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Guide Book on Wildlife Law Enforcement In Bangladesh



Dr. Tapan Kumar Dey & Md. Golam Rabbi

Guide Book

on

Wildlife Law Enforcement In Bangladesh



Bangladesh Forest Department
Ministry of Environment and Forests



Supported by : Strengthening Regional Cooperation for Wildlife Protection Project

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&
Md. Golam Rabbi

Bangladesh Forest Department
Ministry of Environment and Forests



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Preface

Bangladesh has glorious tradition of conservation with codified laws since independence. Over the years, the agenda of wildlife conservation has undergone numerous changes in response to human needs, cultural, political and social norms. Wildlife (Security and Conservation) Act, 2012 is a milestone legal document for wildlife and biodiversity conservation in Bangladesh.

Bangladesh is a hotspot of biological diversity including 3,000-4,000 species of woody floras, 130 species of mammals, 710 species of birds, 164 species of reptiles and 56 species of amphibians (Reza Khan 2013). Rich aquatic biodiversity includes 260 species of finfish belonging to 55 families, 42 species of freshwater and land mollusks, 248 bryophytes species, 195 species of pteridophytes and 427 species of butterflies. A total of 219 species including fishes, amphibians, reptiles, birds and mammals are being noted as threatened according to IUCN. The rich biodiversity is significant to the local context as well as to the international context. Most wild animals in Bangladesh are protected and it is a crime to kill any of them. Many plants are also protected by law. Export and import of all wild animals, their parts and products are prohibited. Bangladesh becomes the signatory of the **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)** in 1981. So it is our moral obligation to tackle illegal wildlife trade.

The geographical location of Bangladesh in South Asia is very important and recently our country is being used as transit point for illegal wildlife trade. Wildlife trafficking is one of the most profitable types of illegal trade in the world. INTERPOL estimates illegal wildlife trade globally is about USD 10-20 billion per year. We like to stop these harmful activities through coordinated approach with all law and enforcing agencies. Despite of all these laws and policies, the illegal trade of wildlife continues to flourish. Just as mere laws do not bring down the incidence of heinous crimes in society.

Worst impact of wildlife trade is the extinction of traded species. As a result ecosystem will be degraded, natural heritage will be lost and ecosystem dependant community will be affected.

It is a matter of great success that Government of Bangladesh has declared 38 Protected Areas (PA) including 17 National Parks, 20 Wildlife Sanctuaries, 01 Marine Protected Area and also declared 02 Vulture Save Zones. Two RAMSAR sites namely Tanguar Haor and Sundarbans have been declared in 1992. In addition to this list 05 (five) East Asian Australasian Flyway Partnership (EAAFP) sites have been declared in 2010 to conserve migratory birds and its habitat namely Sonadia, Nijhum Dweep, Tanguar Haor, Hakaluki Haor and Hail Haor.

The wildlife crime investigation methodology is still evolving. This is the first effort to develop the capacities of law enforcement officers in professional and scientific investigation of wildlife offences. We have compiled this guide book to help the law enforcement officers of various agencies for professional investigation of wildlife offences. This book also includes standardize practices and procedures followed by Forest Department in wildlife crime investigation. It is expected that use of this document would bring uniformity in methodology, improve law enforcement quality and result in better appreciation of evidence by the trial courts for combating wildlife crime.

The guide book is illustrated with a large number of color photographs and diagrams which will be of help in better elucidation of the subject and it will be a useful tool to combat wildlife crime in Bangladesh.

Dr. Tapan Kumar Dey
&
Md. Golam Rabbi



Chief Conservator of Forests
Bangladesh forest Department
Ministry of Environment and Forests

Foreword

Bangladesh is one of the mega biodiverse countries in the world. This diversity is, however, under stress due to livelihood demand of growing population, poaching and organized illegal wildlife trade with global ramifications. The geographical position of Bangladesh between India and Myanmar - countries that experience widespread poaching, further increases the vulnerability of wildlife. The United Nations Office on Drugs and Crime (UNODC) has included wildlife crimes in the list of Transnational Organized Crimes (TOC) in 2003.

Institutional arrangements like Wildlife Crime Control Unit supported Forensic Lab has been established under the Forest Department to combat wildlife crime under the Wildlife (Conservation & Security) Act, 2012. The Act is the apex legislation for wildlife conservation and law enforcement in the country.

Law enforcement cannot be a complete code of procedure for action. There is a lack of uniformity in procedures, practices and methodology in matters relating to wildlife crime investigation, often leading to legal and operational complications. A well codified and uniform procedure for investigation of wildlife offences is found a crucial need of the time.

I am happy to see that the authors have identified these issues as a critical area for improvement and brought out this guide book which will serve as a ready reference for the wildlife crime investigation. The officers of various law enforcement agencies, particularly the officers of Forest Department will be benefitted in their professional life to investigate the wildlife offences. It will also help the trial courts to better appreciate wildlife crime prosecution, thus contributing to increasing the conviction rate in wildlife crime cases.

Wildlife is Nature's greatest treasure, to protect it, we must take every measure.

Md. Yunus Ali
Chief Conservator of Forests
Bangladesh forest Department

Acknowledgement

We like to convey thanks to Md. Yunus Ali, Chief Conservator of Forests for his valuable suggestions and guidance regarding illegal wildlife trade, wildlife law enforcement and CITES regulations.

The publication of this book was made possible with the generous support of “Strengthening Regional Cooperation for Wildlife Protection Project” funded by the World Bank.

We would like to acknowledge those persons who gave us tremendous support and shared valuable information, especially Mr. Md. Modinul Ahasn, ACF; Mr. Hoq Mahbub Morshed, ACF; Dr. Syed Hossain, VS; Mrs. Esika Paul, WBCO; Mr. Md. Shohel Rana, WI; Ms. Ishrat Jahan, WI; Ms. Salma Akter WI, and Ashim Mallick, WI.

We would like to thanks all dedicated Bangladesh Forest Department officers and staffs who are always working hard to combat wildlife crime in Bangladesh.

The section on CITES has been adapted from its website & Secretariat and is included to highlight the roles of the CITES in the sphere of management of wildlife trade and related crime. CITES Secretariat also helps us in designing the course and information. So we are thankful to them.

We are very grateful to Mr. Md. Akbar Hossain, Project Director, SRCWP Project and DCCF, for his kind and consistent support to implement the Sup-project “Capacity Building Training Program through CITES Secretariat”.

Dr. Tapan Kumar Dey
&
Md. Golam Rabbi

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Chapter I

Wildlife and Wildlife Trade

Wildlife

As per wildlife (Security and Conservation) Act, 2012, wildlife includes any animal, aquatic and land vegetation which forms part of any habitat. Thus the term wildlife effectively encompasses all forms of life, whether plant or animal which are found wild in nature. This would also include marine, freshwater and coastal ecosystems. This is the umbrella legislation in Bangladesh.

Wild animal means any animal specified in schedule-1,2 and 4.

Wildlife Trade

It refers to the sale and exchange of animal and plant resources. This includes ornamental animals products such as corals for aquaria, reptile skins for the mather industry, tortoise shell, as well as ornamental plants such as orchids and cacti. It also includes timber products, medicinal and aromatic products, such as taxol, agarwood, musk, fisheries products and live animals for the pet trade including parrots, reptors, primates, and a wide variety of reptiles and ornamental fish.

As per Article I(c) of the CITES, “Trade” means export, re-export, import and introduction from the sea.

Wildlife trade involves hundreds of millions of individual plants and animals species. Wildlife trade is diverse, ranging from live animals and plants to a vast array of wildlife products derived from them including food products, exotic deather goods, wodden musical instruments, timber, tourist curios, fish, other food products and medicines. Most wildlife trade is probably within national borders, but there is a large volume of wildlife in trade internationally. Many forms of wildlife trade are legal but a significant part of the trade is illegal and violation of international and national regulations and legislation.

Main Reasons for Wildlife Trade

There are many reasons why wildlife is traded, including:

Food : fruits, mushrooms, nuts, leaves and tubers, are particular important resources in sustaining livelihoods in many rural areas. Wild animals (including fish) contribute at least a fifth of the animal protein in rural diets in more than 60 countries. A TRAFFIC study demonstrated reliance on wild meat is growing in Eastern and Southern Africa in response to increased human populations and poverty.

Fuel : trees and plants are an important source of fuel for cooking and heating, especially in rural areas

Fodder : considered very important non-wood forest products in arid regions of Asia and Africa

Building materials : for example, timber for furniture and housing to ingredients in manufacturing processes, such as gums and resins

Clothing and ornaments : leather, furs, feathers etc

Sport : from falconry to trophy hunting

Healthcare : everything from herbal remedies, traditional medicines to ingredients for industrial pharmaceuticals. An estimated 80 % of the world's population are said to rely for primary health care on traditional medicines

Religion : many animals and plants or derivatives are used for religious purposes);

Collections : many wildlife specimens and curios are collected by museums and private individuals

The primary motivating factor for wildlife traders is economic, ranging from small scale local income generation to major profit-oriented business, such as marine fisheries and logging companies.

Between collectors of wildlife and the ultimate users, any number of middlemen may be involved in the wildlife trade, including specialists involved in storage, handling, transport, manufacturing, industrial production, marketing, and the export and retail businesses.

In fact most of us are involved in wildlife trade in some way, even if it just as end consumers of wildlife products.

Scale of Wildlife Trade

The wildlife trade involves hundreds of millions of individual plants and animals from tens of thousands of species. Timber and seafood are the most important categories of international wildlife trade, in terms of both volume and value. According to the United Nations Food and Agriculture Organization (FAO), more than \$100 billion of fish were traded and nearly \$200 billion timber in 2009. To put this into perspective, in the same year, the global trade value of tea, coffee and spices all together was \$24.3 billion.

International trade in species of conservation concern is monitored by CITES. From 2005 - 2009, CITES recorded an annual average of more than 317,000 live birds, just over 2 million live reptiles, 2.5 million crocodilian skins, 1.5 million lizard skins, 2.1 million snake skins, 73 tones of caviar, 1.1 million coral pieces and nearly 20,000 hunting trophies. Not all trade is legal of course: between 2005 and 2009 EU enforcement authorities made over 12,000 seizures of illegal wildlife products in the EU.

Value of Wildlife Trade

In the early 1990s, TRAFFIC estimated the value of legal wildlife products imported globally was around USD160 billion. In 2009, the estimated value of global imports was over USD323 billion. TRAFFIC estimated the legal trade of wildlife products into the EU alone was worth an estimated €93 billion in 2005 and this increased to nearly €100 billion in 2009.

By its very nature, it is almost impossible to obtain reliable figures for the value of illegal wildlife trade, but the figure must run into hundreds of millions of dollars. The value of illegal, unreported and unregulated (IUU) fisheries alone has been estimated at between USD10-23 billion per year, while the value of the illegal international timber trade has been estimated as USD7 billion per year, and the illegal wildlife trade, excluding timber and fisheries as USD7.8-10 billion per year.

