>Name and address of owner of the elephant</td>
<td>Address (Village/Upazila/District)</td>
<td>Name of elephant</td>
<td>Registration no</td>
<td>Sex (Male/Female)</td>
<td>Date of birth of elephant</td>
<td>Source of elephant collection</td>
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</tr>
<tr>
<td>20/05/10</td>
<td>Mr. Md. Abdul Malek, Father: Late Haji Abdul Ali</td>
<td>Dhiteshor/Komolgonj/Moulvibazar</td>
<td>Kusum Mala Kunfi</td>
<td>031/10</td>
<td>Female</td>
<td>1984</td>
<td>Domestic elephant’s infant</td>
</tr>
<tr>
<td>20/05/10</td>
<td>Mr. Md. Abdul Malek, Father: Late Haji Abdul Ali</td>
<td>Dhiteshor/Komolgonj/Moulvibazar</td>
<td>Komla Sundori</td>
<td>032/10</td>
<td>Female</td>
<td>1990</td>
<td>Domestic elephant’s infant</td>
</tr>
<tr>
<td>20/05/10</td>
<td>Mr. Md. Abdul Malek, Father: Late Haji Abdul Ali</td>
<td>Dhiteshor/Komolgonj/Moulvibazar</td>
<td>Chompa Mala Kunfi</td>
<td>033/10</td>
<td>Female</td>
<td>1995</td>
<td>Domestic elephant’s infant</td>
</tr>
<tr>
<td>20/05/10</td>
<td>Mr. Md. Abdul Malek, Father: Late Haji Abdul Ali</td>
<td>Dhiteshor/Komolgonj/Moulvibazar</td>
<td>Santi Mala Miani</td>
<td>034/10</td>
<td>Female</td>
<td>1998</td>
<td>Domestic elephant’s infant</td>
</tr>
<tr>
<td>20/05/10</td>
<td>Mr. Md. Abdul Malek, Father: Late Haji Abdul Ali</td>
<td>Dhiteshor/Komolgonj/Moulvibazar</td>
<td>Hiralal Datal</td>
<td>035/10</td>
<td>Male</td>
<td>1984</td>
<td>Domestic elephant’s infant</td>
</tr>
<tr>
<td>20/05/10</td>
<td>Mr. Md. Abdul Malek, Father: Late Haji Abdul Ali</td>
<td>Dhiteshor/Komolgonj/Moulvibazar</td>
<td>Lal Bahadur Mugna</td>
<td>036/10</td>
<td>Male</td>
<td>40 years old</td>
<td>Bought</td>
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<td>20/05/10</td>
<td>Mr. Md. Abdul Malek, Father: Late Haji Abdul Ali</td>
<td>Dhiteshor/Komolgonj/Moulvibazar</td>
<td>Ali Bahadur Datal</td>
<td>037/10</td>
<td>Male</td>
<td>1997</td>
<td>Domestic elephant’s infant</td>
</tr>
<tr>
<td>20/05/10</td>
<td>Mr. Md. Abdul Malek, Father: Late Haji Abdul Ali</td>
<td>Dhiteshor/Komolgonj/Moulvibazar</td>
<td>Pori Mala Miani</td>
<td>038/10</td>
<td>Female</td>
<td>2003</td>
<td>Domestic elephant’s infant</td>
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<tr>
<td>20/05/10</td>
<td>Mr. Md. Abdul Malek, Father: Late Haji Abdul Ali</td>
<td>Dhiteshor/Komolgonj/Moulvibazar</td>
<td>Infant</td>
<td>040/2010</td>
<td>Male</td>
<td>About 3 years old</td>
<td>Domestic elephant’s infant</td>
</tr>
<tr>
<td>Name of elephant</td>
<td>Registration no</td>
<td>Sex (Male/Female)</td>
<td>Date of birth of elephant</td>
<td>Age</td>
<td>Source of elephant collection</td>
<td>Purpose of elephant collection</td>
<td>Name and address of Mahout</td>
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</tr>
<tr>
<td>Infant 041/2010</td>
<td>Mr. Md. Abdul Malek, Father: Late Haji Abdul Ali</td>
<td>Male</td>
<td>About 2 years 9 months old</td>
<td>Domestic elephant's infant</td>
<td>Wood (Log) transport</td>
<td>Wood (Log) transport</td>
<td>Dhiteshor/Komolgonj/Moulvibazar</td>
</tr>
<tr>
<td>Infant 042/2010</td>
<td>Mr. Md. Abdul Malek, Father: Late Haji Abdul Ali</td>
<td>Male</td>
<td>About 1 year 5 months old</td>
<td>Domestic elephant's infant</td>
<td>Wood (Log) transport</td>
<td>Wood (Log) transport</td>
<td>Dhiteshor/Komolgonj/Moulvibazar</td>
</tr>
<tr>
<td>Infant 043/2010</td>
<td>Mr.Md. Abdul Malek, Father: Late Haji Abdul Ali</td>
<td>Male</td>
<td>About 1 year 5 months old</td>
<td>Domestic elephant's infant</td>
<td>Wood (Log) transport</td>
<td>Wood (Log) transport</td>
<td>Dhiteshor/Komolgonj/Moulvibazar</td>
</tr>
<tr>
<td>Infant 044/2010</td>