Major Constraints to Control Illegal Wildlife Trade

There are many reasons for wildlife trade in Bangladesh. Some of them mentioned below:

- Wildlife is an open treasury, free or very limited restrictions.
- Generally poor understanding in policy enforcement.
- Lack of manpower & infrastructure within agencies responsible for enforcement, awareness and extension work.
- Generally no social stigma attached to offenders in forest and wildlife crimes.
- Poor co-ordination among the different enforcement agencies.
- Lack of specialised skills such as crime prevention, detection, investigation and prosecution.
- Low volume, high number of offenders.
- Rural community living close vicinity of wildlife resources used for alternative livelihoods.

Wildlife Poaching Methods

- (1) Fire arms: Most mammals especially elephant & rhiro & birds etc.
- (2) Legtraps: Tigers, Leopards, otters, deer species etc.
- (3) Wire traps and snares: Smalter Memmals.
- (4) Poisoning: Tigers, Leopards, elephants etc.
- (5) Porsoned arrows: From bird to elephants.
- (6) Electrocutation: Small mammals to elephant.
- (7) Pit method: Rhinos, elephants etc.
- (8) Netting: Small mammals, birds, butterflies etc and aquatic species.
- (9) Harpooning: Whale & sharks
- (10) Bird trapping: Birds.

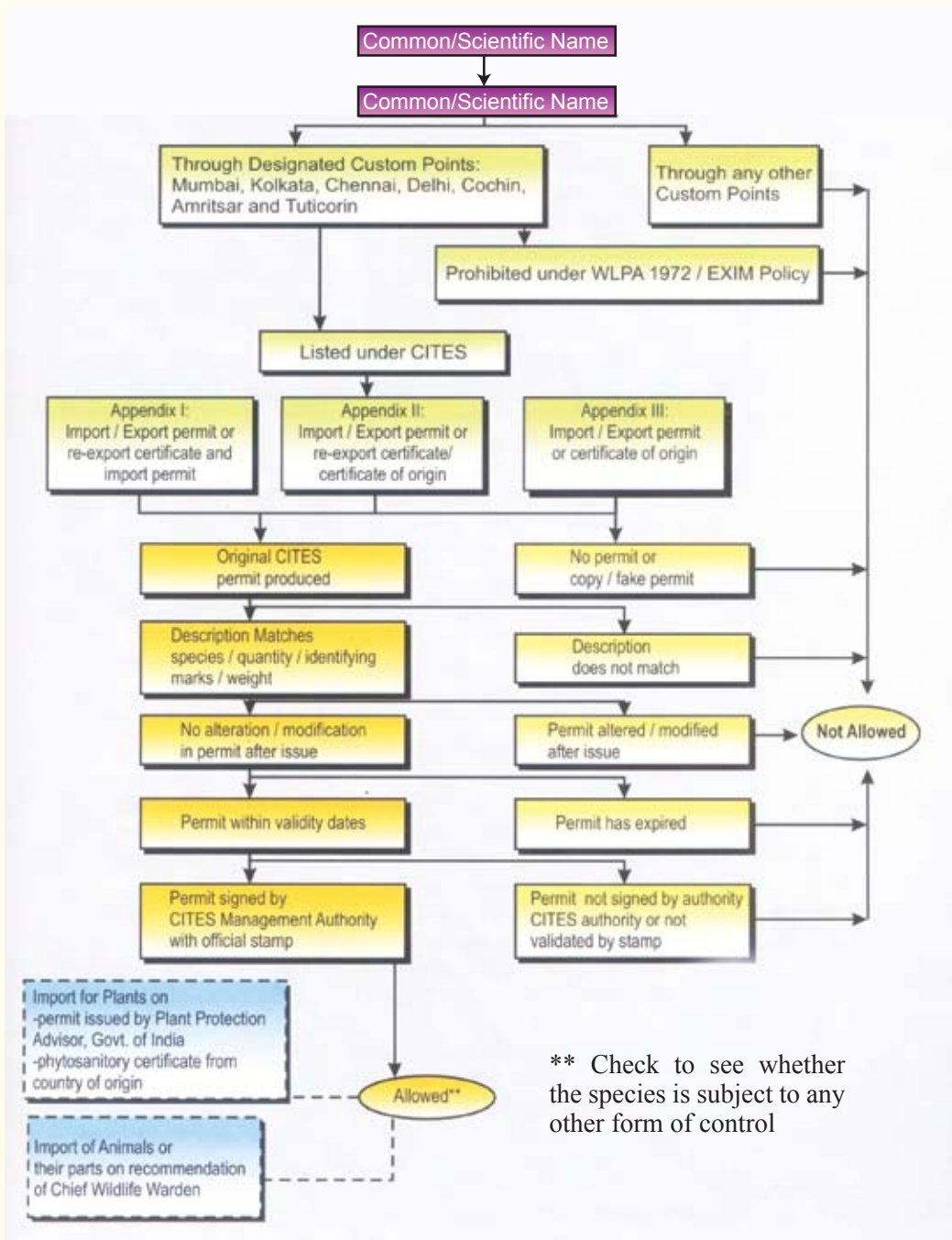
Impact of the Illegal Wildlife Trade

Illegal wildlife trade is estimated to be a multibillion-dollar business involving the unlawful harvest of and trade in live animals and plants or parts and products derived from them. Wildlife is traded as skins, leather goods or souvenirs; as food or traditional medicine; as pets, and in many other forms. Illegal wildlife trade runs the gamut from illegal logging of protected forests to supply the demand for exotic woods, to the illegal fishing of endangered marine life for food, and the poaching of elephants to supply the demand for ivory.

Illegal wildlife trade is also often unsustainable, harming wild populations of animals and plants and pushing endangered species toward extinction. Endangered animals and plants are often the target of wildlife crime because of their rarity and increased economic value. Furthermore, illegal trade negatively impacts a country's natural resources and local communities that might otherwise benefit from tourism or legal, sustainable trade.

Thousands of wildlife species are threatened by illegal and unsustainable wildlife trade. For example, in recent months significant media attention has gone to the plight of the world's rhinoceros species, which are facing increased poaching as demand for their horns increases in Asia. In some parts of Asia, rhino horn is considered to be a powerful traditional medicine, used to treat a variety of ailments. While there is little scientific evidence to support these claims, the dramatic rise in poaching to supply this demand is pushing rhinos toward the brink of extinction.

Flow Chart for Import / Export of Wild Animals and Plants



Chapter II

Present Status of Wildlife and Protected Areas of Bangladesh

Introduction

Bangladesh is a biodiversity hotspot in spite of very small territory. Bio-geographically, Bangladesh lies at the junction of the Indian and Malayan sub regions of the Indo-Malayan Realm and is located very near to the western side of Sino-Japanese region. The country's biodiversity reflects this mixture. A large number of native floras, including 3,000-4,000 species of woody floras, have been recorded from Bangladesh, and also supports 130 species of mammals, 710 species of birds, 164 species of reptiles and 56 species of amphibians (Reza Khan 2013). Rich aquatic biodiversity includes 260 species of finfish belonging to 55 families, 42 species of freshwater and land Mollusks, 248 bryophytes species, 195 species of Pteridophytes and 427 species of butterflies. Bangladesh's aquatic diversity, especially marine ecology, has not yet been adequately discovered. A total of 219 species including fishes, amphibians, reptiles, birds and mammals are being noted as threatened according to Bangladesh National Criteria (IUCN Bangladesh 2006). The rich biodiversity is significant to the local context as well as to the international context. Most wild animals in Bangladesh are protected and it is a crime to kill any of them. Many plants are also protected by law. Export and import of all wild animals, their parts and products are prohibited. Bangladesh become the signatory of the **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)** in 1981. So it is our moral obligation to tackle illegal wildlife trade.

The geographical location of Bangladesh in South Asia is very important and recently our country is being used as transit point for illegal wildlife trade. Wildlife trafficking is one of the most profitable types of illegal trade in the world. INTERPOL estimates illegal wildlife trade globally is about USD 10-20 billion per year. We like to stop this harmful activities through coordinated approach with all law and enforcing agencies. Despite of all these laws and policies, the illegal trade of wildlife continues to flourish. Just as mere laws do not bring down the incidence of heinous crimes in society.

Worst impact of wildlife trade is the extinction of traded species. As a result ecosystem will be degraded, natural heritage will be lost and ecosystem dependant community will be affected.

It is a matter of great success that Government of Bangladesh has declared 38 Protected Areas (PA) including 17 National Parks, 20 Wildlife Sanctuaries, 01 Marine Protected Area and also declared 02 Vulture Save Zones. Two RAMSAR sites namely Tanguar Haor and Sundarbans have been declared in 1992. In addition to this list 05 (five) East Asian Australasian Flyway Partnership (EAAFP) sites have been declared in 2010 to conserve migratory birds and its habitat namely Sonadia, Nijhum Dweep, Tanguar Haor, Hakaluki Haor and Hail Haor.

The term "Wild Life" (written as two words) was first used by the famous American Zoologist William Temple Hornaday in his book "Our Vanishing Wild Life (Its Extermination and Preservation)" published in 1913. It was only in 1930s that "Wildlife," written as a single word, came into widespread usage. Wildlife means the native wild fauna and flora of a region. As per Wildlife (Conservation & Security) Act, 2012, "**Wildlife**" means different types and species of animals or different stages of their life cycle, whose source is considered as wild.

Status of Wildlife in Bangladesh

Animals Group (terrestrial and marine)	No. of species of resident wild animals (terrestrial and marine)	No. of species extinct from the nature	No. of threatened and endangered species				Data deficient	No. of species not threatened
			Critically endangered	Endangered	Vulnerable	Total		
Fish	708	0	12	29	17	58	66	584
Amphibian	56	0	0	3	5	8	7	7
Reptile	164	1	13	28	22	63	39	24
Bird	710	2	19	20	8	47	164	407
Mammal	130	10	21	15	7	43	53	17
Total	1768	13	65	95	59	219	329	1039

List of notified Protected Areas (PA's) of Bangladesh

National Parks

Sl. No.	National Park	Location	Area (ha.)	Date of Notification
1.	Bhawal National Park	Gazipur	5,022.29	11-05-1982
2.	Modhupur National Park	Tangail/Mynsingh	8,436.13	24-02-1982
3.	Ramsagar National Park	Dinajpur	27.75	30-04-2001
4.	Himchari National Park	Cox's Bazar	1,729.00	15-02-1980
5.	Lawachara National Park	Moulavibazar	1,250.00	07-07-1996
6.	Kaptai National Park	Ctg. Hill Tracts	5,464.78	09-09-1999
7.	Nijhum Dweep National Park	Noakhali	16352.23	08-04-2001
8.	Medha Kassapia National Park	Cox's Bazar	395.92	04-04-2004
9.	Satchari National Park	Habigonj	242.91	15-10-2005
10.	Khadeem Nagar National Park	Sylhet	678.80	13-04-2006
11.	Baraiyadhala National Park	Chittagong	2933.61	06-04-2010
12.	Kadigar National Park	Mymensing	344.13	24-10-2010
13.	Shingra National Park	Dinajpur	305.69	24-10-2010
14.	Nababgong National Park	Dinajpur	517.61	24-10-2010
15.	Kuakata National Park	Patuakhali	1613.00	24-10-2010
16.	Altadeghe National Park	Nagaon	264.12	14-12-2011
17.	Birgonj National Park	Dinajpur	168.56	14-12-2011
	Sub-Total =		45,746.53	

Map of Bangladesh (Showing Protected Areas)



Wildlife Sanctuaries

Sl. No.	Wildlife Sanctuaries	Location	Area (ha.)	Date of Notification
18.	Rema-kelenga Wildlife Sanctuary	Hobigonj	1795.54	07-07-1996
19.	Char Kukri-Mukri Wildlife Sanctuary	Bhola	40.00	19-12-1981
20.	Sundarban (East) Wildlife Sanctuary	Bagerhat	31226.94	06-04-1996
21.	Sundarban (West) Wildlife Sanctuary	Satkhira	71502.10	06-04-1996
22.	Sundarban (South) Wildlife Sanctuary	Khulna	36970.45	06-04-1996
23.	Pablakhali Wildlife Sanctuary	Ctg. Hill Tracts	42069.37	20-09-1983
24.	Chunati Wildlife Sanctuary	Chittagong	7763.97	18-03-1986
25.	Fashiakhali Wildlife Sanctuary	Cox's Bazar	1302.42	11-04-2007
26.	Dudh Pukuria-Dhopachari Wildlife Sanctuary	Chittagong	4716.57	06-04-2010
27.	Hazarikhil Wildlife Sanctuary	Chittagong	1177.53	06-04-2010
28.	Shangu Wildlife Sanctuary	Bandarban	2331.98	06-04-2010
29.	Teknaf Wildlife Sanctuary	Cox's Bazar	11614.57	24-03-2010
30.	Tengragree Wildlife Sanctuary	Barguna	4048.58	24-10-2010
31.	Sonarchar Wildlife Sanctuary	Patuakhali	2026.48	24-12-2011
32.	Chandpai Wildlife Sanctuary	Bagherhat	560.00	29-01-2012
33.	Dudmukhi Wildlife Sanctuary	Bagherhat	170.00	29-01-2012
34.	Daingmari Wildlife Sanctuary	Bagherhat	340.00	29-01-2012
35.	Nagarbari-Mohangonj Dolphin (Platanista gangetica) Sanctuary	Pabna	408.11	01-12-2013
36.	Shilanda-Nagdemra Wildlife (Dolphin) Sanctuary	Pabna	24.17	01-12-2013
37.	Nazirgonj Wildlife (Dolphin) Sanctuary	Pabna	146.00	01-12-2013
	Sub-Total =		2,20,334.78	

Marine Protected Area

Sl. No.	Marine Protected Area	Location	Area (ha.)	Date of Notification
38.	Swatch of No-ground Marine Protected Area	South Bay of Bengal	1,73,800.00	27-10-2014

Vulture Safe Zone

Sl. No.	Safe Zone	Location	Area (ha.)	Date of Notification
39.	Vulture Save Zone	Shylet, Hobigonj, Sunamgonj, Molvibazar, Netrokona, Kishorgonj, Gazipur, Mymanshing, Brammonbaria, Norshindi, Comilla & Khagrachari	19,66,300.18	23-12-2014
40.	Vulture Save Zone	Faridpur, Magura, Jhinaidha, Madaripur, Jossore, Gopalganj, (Except Tungipara), Narial, Shariatpur, Barishal, Bagerhat, Khulna, Satkhira, Pirojpur, (Except Vandaria), Jhalakhati, Patuakhali and Barguna.	27,71,700.26	23-12-2014
	Sub-Total =		47,38,000.44	

* Source: Bangladesh Forest Department

** Though vulture save zones are declared under Wildlife (conservation & security) Act, 2012 but it was not notified as Protected Area cause most of the areas belongs to private property.

*** Marine Protected Area is the outer side of Sundarbans and have common border with India.

Extinct Wildlife of Bangladesh

Wildlife populations including amphibians, reptiles, birds and mammals have been declining steadily due to habitat loss, fragmentation and degradation, destruction of reproduction grounds, illegal hunting (illegal trade), environmental pollution (agrochemicals and other), food shortage, over exploitation of resources, etc. which accelerate mortality due to natural factors (food shortage and disease). Studies indicate that 4-5% of faunal species and about 10% of floral diversity have become extinct in the last century. Some wildlife already extinct from the nature, such as-



One-horned Rhinoceros
Rhinoceros unicornis



Javan Rhinoceros
Rhinoceros sondaicus



Asiatic Two-horned Rhinoceros
Didermoceros sumatrensis



Swamp Deer
Cervus duvauceli



Blackbuck
Antelope cervicapra



Nilgai
Boselaphus tragocamelus



Banteng
Bos banteng



Wild Buffalo
Bubalus bubalis



Gaur
Bos gaurus



Grey Wolf
Canis lupus



Striped Hyena
Hyaena hyaena



Marsh Crocodile
Crocodylus palustris



Pink-headed Duck
Rhodonessa caryophyllacea



Common Peafowl
Pavo cristatus

Chapter III

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

What Is Cites?

(<https://cites.org/eng/disc/what.php>)

CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival.

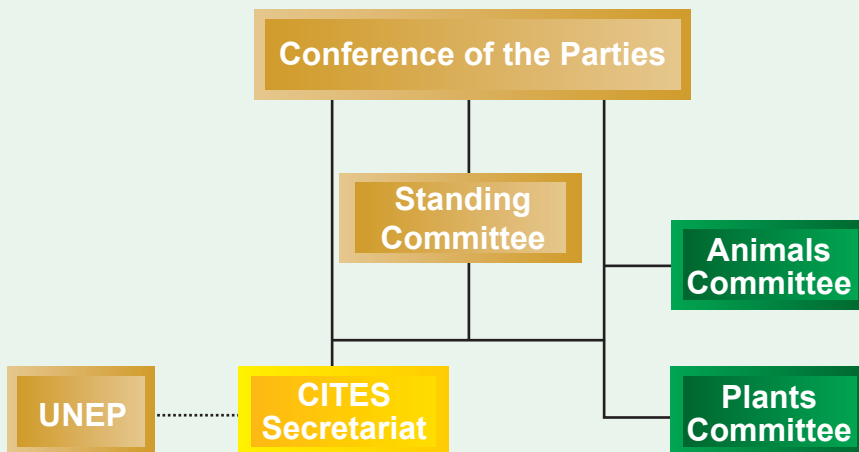
Cites Membership

(<https://cites.org/eng/disc/parties/index.php>)

A State for which the Convention has entered into force is called a Party to CITES. Currently there are 181 Parties included in CITES, with the latest Party at time of this publication (September 2015) being the European Union (entry into force on 8 July 2015).

How Cites Works

CITES works by subjecting international trade in specimens of selected species to certain controls. All import, export, re-exports and introduction from the sea of specimens covered by the Convention are subject to various levels of regulation.



Conference of The Parties (COP)

(<https://cites.org/eng/cop/index.php>)

The Parties (member States) to CITES are collectively referred to as the Conference of the Parties. Every two to three years, the Conference of the Parties meets to review the implementation of the Convention. These meetings last for about two weeks and are usually hosted by one of the Parties. The meetings are often referred to as 'CoPs'. They provide the occasion for the Parties to:

- ◆ Review progress in the conservation of species included in the Appendices;
- ◆ Consider (and where appropriate adopt) proposals to amend the lists of species in Appendices I and II;
- ◆ Consider discussion documents and reports from the Parties, the permanent committees, the Secretariat and working groups;
- ◆ Recommend measures to improve the effectiveness of the Convention; and
- ◆ Make provisions (including the adoption of a budget) necessary to allow the Secretariat to function effectively.

On a more informal level, the meetings provide an opportunity for participants to make or renew relationships and to discuss problems and successes. Meetings of the Conference of the Parties are attended not only by delegations representing CITES Parties but also by observers. These include representatives of States that are not party to CITES, of United Nations agencies and of other international Conventions. Observers from non-governmental organizations involved in conservation or trade are also allowed to participate at the discretion of the Parties. Although they may participate in the meeting, they have no vote. Members of the public may also attend as visitors, although they are not able to participate in the discussions.

Cites Appendices

The species covered by CITES are listed in three Appendices :

- ◆ **Appendix I** includes species threatened with extinction. Trade in specimens of these species is permitted only in exceptional circumstances.
- ◆ **Appendix II** includes species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilization incompatible with their survival.
- ◆ **Appendix III** contains species that are protected in at least one country, which has asked other, CITES Parties for assistance in controlling the trade.

(<https://cites.org/eng/disc/how.php>)

The Cites Species

The species covered by CITES are listed in three Appendices, according to the degree of protection they need. Roughly 5,600 species of animals and 30,000 species of plants are protected by CITES against over-exploitation through international trade. The species are grouped in the Appendices according to how threatened they are by international trade

Species in the CITES Appendices can be searched through the CITES Checklist (<http://checklist.cites.org/>).

(<https://cites.org/eng/disc/species.php>)

Procedure for Trade of Cites Specimen

A specimen of a CITES-listed species may be imported into or exported (or re-exported) from a State party to the Convention only if the appropriate document has been obtained and presented for clearance at the port of entry or exit.

(<https://cites.org/eng/disc/how.php>)

Appendix-I Specimens

- ◆ An import permit issued by the Management Authority of the State of import is required. This may be issued only if the specimen is not to be used for primarily commercial purposes and if the import will be for purposes that are not detrimental to the survival of the species. In the case of a live animal or plant, the Scientific Authority must be satisfied that the proposed recipient is suitably equipped to house and care for it.
- ◆ An export permit or re-export certificate issued by the Management Authority of the State of export or re-export is also required.
- ◆ An export permit may be issued only if the specimen was legally obtained; the trade will not be detrimental to the survival of the species; and an import permit has already been issued.
- ◆ A re-export certificate may be issued only if the specimen was imported in accordance with the provisions of the Convention and, in the case of a live animal or plant, if an import permit has been issued.
- ◆ In the case of a live animal or plant, it must be prepared and shipped to minimize any risk of injury, damage to health or cruel treatment.