<td>Mr. Md. Abdul Malek, Father: Late Haji Abdul Ali</td>
<td>Male</td>
<td>About 3 years old</td>
<td>Domestic Elephant's Infant</td>
<td>Wood (Log) transport</td>
<td>Wood (Log) transport</td>
<td>Dhiteshor/Komolgonj/Moulvibazar</td>
</tr>
<tr>
<td>Mohon Mala 045/2011</td>
<td>Mr. Anil Malaker, Father: Late Roy Malaker, Village: Noldori, Post: Kormodha, Thana: Kulaura, District: Moulvibazar</td>
<td>Female</td>
<td>36 years old (01/04/75)</td>
<td>Inherited</td>
<td>Exhibit in wedding ceremony, circus and removal of timber</td>
<td>Exibit in wedding ceremony, circus and removal of timber</td>
<td>Sukonnabad/Kulaura/Moulvibazar</td>
</tr>
<tr>
<td>Registration no</td>
<td>Name of elephant</td>
<td>Sex</td>
<td>Date of birth of elephant</td>
<td>Date of registration</td>
<td>Name and address of owner of the elephant</td>
<td>Name and address of Mahout</td>
<td>Purpose of elephant collection</td>
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</tr>
<tr>
<td>048/2011</td>
<td>Chondon Tara</td>
<td>Female</td>
<td>41 years old (12/02/70)</td>
<td>31/12/11</td>
<td>Mr. Md. Nojib Ali, Father: Late Manullah Mohismaia/Kulaura/Moulvibazar</td>
<td>Mr. Toymus Ali, Father: Renu Ma Ali, Village: Mohismaia, Post: Kormodha, Thana: Kulaura, District: Moulvibazar</td>
<td>Exhibit in wedding ceremony, circus and removal of timber</td>
</tr>
<tr>
<td>049/2011</td>
<td>Manik Lal Bahadur</td>
<td>Male</td>
<td>51 years old</td>
<td>31/12/11</td>
<td>Mr. Md. Harunur Roshid, Father: Late Haji Sid-dique Ali Sukonnabad/Kulaura/Moulvibazar</td>
<td>Mr. Md Saiub Ali, Father : Late Kudrot Ullah, Village : Tartriuli, Post : Kormodha, Thana : Kulaura, District : Moulvibazar</td>
<td>Exhibit in wedding ceremony, circus and removal of timber</td>
</tr>
<tr>
<td>051/2011</td>
<td>Rock Bahadur</td>
<td>Male</td>
<td>12 years old</td>
<td>31/12/11</td>
<td>Mr. Md. Roshid Mia, Father: Late Konor Ali Mohismaia/Kulaura/Moulvibazar</td>
<td>Mr. Kanai Mia, Father : Late Malek Ali, Village : East Fotioli, Post : Kormodha, Thana : Kulaura, District : Moulvibazar</td>
<td>Exhibit in wedding ceremony, circus and removal of timber</td>
</tr>
<tr>
<td>052/2011</td>
<td>Bir Bahadur</td>
<td>Male</td>
<td>1 years old (10/01/10)</td>
<td>31/12/11</td>
<td>Mr. Md. Roshid Mia, Father: Late Konor Ali Mohismaia/Kulaura/Moulvibazar</td>
<td>Mr. Md. Roshid Mia, Father: Late Konor Ali, Village: Mohismaia, Post: Kormodha, Thana: Kulaura, District: Moulvibazar</td>
<td>Infant of Chondro Tara</td>
</tr>
</tbody>
</table>
| Name and address of Mahout | Name of elephant | Regis- 
<p>| | | | | no | Source of elephant | Date of | Sex | Date of | Purpose of | Address | Name and address of owner of the elephant |
|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|</p>
<table>
<thead>
<tr>
<th>Registration date</th>
<th>Name and address of owner of the elephant</th>
<th>Address (Village/Upazila/District)</th>
<th>Name of elephant</th>
<th>Registration no</th>
<th>Sex (Male/Female)</th>
<th>Date of birth of elephant</th>
<th>Source of elephant collection</th>
<th>Purpose of elephant collection</th>
<th>Name and address of Mahout</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Shahi Bahadur</td>
<td>065/2014</td>
<td>Male</td>
<td>09 years old</td>
<td>Inherited</td>
<td>Exhibit in wedding ceremony, circus and removal of timber</td>
<td>Mr. Ershad Mia, Father: Mojid Mia, Village: Tartriuli, Post: Kormodha, Thana: Kulaura, District: Moulvibazar</td>
</tr>
<tr>
<td>Registration date</td>
<td>Name and address of owner of the elephant</td>
<td>Address (Village/Upazila/District)</td>
<td>Name of elephant</td>
<td>Registration no</td>
<td>Sex (Male/Female)</td>
<td>Date of birth of elephant</td>