Appendix-II Specimens

- ◆ An export permit or re-export certificate issued by the Management Authority of the State of export or re-export is required.
- ◆ An export permit may be issued only if the specimen was legally obtained and if the export will not be detrimental to the survival of the species.
- ◆ A re-export certificate may be issued only if the specimen was imported in accordance with the Convention.
- ◆ In the case of a live animal or plant, it must be prepared and shipped to minimize any risk of injury, damage to health or cruel treatment.
- ◆ No import permit is needed unless required by national law.

In the case of specimens introduced from the sea, a certificate has to be issued by the Management Authority of the State into which the specimens are being brought, for species listed in Appendix I or II.

Appendix-III Specimens

- ◆ In the case of trade from a State that included the species in Appendix III, an export permit issued by the Management Authority of that State is required. This may be issued only if the specimen was legally obtained and, in the case of a live animal or plant, if it will be prepared and shipped to minimize any risk of injury, damage to health or cruel treatment.
- ◆ In the case of export from any other State, a certificate of origin issued by its Management Authority is required.
- ◆ In the case of re-export, a re-export certificate issued by the State of re-export is required

Cites E-permitting Systems

CITES Parties are developing and implementing CITES e-permitting systems to better regulate international trade in specimens of CITES-listed species. Parties can use the CITES E-permitting Toolkit for guidance in the development of such systems. The Toolkit is harmonized with standards found in the World Customs Organization Data Model (WCO) and also compliant with standards published by the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT). More information on the CITES E-permitting Toolkit, the WCO Data Model and UN/CEFACT standards is available at: <https://cites.org/eng/prog/e/e-permitting-toolkit.php>

Exemptions and Special Procedures

The convention has certain exemptions and special procedures relate to specimens that are :

Transit or Transshipment

Transit and transshipment refers only to specimens:

- That remain in Customs control
- That is in the process of shipment to a named consignee through or in the territory of a third Party.
- For which interruption in their movement is only due to arrangements necessitated by the requirements of transport.

However, in the past this exemption was too frequently used to move illegal specimens, or to temporarily store these in customs zones. Therefore, Resolution Conf. 9.7 (Rev. CoP15) recommends that, if their national legislation allows, Parties should verify the presence of valid CITES documents and seize/confiscate specimens without valid documentation.

Resolution Conf. 9.7 (Rev. CoP15) also recommends that, if confiscation is not possible, shipment details should be sent to the country of final destination, other countries of transshipment and to the CITES Secretariat. These procedures should also apply if the country of origin and/or country of final destination are non-Parties.

Pre-Convention

Generally specimens that were acquired before the date on which the specimens concerned was first included in the Appendices. The specimens can be used for commercial purposes or trade if the Management Authority agrees to their pre-Convention status by issue a pre-Convention certificate.

Pre-Convention specimens of wild origin of species included in Appendix I can be traded for primarily commercial purposes.

Personal or Household Effects

Personal effects mean specimens that are:

- a) Personally owned or possessed for non-commercial purposes;
- b) Legally acquired; and
- c) At the time of import, export or re-export either
 - Worn or carried or included in personal baggage; or
 - Part of a household move
 - Personal effect exemptions do not apply to live specimens
 - These still require permits
 - The exemption does NOT apply for Appendix-I specimens when a person obtains a specimen in a country other than his/her country of usual residence, and returns home with it
 - This is considered to be an import



Red-crowned Parrots



Elephant ivory jewelry

The exemption does NOT apply to Appendix-II specimens when

- a) The specimen was acquired in the State where it was removed from the wild and which is not the person's State of usual residence
- b) The specimen is being imported into the owner's State of usual residence
- c) The State where removal from the wild occurred requires the issuance of an export permit before export
- d) In these cases an export permit is required

For Appendix III specimens, all personal or household effects are exempt from the provisions of the Convention. No CITES documentation is required.



Walrus (*Odobenus rosmarus*)



Walrus Ivory product

Special exemptions per person (Resolution Conf. 13.7 Rev. CoP16)

Caviar: maximum 125 grams, container has to be labeled in accordance with Resolution Conf. 12.7 (Rev. CoP16)



Rain sticks of Cactaceae: up to three



Specimens of crocodilian species: up to four



Queen conch (*Strombus gigas*) shells : up to three



Giant clams (*Tridacnidae*) : three dead specimens (or 3 x 2 matching halves), no more than 3 kg



Seahorses (*Hippocampuspp*) : four specimens



Tourist Souvenirs

The term 'tourist souvenir specimen' applies only to personal and household effects acquired outside a person's State of usual residence. The term 'tourist souvenir specimen' does not apply to live specimens. Tourist souvenir specimens of species listed in Appendix I should not be exempted from the usual CITES provisions for Appendix-I species. Sale of tourist souvenirs of Appendix-I species in places of international departure/arrival that are beyond Customs controls should be prohibited.



Made of Frog skin



Made of Elephant Ivory



Made of Tortoise shell

Captive-bred or Artificially Propagated

Appendix-I artificially propagated plant and captive-bred animal specimens produced for commercial purposes can be traded. If a Management Authority is satisfied that a specimen of an Appendix-II or -III species has been captive-bred or artificially propagated for any purpose, or an Appendix-I specimen has been bred or propagated for non-commercial purposes, a certificate stating this can be accepted.

Appendix-I Species in Registered Commercial Captive Breeding Operations

Reptiles :

- *Alligator sinensis* (1/2)
- *Crocodylus acutus* (2/3)
- *Crocodylus moreletii* (1/3)
- *Crocodylus niloticus* (1/1)
- *Crocodylus porosus* (4/18)
- *Crocodylus rhombifer* (1/1)
- *Crocodylus siamensis* (3/27)

Mammals :

- *Acinonyx jubatus* (1/1)

Fish :

- *Scleropages formosus* (3/94)
- *Pangasianodon gigas* (1/1)

Birds :

- *Cacatua haematuropygia* (1/1)
- *Cacatua moluccensis* (1/2)
- *Caloenas nicobarica* (1/1)
- *Eos histrio* (1/1)
- *Falco jugger* (1/1)
- *Falco plegrinoides* (1/1)
- *Falco peregrinus* (8/24)
- *F. p. anatum* (1/1)
- *F. p. pealei* (2/2)
- *Falco rusticolus* (6/23)
- *Guarouba guarouba* (2/2)
- *Psephotus dissimilis* (1/1)
- *Tragopan caboti* (1/1)

(countries / operations)

Exchanged between Registered Scientific Institutions

There is provision to exempt the donation or exchange of certain types of scientific material if such specimens are being transferred between scientists or scientific institutions registered by a Management Authority of their State. This applies only to herbarium specimens, live plant material, and preserved, dried or embedded museum specimens.

The conditions that apply are specified in Resolution Conf. 11.15 (Rev. CoP12)

- The Management Authority of the State concerned should, upon advice of the Scientific Authority, register the scientific institution with the Secretariat, and is given a registration number.

The container in which the specimens are shipped should carry a label indicating:

- the type of specimens
- the name and address of the exporting institution, and
- the codes of the exporting and importing institution



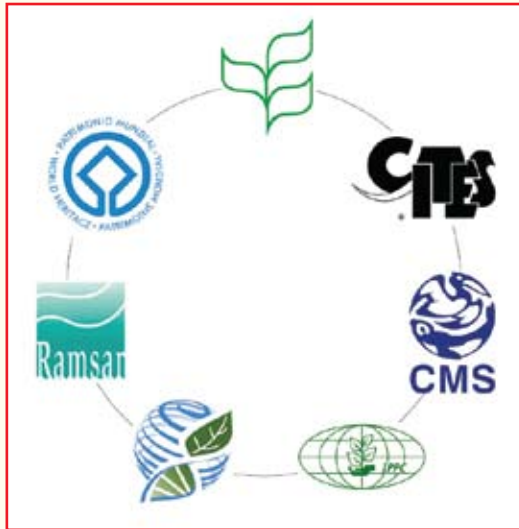
Traveling Exhibitions

A Management Authority may waive and allow the movement of specimens in a travelling zoo, circus, plant exhibition or other travelling exhibition provided that three conditions are met:

1. Full details are registered with that Management Authority.
2. The specimens are either pre-Convention or captive-bred/artificially propagated.
3. Live specimens are transported in a manner that minimizes injury etc.

Biodiversity Liaison Group

The Liaison Group of Biodiversity-related Conventions was established in 2002 pursuant to CBD Decision VII/26. It currently comprises the heads of the secretariats of the seven biodiversity-related conventions (CBD, CITES, CMS, IPCC, ITPGR, Ramsar and WHC). The Group's aims are to explore opportunities for collaboration and increased coordination, and to exchange information.



The International Consortium On Combating Wildlife Crime (ICCWC)

ICCWC is the collaborative effort by five inter-governmental organizations working to bring coordinated support to the national wildlife law enforcement agencies and to the sub-regional and regional networks that, on a daily basis, act in defense of natural resources.

The emphasis of ICCWC's approach is on building long-term capacity among national agencies responsible for wildlife law enforcement, and to provide these authorities with the tools and services that they need to combat wildlife crime effectively.

ICCWC is comprised of the CITES Secretariat, INTERPOL, the United Nations Office on Drugs and Crime (UNODC), the World Bank and the World Customs Organization (WCO). The CITES Secretariat chairs the alliance. For more information on ICCWC, see <https://cites.org/eng/prog/iccwc.php>. For more details on ICCWC tools and services available through ICCWC partner agencies, see <https://cites.org/eng/prog/iccwc.php/Tools>

Guidelines on methods and procedures for ivory sampling and laboratory analysis

In support of the deployment of forensic technology to combat elephant poaching, ICCWC has developed 'Guidelines on methods and procedures for ivory sampling and laboratory analysis', together with experts from around the world. Led by the United Nations Office on Drugs and Crime (UNODC) on behalf of ICCWC, the Guidelines are aimed at first responders, investigators, law enforcement officials, forensic scientists, prosecutors and the judiciary. Their purpose is to facilitate the use of forensic science to the fullest extent possible in order to combat wildlife crime, and in particular, to combat the trade in illegal ivory through the provision of guidance to support transnational criminal investigations and law enforcement operations. See https://www.unodc.org/documents/Wildlife/Guidelines_Ivory.pdf for more details.

ICCWC Guidelines for Timber Sampling and Analysis

ICCWC is currently developing similar guidelines for timber sampling and analysis. Ongoing work by ICCWC will also contribute to Decisions 18.78 and 16.89 adopted at the 16th meeting of the CITES Conference of the Parties (COP16) as well as Recommendations adopted at the 65th Meeting of the CITES Standing Committee (SC65) as follows:

- Decision 16.78 The Secretariat shall, subject to external funding: b) examine and advise about existing DNA-based and forensic identification techniques for sourcing and ageing ivory, identify relevant forensic facilities and research institutions, and consider the need for further research in these areas;
- Decision 16.89 The Secretariat shall: b) subject to external funding, develop, in conjunction with relevant institutions and experts, a manual containing guidelines on best practices, protocols and operational procedures, that will promote the use of wildlife forensic technology;
- Recommendations e) and f) arising from SC65 Doc. 42.1: The Standing Committee: e) encourage all Parties to make full use of the “Guidelines for forensic methods and procedures of ivory sampling and analysis” developed by UNODC, to promote the use of forensic analysis to the fullest extent possible to combat the illegal ivory trade; f) request the Secretariat to compile a list of appropriate forensic-analysis facilities capable of reliably determining the age or origin of ivory, or both, for distribution to the Parties;

Useful Resources

- **CITES Website** (<https://cites.org>) is a comprehensive resource on the CITES regulations. It also houses a wealth of useful information and tools for CITES implementation.
- **CITES Checklist** (<http://checklist.cites.org/>) is the official database of CITES-listed species. It allows the users to search through over 35,000 species of plants and animals to check their degree of regulation under CITES, as well as the history of CITES listings. Species+ (<http://www.speciesplus.net/>) is a similar database, which also allows comparison of species under CITES and the Convention of Migratory Species (CMS).
- **CITES Wiki identification manual** (https://cites.org/eng/resources/wiki_id.php) is a collection of data sheets designed to help identify various species of fauna and flora with drawings (black and white), photographs, maps and concise descriptions. It helps CITES authorities in identifying CITES-listed specimens.
- **CITES Trade database** (<http://trade.cites.org/>) is a database of trade transactions in CITES-listed species, based on submissions by Parties (through their annual reports). The CITES Trade dashboard (<http://dashboards.cites.org/>) allows users to create visual guides (graphs, etc.) on trade trends.
- **CITES Virtual College** (<https://cites.unia.es/>) is a one-stop shop providing essential resource to enhance capacities of Parties, increase awareness of the Convention and provide learning and training materials on CITES.

Chapter IV

CITES Permit Management in Bangladesh

- ★ **Ratification : 20/11/1981**
- ★ **Entry into force : 18/02/1982**



Management Authority

- ◆ The Chief Conservator of Forests, (Chief Wildlife Warden)
- ◆ Conservator of Forests, Wildlife & Nature Conservation Circle (Additional Chief Wildlife Warden)

Scientific Authority

- ◆ Bangladesh Wildlife Advisory Board supported by Technical Expert Committee.

Cites Permit Certificate of Bangladesh

As management authority, the Chief Conservator of Forests, Bangladesh forest Department sign the CITES permit certificate of Bangladesh for export of any CITES listed species.

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA		<input checked="" type="checkbox"/> EXPORT	1. ORIGINAL PERMIT CERTIFICATE NO.
		<input type="checkbox"/> RE-EXPORT	262816
		<input type="checkbox"/> IMPORT	2. VALID DATE
		<input type="checkbox"/> OTHER	30 Nov 2016
3. Consignee/Exporter (Name and Address) Hasan Shahin Ahmed Pearlanes (LLC) P.O. Box-1058, Kawati Masjid Deira, Dubai, U.A.E		4. Permit/Exporter (Name and Address Country) Prince International Robson Height's (5 th Floor) 1125A JE. Ngstone, Gorkhatibarga Agartala, Chittagong, Bangladesh.	
3a. Country of issue: Dubai, U.A.E		5. Name, Address, Nationality and Country of CITES Management Authority CHIEF CONSERVATOR OF FORESTS BANGLADESH MINISTRY OF ENVIRONMENT AND FOREST DHAKA-1200 BANGLADESH	
3b. Special Condition		6.	
For the animals, this permit is valid if the transport conditions conform to the Guidelines for Transport of live Animals or in the case of air transport, to the IATA Live Animals Regulations.			
5a. Purpose of the transaction	5b. Security Stamp No.		
5a. Wild.	5b. 80 9118416		
7a. Scientific Name (Genus and species) and Common name of animal or plant	7b. Description of part of specimen, including scientific name or number (sp. / var. / etc.)	10. Appends to: and nature	11. Quantity, number of specimens, and or net weight
7a. <i>Agave agave</i> Agave Wood	7b. Agave Wood Chips	10. 4 "A"	11. 4000 lbs (1814.36 kg)
9a. <i>Agave agave</i>	9b.	12. Country of origin BANGLADESH	13. Permit to and date
9a. <i>Agave agave</i>	9b.	12. Country of origin	13. Permit to and date
12. This permit is issued by: The Chief Conservator of Forests Forest Department Ministry of Environment & Forest Bangladesh.			
Dhaka, 30 September 2016			
Name, Date		Title, Name and Official Seal	
14. Export Endorsement: Back (Code) A B See Back 10		15. Bill of Lading / Air way bill number	
Port of Export		Date	
Date		Signature	
Date		Official Stamp and Seal	

14. Back 14 is to be filled up and signed by the Custom Authority at the port of exportation.

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The Species of Bangladesh are Included in Cites Appendices

Order	Family	English Name	Scientific Name	Bengali Name	CITES Status (Appendices)	Wildlife (Conservation and Security) Act, 2012 (Schedules)	Global Status
Mammal							
Proboscidea	Elephantidae	Elephant	<i>Elephas maximus</i>	হাতি	I	I	EN
Sirenia	Dugongidae	Dugong	<i>Dugong dugon</i>	ডুগং	I	I	VU
Scandentia	Tupauidae	Tree Shrew	<i>Tupaia belangeri</i>	গেছো চুঁছে	II	I	LC
Primates	Cercopithecoidea	Bengal Slow Loris	<i>Nycticebus bengalensis</i>	লজ্জাবতী বানর	I	I	VU
		Rhesus Macaque	<i>Macaca mulatta</i>	রেসাস বানর	II	I	LC
		Stump Tailed Macaque	<i>Macaca arctoides</i>	খাট্টোলোজি বানর	II	I	VU
		Assamese Macaque	<i>Macaca assamensis</i>	আসামি বানর	II	I	NT
		Crab-eating/Long-tailed Macaque	<i>Macaca fascicularis</i>	কঁকড়ভুক বানর/ লম্বলেজি বানর	II	I	LC
		Pig-tailed Macaque	<i>Macaca leonina</i>	উল্টোলোজি বানর	II	I	VU
		Common Langur	<i>Semnopithecus entellus</i>	বড় হনুমান	I	I	LC
		Phayre's Leaf Monkey/Langur	<i>Trachypithecus phayrei</i>	চশমাপরা হনুমান	II	I	EN
		Capped Langur	<i>Trachypithecus pileatus</i>	মুখপোড়া হনুমান	I	I	VU
		Hylodidae	Hoolock Gibbon	<i>Hoolock hoolock</i>	উল্লুক	I	I
Rodentia	Sciuridae	Malayan Giant Squirrel	<i>Ratufa bicolor</i>	বড় কাঠবিড়ালী	II	I	NT
Lagomorpha	Leporidae	Hipster Hare	<i>Caprolagus hispidus</i>	হিপসিড খরগোশ	I	I	EN
Chiroptera	Pteropodidae	Indian Flying Fox	<i>Pteropus giganteus</i>	কলাবাদুড়	II	I	LC
		Indian Pangolin	<i>Manis crassicaudata</i>	ইন্ডিয়ান বনরুই	II	I	EN
Pholidota	Manidae	Malayan Pangolin	<i>Manis javanica</i>	মালয়ান বনরুই	II	I	CR
		Chinese Pangolin	<i>Manis pentadactyla</i>	চাইনা বনরুই	II	I	CR
Carnivora	Felidae	Asian Golden Cat	<i>Catopuma temminckii</i>	সোনালি বিড়াল	I	I	NT
		Jungle Cat	<i>Felis chaus</i>	বন বিড়াল	II	I	LC
		Clouded Leopard	<i>Neofelis nebulosa</i>	মেঘছাপা চিতা/লাম চিতা	I	I	VU
		Leopard	<i>Panthera pardus</i>	চিতা বাঘ	I	I	NT
		Tiger	<i>Panthera tigris</i>	বাঘ	I	I	EN
		Marbled Cat	<i>Pardofelis marmorata</i>	মার্বেল বিড়াল	I	I	VU

	Leopard Cat	<i>Prionailurus bengalensis</i>	চিতা বিড়াল	I	I	LC
	Fishing Cat	<i>Prionailurus viverrinus</i>	মেছো বিড়াল	II	I	EN
Viverridae	Large Indian Civet	<i>Viverra zibetha</i>	বড় বাগদাশ	III	I	NT
	Small Indian Civet	<i>Viverricula indica</i>	খাটশ/ ছোট বাগদাশ	III	I	LC
	Bear Cat/ Binturong	<i>Arctictis binturong</i>	বিন্টুরাং	III	I	VU
	Himalayan Palm Civet	<i>Paguma larvata</i>	হিমালয়ী বাগদাশ	III	I	LC
	Common Palm Civet	<i>Paradoxurus hermaphroditus</i>	পাতি বাগদাশ	III	I	LC
Herpestidae	Common Mongoose	<i>Herpestes edwardsi</i>	পাতি বেজি/নেইল	III	I	LC
	Crab-eating Mongoose	<i>Herpestes urva</i>	কঁকড়াভুক বেজি	III	I	LC
Canidae	Jackal	<i>Canis aureus</i>	পাতি শিয়াল	III	I	LC
	Asiatic Wild Dog	<i>Cuon alpinus</i>	রামকুড়া	II	I	EN
Mustelidae	Bengal Fox	<i>Vulpes bengalensis</i>	খেক শিয়াল	III	II	LC
	Short-clawed Otter	<i>Aonyx cinerea</i>	ছোটনখী ভৌদর	II	I	VU
	Common Otter	<i>Lutra lutra</i>	পাতি ভৌদর	I	I	NT
	Smooth-coated Otter	<i>Lutrogale perspicillata</i>	মসুন ভৌদর	II	I	VU
Ursidae	Sun Bear	<i>Helarctos malayanus</i>	সূর্যমুখী ভালুক	I	I	VU
	Sloth Bear	<i>Melursus ursinus</i>	শ্লথ ভালুক	I	I	VU
Artiodactyla	Asiatic Black-Bear	<i>Ursus thibetanus</i>	কালো ভালুক	I	I	VU
	Serow	<i>Carpicornis sumatraensis</i>	বন ছাগল	I	I	VU
Cetacea	Hog Deer	<i>Axis porcinus</i>	প্যারা হরিণ	III	I	EN
	Bryde's Whale	<i>Balaenoptera edeni</i>	ব্রাইডস তিমি		I	DD
	Fin-backed Whale	<i>Balaenoptera physalus</i>	ফিন তিমি	I	I	EN
	Blue Whale	<i>Balaenoptera musculus</i>	নীল তিমি	I	I	EN
	Humpbacked Whale	<i>Megaptera novaeangliae</i>	কুঞ্জো তিমি	I	I	LC
	Pygmy Sperm Whale	<i>Kogia breviceps</i>	কমন স্পার্ম তিমি	II	I	DD
	Dwarf Sperm Whale	<i>Koiga sima</i>	খাটো স্পার্ম তিমি	II	I	DD
	Atlantic Dolphin	<i>Delphinus delphis</i>	আটলান্টিক ডলফিন	II	I	LC
	Short-finned pilot Whale	<i>Globicephala macrorhynchus</i>	খাটো পাখা পাইলট তিমি	II	I	DD
	Irrawaddy Dolphin	<i>Orcaella brevirostris</i>	ইরাবতী ডলফিন	I	I	VU
Delphinidae	Killer Whale	<i>Orcinus orca</i>	ঘাতক তিমি	II	I	DD
	Melon-headed Whale	<i>Peponocephala electra</i>	ফুটিমাথা তিমি	II	I	LC