<td>Source of elephant collection</td>
<td>Purpose of elephant collection</td>
<td>Name and address of Mahout</td>
</tr>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Kanchon Mala</td>
<td>068/2014</td>
<td>Female</td>
<td>31 years old (05/03/80)</td>
<td>Inherited</td>
<td>Exhibit in wedding ceremony, circus and removal of timber</td>
<td>Mr. Anik Mia, Father: Eusuf Mia, Village: Noldori, Post: Kormodha, Thana: Kulaura, District: Moulvibazar</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Panna Bahadur</td>
<td>070/2014</td>
<td>Male</td>
<td>08 years old (10/04/03)</td>
<td>Inherited</td>
<td>Exhibit in wedding ceremony, circus and removal of timber</td>
<td>Mr. Asif Mia, Father: Eusuf Mia, Village: Noldori, Post: Kormodha, Thana: Kulaura, District: Moulvibazar</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hira Bahadur</td>
<td>071/2014</td>
<td>Male</td>
<td>12 years old (10/02/99)</td>
<td>Inherited</td>
<td>Exhibit in wedding ceremony, circus and removal of timber</td>
<td>Mr. Salek Mia, Village: Tartritoli, Post: Kormodha, Thana: Kulaura, District: Moulvibazar</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sundori</td>
<td>073/2014</td>
<td>Female</td>
<td>19 years old (07/02/92)</td>
<td>Bought</td>
<td>Circus and wood (Log) transport</td>
<td>Mr. Manik Mia, Father: Hiron Mia, Village: Chitmarm, Post: Kaptai, Thana: Kaptai, District: Rangamati</td>
</tr>
<tr>
<td>Registration date</td>
<td>Name and address of owner of the elephant</td>
<td>Address (Village/Upazila/District)</td>
<td>Name of elephant</td>
<td>Registration no</td>
<td>Sex (Male/Female)</td>
<td>Date of birth of elephant</td>
<td>Source of elephant collection</td>
<td>Purpose of elephant collection</td>
<td>Name and address of Mahout</td>
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<tr>
<td>20/08/14</td>
<td>Mr. Md Mokles Mia, Father: Md. Moin Mia</td>
<td>Mohismaya/Kormodha/Moulvibazar</td>
<td>Gull Anower</td>
<td>074/2014</td>
<td>Female</td>
<td>51 years old</td>
<td>Inherited</td>
<td>Exhibit in wedding ceremony, circus and removal of timber</td>
<td>Mr. Manik Mia, Father: Late Gofur Mia, Village: Noldori, Post: Kormodha, Thana: Kulaura, District: Moulvibazar</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Anar Koli</td>
<td>075/2014</td>
<td>Female</td>
<td>02 years old</td>
<td>Inherited</td>
<td>Exhibit in wedding ceremony, circus and removal of timber</td>
<td>Mr. Manik Mia, Father: Late Gofur Mia, Village: Noldori, Post: Kormodha, Thana: Kulaura, District: Moulvibazar</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Full Koli</td>
<td>076/2014</td>
<td>Female</td>
<td>12 years old</td>
<td>Inherited</td>
<td>Exhibit in wedding ceremony, circus and removal of timber</td>
<td>Mr. Manik Mia, Father: Late Gofur Mia, Village: Noldori, Post: Kormodha, Thana: Kulaura, District: Moulvibazar</td>
</tr>
<tr>
<td>Registration date</td>
<td>Name and address of owner of the elephant</td>
<td>Address (Village/Upazila/District)</td>
<td>Name of elephant</td>
<td>Registration no</td>
<td>Sex (Male/Female)</td>
<td>Date of birth of elephant</td>
<td>Source of elephant collection</td>
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<td>Name and address of Mahout</td>
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<td></td>
<td>Mr. Joynal Abedin, Father: Md. Hamidur Rahman</td>
<td>Amirabad/Lohagara/Chittagong</td>
<td>-</td>
<td>-</td>
<td>Male</td>
<td>-</td>
<td>-</td>
<td>Exhibit in wedding ceremony, circus and removal of timber</td>
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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 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.