			False Killer Whale	<i>Pseudorca crassidens</i>	ছদ্মঘাতক তিমি	II	I	DD
			Indo-Pacific Humpbacked Dolphin	<i>Sousa chinensis</i>	গোলাপী তিমি	I	I	NT
			Pantropical Spotted Dolphin	<i>Stenella attenuata</i>	চিতা ডলফিন	II	I	LC
			Spinner Dolphin	<i>Stenella longirostris</i>	ঘূর্ণী ডলফিন	II	I	DD
			Striped Dolphin	<i>Stenella coeruleoalba</i>	ডোরাকাটা ডলফিন	II	I	LC
			Indo-Pacific bottlenose dolphin	<i>Tursiops aduncus</i>	বোতল নাসা ডলফিন	II	I	DD
			Bottle nosed Dolphin	<i>Tursiops truncatus</i>	বোতল নাসা ডলফিন	II	I	LC
			Finless Porpoise	<i>Neophocaena phocaenoides</i>	পাখনাহীন সমুদ্র শুস্ক	I	I	VU
			Gangetic River Dolphin	<i>Platanista gangetica</i>	গাঙ শুস্ক	I	I	EN
			Aves					
Anseriformes	Anatidae		Baikal Teal	<i>Anas formosa</i>	বৈকাল তিলিহাঁস	II	I	LC
			Comb Duck	<i>Sarkidiornis melanotos</i>	ঝুঁটি হাঁস	II	I	LC
Charadriiformes	Dendrocygnidae		Fulvous Whistling Duck	<i>Dendrocygna bicolor</i>	রাজ সরালি	III	I	LC
Ciconiiformes	Scolopacidae		Nordmann's Greenshank	<i>Tringa guttifer</i>	নর্ডম্যান সবুজ পা	I	I	EN
	Cyprinidae		Black Stork	<i>Ciconia nigra</i>	কালো মানিকজোড়	II	I	LC
	Threskiornithidae		Eurasian Spoonbill	<i>Platalea leucorodia</i>	ইউরেশিও চামচঠুটি	II	I	LC
Coraciiformes	Bucerotidae		Oriental Pied Hornbill	<i>Anthracoceros albirostris</i>	পাকড়া ধলেশ	II	I	LC
			Great Hornbill	<i>Buceros bicornis</i>	রাজ ধলেশ	I	I	NT
			Wreathed Hornbill	<i>Rhyticeros undulatus</i>	পাতঠুটি ধলেশ	II	I	LC
Falconiformes	Falconidae		Amur Falcon	<i>Falco amurensis</i>	আমুর শাহীন	II	I	LC
			Saker Falcon	<i>Falco cherrug</i>	সাকের শাহীন	II	I	EN
			Red-necked Falcon	<i>Falco chicquera</i>	লালঘাড় শাহীন	II	I	NT
			Laggar Falcon	<i>Falco jugger</i>	লেগার শাহীন	I	I	NT
			Lesser Kestrel	<i>Falco naumanni</i>	ছোট কেস্ট্রেল	II	I	LC
			Peregrine Falcon	<i>Falco peregrinus</i>	পেরিগ্রিন শাহীন	I	I	LC
			Oriental Hobby	<i>Falco severus</i>	উদয়ী টিকশাহীন	II	I	LC
			Eurasian Hobby	<i>Falco subbuteo</i>	ইউরেশিও টিকশাহীন	II	I	LC
			Common Kestrel	<i>Falco tinnunculus</i>	পাতি কেস্ট্রেল	II	I	LC
	Accipitridae		Asian Imperial Eagle	<i>Aquila heliaca</i>	এশিয়ান শাহী ঈগল	I	I	VU
			White-tailed Eagle	<i>Haliaeetus albicilla</i>	ধলালেজ ঈগল	I	I	LC

Galliformes	Phasianidae	Kalij Pheasant	<i>Lophura leucomelanos</i>	কলা মথুরা	III	I	LC
Gruiformes	Gruidae	Grey Peacock- Pheasant	<i>Polyplectron bicalcaratum</i>	মেটে কঠমৌর	II	I	LC
		Sarus Crane	<i>Grus antigone</i>	দেশি সারস	II	I	VU
Passeriformes/ Psittaciformes	Sturnidae Psittacidae	Demoiselle Crane	<i>Anthropoides virgo</i>	ডেমোজিল সারস	II	I	LC
		Hill Myna	<i>Gracula religiosa</i>	পাহাড়ী ময়না	II	I	LC
		Indian Hanging Parrot	<i>Loriculus vernalis</i>	বাসন্তী লটকন তোতা	II	I	LC
		Rose-ringed Parakeet	<i>Psittacula krameri</i>	টিয়া	II	II	LC
		Red-breasted Parakeet	<i>Psittacula alexandri</i>	মদনা টিয়া	II	I	NT
		Plum-headed Parakeet	<i>Psittacula cyanocephala</i>	লালমাথা টিয়া	II	I	LC
		Alexandrine Parakeet	<i>Psittacula eupatria</i>	চন্দনা টিয়া	II	I	NT
		Blossom-headed Parakeet	<i>Psittacula roseata</i>	ফুলমাথা টিয়া	II	I	NT
		Barn Owl	<i>Tyto alba</i>	লক্ষ্মী পোঁচ	II	I	LC
		Collared Scops Owl	<i>Onus bakkamoena</i>	ককী নিমপোঁচ	II	I	LC
Strigiformes	Strigidae	Mountain Scops Owl	<i>Onus spilocephalus</i>	পাহাড়ী নিমপোঁচ	II	I	LC
		Oriental Scops Owl	<i>Onus sunia</i>	উদয়ী নিমপোঁচ	II	I	LC
		Dusky Eagle-Owl	<i>Bubo coromandus</i>	মেটে ছতোমপোঁচ	II	I	LC
		Spot-bellied Eagle-Owl	<i>Bubo nipalensis</i>	চিতিপেট ছতোমপোঁচ	II	I	LC
		Tawny Fish Owl	<i>Ketupa flavipes</i>	তামাটে মেছোপোঁচ	II	I	LC
		Buffy Fish Owl	<i>Ketupa ketupu</i>	হলদে মেছোপোঁচ	II	I	LC
		Brown Fish Owl	<i>Ketupa zeylonensis</i>	খয়রা মেছোপোঁচ	II	I	LC
		Brown Wood Owl	<i>Strix leptogrammica</i>	খয়রা গাছপোঁচ	II	I	LC
		Collared Owlet	<i>Glaucidium brodiei</i>	দাগিয়াড় কুটিপোঁচ	II	I	LC
		Asian Banded Owlet	<i>Glaucidium cuculoides</i>	এশিও দাগিপোঁচ	II	I	LC
		Spotted Owlet	<i>Athene brama</i>	ককী কুটিপোঁচ	II	I	LC
		Brown Hawk-Owl	<i>Ninox scutulata</i>	খয়রা শিকরোপোঁচ	II	I	LC
		Short-eared Owl	<i>Asio flammeus</i>	ছোটকান পোঁচ	II	I	LC
		Hodgson's Frogmouth	<i>Batrachostomus hodgsoni</i>	হজসনি ব্যাঙমুখো	II	I	LC
		Eurostodidae	Caprimulgidae	Great Eared Nightjar	<i>Eurostodopus macrotis</i>	বড় কানচরা	II
Savanna Nightjar	<i>Caprimulgus affinis</i>			মেঠৌ রাতচরা	II	I	LC
		Indian Nightjar	<i>Caprimulgus asiaticus</i>	দেশি রাতচরা	II	I	LC
		Grey Nightjar	<i>Caprimulgus indicus</i>	মেটে রাতচরা	II	I	LC
		Large-tailed Nightjar	<i>Caprimulgus macrurus</i>	লেঞ্জা রাতচরা	II	I	LC

Amphibia									
Anura	Dicroglossidae	Green Frog	<i>Euphyctis hexadactylus</i>	সবুজ বাঙ	II	I	LC		
		Indian Bull Frog	<i>Hoplobatrachus tigerinus</i>	সোনা বাঙ	II	I	LC		
	Reptiles								
Testudines	Testudinidae	Elongated Tortoise	<i>Indotestudo elongata</i>	হলুদ পাহাড়ি কচ্ছপ	II	I	EN		
	Geoemydidae	Asian Giant Tortoise	<i>Manouria emys</i>	হলুদ পাহাড়ি কচ্ছপ	II	I	EN		
		River Terrapin	<i>Batagur baska</i>	বড় কাইট	I	I	CR		
		Three-Striped Roofed Turtle	<i>Batagur dhongoka</i>	ডিবা কাছিম/ত্রিরেখকফ কাছিম	II	I	EN		
		Red-Crowned Roofed Turtle	<i>Batagur kachuga</i>	আদি কড়ি কাইট	II	I	CR		
		Brown-roofed Turtle	<i>Pangshura smithii</i>	ভাইটাল কাইট	II	I	NT		
		Sylhet Roofed Turtle	<i>Pangshura sylhetensis</i>	সিলেটি কড়ি কাইট	II	I	EN		
		Indian Roofed Turtle	<i>Pangshura tecta</i>	কড়ি কাইট	I	I	LC		
		Indian Tent Turtle	<i>Pangshura tentoria</i>	মাঝারি কাইট	I	I	LC		
		Asian Box Turtle	<i>Cuora amboinensis</i>	ডিবা কাছিম	II	I	VU		
		Asian Leaf Turtle	<i>Cyclenys dentata</i>	এশিয়ান পাতা কাছিম	II	I	NT		
		Oldham's Leaf Turtle	<i>Cyclenys oldhamii</i>	পাতা কাছিম	II	I	Not evaluated		
	Trionychidae	Ganges Soft-shelled Turtle	<i>Nilssonina gangetica</i>	গঙ্গা কাছিম	I	I	VU		
		Peacock Soft-shelled Turtle	<i>Nilssonina hurum</i>	ধুম কাছিম	I	I	VU		
		Bostami Turtle/Black Soft-shell Turtle	<i>Nilssonina nigricans</i>	বোস্তামি কাছিম	I	I	Extinct in Wild		
		Narrow headed Soft-shelled Turtle	<i>Chitra indica</i>	চিত্রা কাছিম	II	I	EN		
		Asian Giant Soft-shelled Turtle	<i>Pelochelys cantorii</i>	জঁতা কাছিম	II	I	EN		
		Indian Flap-shelled Turtle	<i>Lissemys punctata</i>	সুন্দি কাছিম		II	LC		
	Cheloniidae	Loggerhead Sea Turtle	<i>Caretta caretta</i>	আটোমাথা সাগর কাছিম	I	I	EN		
		Green Turtle	<i>Chelonia mydas</i>	সবুজ কাছিম	I	I	EN		
		Hawksbill Sea Turtle	<i>Eretmochelys imbricata</i>	ঈগলঠুঁটি সাগর কাছিম	I	I	CR		
		Olive Ridley Sea Turtle	<i>Lepidochelys olivacea</i>	জলপাইরুড়া সাগর কাছিম	I	I	VU		
	Dermocheilidae	Leatherback Sea Turtle	<i>Dermocheilus coriacea</i>	পুরুচর্ম পৃষ্ঠ সাগর কাছিম	I	I	VU		
	Varanidae	Yellow Monitor	<i>Varanus flavescens</i>	সোনাগুই	I	I	LC		
		Water Monitor	<i>Varanus salvator</i>	কাগো গুই	II	I	LC		
		Bengal Monitor	<i>Varanus bengalensis</i>	গুইসাপ	I	II	LC		

	Boidae	Common Sand Boa	<i>Gongylophis conicus</i>	বালু বোড়া	II	I	Not evaluated
		Rock Python	<i>Python molurus</i>	অজগর	II	II	VU
		Reticulated Python	<i>Python reticulatus</i>	অজগর/গোলবাহার	II	I	Not evaluated
	Colubridae	Olive Keelback	<i>Atretium schistosomum</i>	মাইত্রী সাপ	III	I	LC
		Dog-faced water Snake	<i>Cerberus rhynchops</i>	জলবোড়া সাপ	III	I	LC
		India Rat Snake	<i>Ptyas mucosus</i>	দারাজ	II	I	Not evaluated
		Checkered Keelback	<i>Xenochrophis piscator</i>	তৌড়া সাপ	III	I	Not evaluated
Crocodylia	Crocodylidae	Marsh Crocodile	<i>Crocodylus palustris</i>	মিঠা পানির কুমির	I	I	VU
		Saltwater Crocodile	<i>Crocodylus porosus</i>	লোনো পানির কুমির	I	I	LC
	Gavialidae	Gharial	<i>Gavialis gangeticus</i>	ঘড়িয়াল	I	I	CR
Elapidae	Hydrophidae	Spectacled Cobra	<i>Naja naja/ Naja kaouthia</i>	ফুল গোখরা	II	II	LC
		King Cobra	<i>Ophiophagus hannah</i>	পদ্ম গোখরা/রাজ গোখরা	II	II	VU
	Viperidae	Russell's Viper	<i>Daboia siamensis</i>	চন্দ্রবোড়া	III	II	LC
		Fish					
Squaliformes	Sphyrnidae	Scalloped Hammerhead	<i>Sphyrna lewini</i>	জুলিয়া মংগর	II	I	EN
		Smooth Hammer-head Shark	<i>Sphyrna zygaena</i>	হাতুরী হাঙ্গর	II	I	VU
	Rhincodontidae	Whale Shark	<i>Rhincodon typus</i>	তিম হাঙ্গর	II	I	VU
	Pristidae	Long Comb sawfish	<i>Pristis zijsron</i>	সবুজ করাতি হাঙ্গর	I	I	CR
		Large Tooth Sawfish	<i>Pristis microdon</i>	করাতি হাঙ্গর	I	I	CR
		Pointed Sawfish	<i>Anoxypristis cuspidata</i>	করাতি হাঙ্গর	I	I	EN

** Abbreviation: LC - Least Concern, VU - Vulnerable, NT – Near Threatened, EN - Endangered, CR - Critically Endangered, DD - Data Deficient

Chapter V

Wildlife Crime as Transnational Organised Crime

"**Transnational Crime**" includes criminal offences which directly or indirectly involve more than one country.

Groups involved in such transnational crime vary considerably in structure, strength, size, geographical range, and the scope and diversity of their operations. Operating at the international level, they usually have a complex organisational structure run by a group of people acting together to commit one or more serious crimes with the purpose of obtaining, directly or indirectly, an economic or a material benefit. "Money laundering" or the recycling of illicitly obtained money has an important place in the activities of such a group.

Globalisation as a Driving Force for Transnational Organised Crime

Increasing globalisation beginning in the 1990s has helped criminal organisations expand their activities and gain global reach. Globalisation of financial, commercial, transportation and communications networks has enabled buyers and sellers to locate each other—often without actual physical contact—identify points of common interest and establish terms of co-operation.

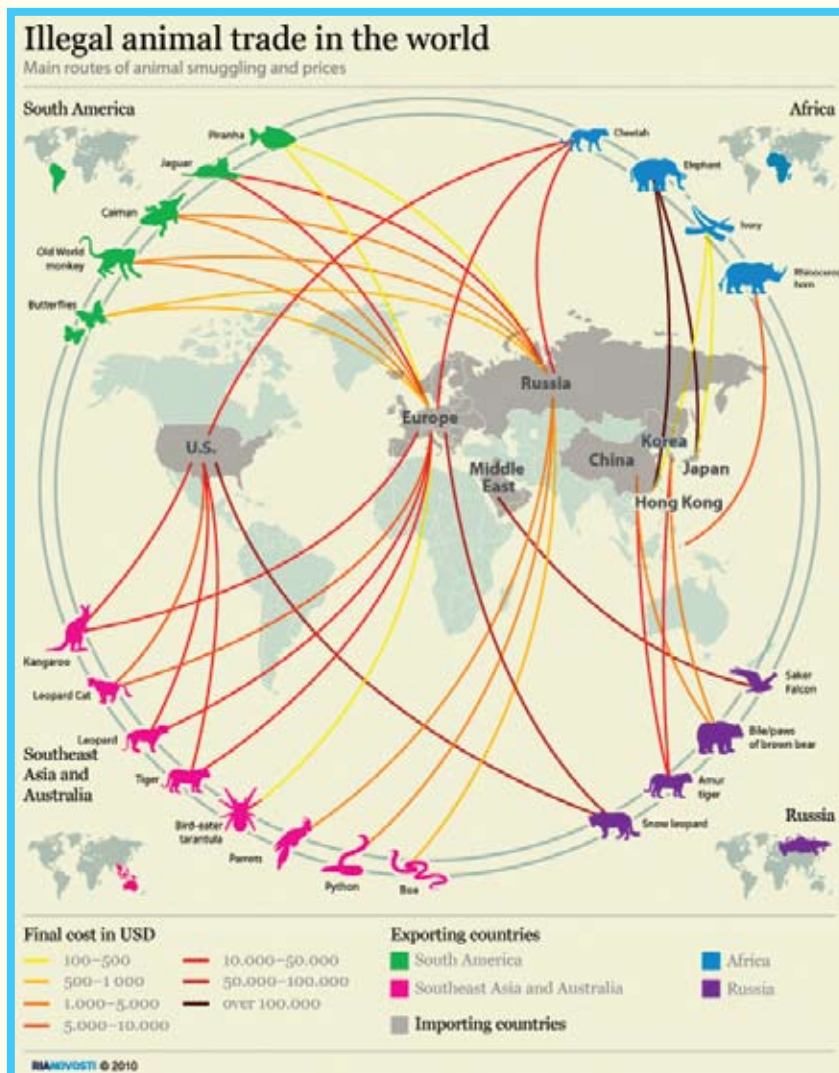
In today's now world, the connectivity and communication among different parts of the world is easy and cheap. It is believed that these benefits of globalisation, including those such as expansion of trade and relaxation of stricter border controls, have also been effectively utilised by criminal networks to boost their criminal enterprise. Such transnational criminal organisations have also exploited expanding financial markets and rapid technological developments. In effect, such crime networks also indulge in a diverse range of criminal activities, benefiting from an in-depth understanding of the enforcement systems in place and the ease and ability to take risks to achieve their goals. The globalised world, with shrinking barriers, also aids the linkages between such organised criminal endeavours. The internet, as a virtual market for goods and services of all kinds and a tool that connects the entire globe seamlessly is an apt illustration of this breaking of barriers.

Some Characteristics of Transnational Organised Crime

- ★ Misuse of legitimate business structures and the transport sector in particular.
- ★ Often thrives on the absence of effective governance regimes, especially in unstable political conditions, most often in the "developing world".
- ★ Reliance on international infrastructure systems (financial, commercial, transportation, and communications) that offer high anonymity and numerous access points.
- ★ May exercise significant influence on business, politics, press, public administration, and other spheres of public life.
- ★ Launder their assets through legitimate businesses.

Some examples of transnational organized crime

- ★ Drug trafficking especially in synthetic drugs
- ★ Smuggling and trafficking in human beings, especially linked to illegal immigration
- ★ Commercial fraud, especially with respect to high taxation value goods
- ★ Identity fraud, involving theft and misuse of credit card information
- ★ Counterfeiting of currency
- ★ Commodity counterfeiting and intellectual property theft
- ★ Money laundering
- ★ Illegal armaments



Chapter VI

Wildlife Crime Scenario in Bangladesh

Wildlife Trafficking

Wildlife crime can be defined as taking, possession, trade or movement, processing, consumption of wild animals and plants or their derivatives in contravention of any international, regional, or national legislation. The United Nations Office on Drugs and Crime (UNODC) included wildlife crimes in the list of Transnational Organized Crimes (TOC) in 2003. Transnational Organized Crime, as defined by the UNODC is “a structured group of three or more persons, acting together with the aim of committing one or more serious crime, in order to obtain financial or material benefit and these crimes are planned and/or committed in more than one country”. Hunting and illegal trade are the major wildlife offences. All other offences like preparation, possession, transportation, processing etc are ancillary offences. That being so, wildlife offenders can be divided into two groups - (a) the poachers or hunters who kill or capture wild animals or collect wild plants and (b) persons buying hunted and/or captured animals or its body parts or derivatives or collected plants or its parts or derivatives, for own consumption or for trade. The traders of wildlife materials constitute the most influential group of wildlife offenders and they operate in highly organized manner. Networks of such organized wildlife criminals have global presence and they make maximum commercial gain from these crimes.

Wildlife trafficking is one of the most profitable types of illegal trade in the world. INTERPOL estimated the illegal wildlife trade at approx USD 10-20 billion per year. Wildlife is usually traded for few main purposes :

- ★ Traditional Medicine
- ★ Pet trade
- ★ Zoos and Collectors
- ★ Trophies, Decorations and Luxury items
- ★ Wild Meat/Bush meat
- ★ Timber



Wildlife Trafficking Route

Target Species for Wildlife Trafficking

Following wildlife are most targeted by poachers recent days throughout the world for traditional medicine, jewelry, show piece, pet etc.



Royal Bengal Tiger, বাঘ
Panthera tigris tigris



Tiger Skin



Herbal Tonic
made
of Tiger bone



Ladies bag made
of tiger skin



Key ring with
tiger teeth



Pangolin, বনরুই
Manis crassicaudata



Pangolin scale armored coat



Asiatic Elephant, হাতি
Elephas maximus



Show piece made of elephant ivory



Jewelry made of elephant ivory



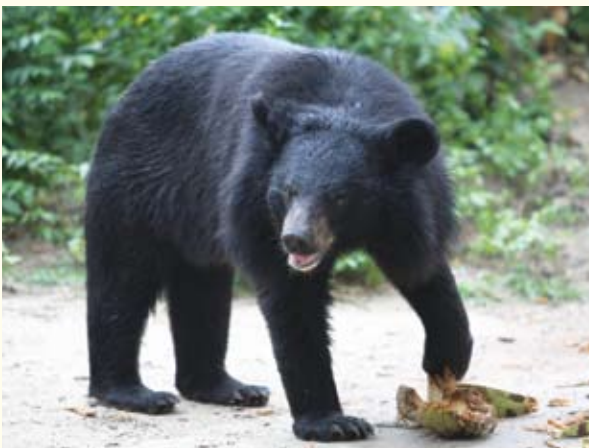
One-horned Rhinoceros, এক শিংগা গভার
Rhinoceros unicornis



Rhino Horns



Sauce made of Rhino Horn



Asiatic Black-Bear, কালো ভালুক
Ursus thibetanus



Bear bile



Bear bile products



Spotted Deer, হরিণ
Axis axis



Deer skin



Chair made of deer skin and antler



Saltwater Crocodile, লোনা পানির কুমির
Crocodylus porosus



Crocodile egg



Bag from crocodile leather



King Cobra, পদ্ম গোখরা/রাজ গোখরা
Ophiophagus hannah



Snake venom extraction



Rock Python, অজগর
Python molurus



Ladies shoe made of Python skin



Belt made of Python skin



Common Otter, ভেঁদড়
Lutra lutra



Otter Skin



Musk Deer, কস্তুরীমৃগ
Moschus cupreus



Musk Deer Gland

Other wildlife which are targeted by poachers for illegal trade. Tribal communities also hunt few of this species for skin, meat.



Jungle Cat, বন বিড়াল (*Felis chaus*)



Fishing Cat, মেছো বিড়াল (*Prionailurus viverrinus*)



Bengal Slow Loris, লজ্জাবতী বানর (*Nycticebus bengalensis*)



Rhesus Macaque, বানর (*Macaca mulatta*)



Common Langur, হনুমান (*Semnopithecus entellus*)



Phayre's Leaf Monkey, চশমাপরা হনুমান (*Trachypithecus phayrei*)



Gharial, ঘড়িয়াল (*Gavialis gangeticus*)



Tiger Shark, বাঘা হাঙ্গর (*Galeocerdo cuvier*)



Malayan Giant Squirrel, বড় কাঠবিড়ালী (*Ratufa bicolor*)



Common Palm Civet, বাগদাশা (*Paradoxurus hermaphroditus*)



Common Mongoose, বেজি (*Herpestes edwardsi*)



Jackal, শিয়াল (*Canis aureus*)



Gangetic River Dolphin, গুগু (*Platanista gangetica*)



Green Frog, সবুজ ব্যাঙ (*Euphlyctis hexadactylus*)



Sylhet Roofed Turtle, সিলেট কড়ি কাইটা (*Pangshura sylhetensis*)



Water Monitor Lizard, গুইসাপ (*Varanus salvator*)



Gecko, তক্ষক (*Gekko gekko*)



Black-headed Munia, কালো মাথা মুনিয়া (*Lonchura atricapilla*)



Purple Moorhen, কালিম (*Porphyrio porphyrio*)



White breasted Water hen, ডাহক (*Amaurornis phoenicurus*)



Oriental Pied Hornbill, কাক ধনেশ (*Anthracoceros albirostris*)



Hill Myna, পাহাড়ী ময়না (*Gracula religiosa*)



Rose-ringed Parakeet, টিয়া (*Psittacula krameri*)



Spotted Dove, তিলামুখু (*Spilopelia chinensis*)

Current Status of Wildlife Crime In Bangladesh

a) Specieswise number of seizure (2010- September 2015)

Spotted Deer	Tiger Cub	Tiger Skin	Tiger Teeth	Spotted Deer Skin	Birds	Turtle	Gecko	Others
92	03	12	04	85	7483	10588	182	955

b) Wildlife Crime Control Activities during 2010 to 2015 (Till September)

Year	Total wildlife offence	No. of case						No. Seized/ rescued wildlife				No. of offender	Present condition of cases	
		P.O.R.	U.D.O.R.	C.O.R.	Mobile court	Case in Police station	Case in RAB headquarter	Mammals	Birds	Reptiles	Amphibians			
2015 (till Sept.)	44		27		07	06	04	41	3358	5226	-		37	In 11 cases offenders get different ranges of punishment and fine, rests are under trial.
2014	68	09	19	03	28	05	04	54	1232	2200	-		146	In 35 cases offenders get different ranges of punishment and fine, rests are under trial.

2013	34	12	16	-	04	02	-	45	192	2843	-	65	In 11 cases offenders get different ranges of punishment and fine, rests are under trial.
2012	55	20	28	-	02	05	-	23	1549	2334	-	119	In 08 cases offenders get different ranges of punishment and fine, rests are under trial.
2011	23	06	16	-	-	-	01	14	778	403	-	12	In 01 case offender get 1 year imprisonment, rests are under trial.
2010	10	06	04	-	-	-	-	-	374	1040	-	06	Cases under trial.
Total	234	53	110	03	41	18	09	177	7483	14046		385	

Abbreviation : P.O.R. = Prosecution Offense Report; U.D.O.R. = Undetected Offense Report; C.O.R. = Compensation Offense Report

Summary : Total case : 234; UDOR : 110; Mobile Court : 41; COR : 03; Police station case : 18; Case in RAB headquarter : 09;

Total seized wildlife: 22,114; Total offender : 385

Photograph of some live animals and trophy seized during 2012-2015 (Till September)



Elephant Tusk seized from Jatrabari, Dhaka



Civet and Python Skin seized by Wildlife Division, Dhaka and Magistrate



Indian Hanging Parrot Seized from Dhaka



Spotted Deer Skin seized by RAB



Venison and slaughtered Migratory birds seized from Pagla, Narayangang.



Turtle Shell seized from Narayangang.



Bones of Dolphin seized from Norsingdi



WCCU seized Spotted Pond Turtle with APBN at Hazrat Shahjalal International Airport



Spotted Deer Skin seized by Wildlife Division Dhaka and Gandaria Thana, DMP



17 Cobra seized by Wildlife Division Dhaka and RAB



WCCU seized Turtle with APBN at Hazrat Shahjalal International Airport

The most common seizures of wildlife are Birds (mynas, munias, parakeets, lorikeets, water birds etc.), Geckos, Turtles and Tortoises. Main objective of offences seems to be pet trade and meat. Star tortoises and Hamilton's turtles are smuggled in from India, in very large numbers for transmission to East Asian countries. Most offences seem to be committed outside the forests where presence of the forest department is minimal. Total detection percentage of offences is not known, but offenders are not identified in 60% of detected cases (UDOR cases). Only 20% cases are decided by the courts even after 8 years, conviction rate of the total disposal is 70.65%. Mostly Six months' imprisonment and BDT 5000 fine seems to be the modal penalty.

Chapter VII

Prevention of Wildlife Offences : Identifying Early Warning Signal

As a major strategy in the fight against wildlife crime, it is important to identify and interpret early warning signs. These signs can be read by most field personnel if they have the inclination for it and spend sufficient time in the field.

For a Protected Area or any other wildlife habitat to be secure, it is essential for the field manager to establish tactical dominance over the area. While it is critical to cover the area inside the Protected Area boundaries, referred to in intelligence parlance as the “**Area of Influence**”, it is equally important to know intimately the area immediately on the periphery of such an area, known as the “**Area of Interest**”.

- ★ The first step is to establish intimate knowledge of the “Area of Influence”.
- ★ Maintaining detailed maps of neighbouring villages and habitations with important landmarks can be very vital, Similarly, a file with details of important community leaders, other influential persons, infrastructure and other places of interest will be very useful. By maintaining these over time, one can develop a clearer picture of the habits, influences, movement patterns, economic activities and key associations etc. of certain persons in the communities around the Area of Influence” and in the ‘Area of Interest’.
- ★ Identifying places of group interactions such as liquor shops, tea stalls etc. in a village can yield very important information.
- ★ If there are any known poachers or wildlife traders in such villages, any unexplained absence from their normal place of residence or a gathering at a certain place should arouse suspicion.
- ★ Agricultural fields abutting forest areas, streams and forest trails at the edge of forests should be monitored for signs of snaring, trapping etc.
- ★ Consumption patterns of cartridges for licensed guns around the Protected Areas should be carefully monitored and any sudden increase should be analysed and investigated.
- ★ Livestock kills should also be monitored, particularly with reference to the possibility of poisoning of carcasses. Any unexplained or mass mortality of domestic species should be investigated as this could be a test run of a technique before use on wildlife species.
- ★ Inside the “Area of Influence”, it is important to monitor entry and exit points.
- ★ A forest is an open resource and provides unlimited opportunities for anyone to enter it. To monitor such unwanted ingress, all forest trails leading into the forest, as also nullahs and streambeds should be monitored regularly for signs of unwanted human presence. Some trails are more preferred than others, Sometimes, the criminals might take a detour from the edge of the forest and join the trail at a later point, just to leave a false trail.
- ★ Field staff regularly patrolling forest areas should be aware of the presence and movement patterns of major species such as Tigers, leopards and Elephants in such areas. They should actively look for direct and indirect evidence of such species presence on a regular basis. Any inconsistencies should be immediately investigated.

- ★ Water bodies should be examined for signs of poisoning or of attempts at snaring or trapping around it. Sometimes, fish are killed using chemical additives. This can be detected by telltale signs of small fish floating dead on the surface. Signs of poison such as sulphur and other chemical ground on rocks near the water are also a pointer to such criminal active.
- ★ Any sign of small fires or of camping in the forest should be investigation seriously as this could be an indication of a poacher's presence in the area. Some poacher communities are experts in lighting slow fires using twigs, which does not draw attention normally.
- ★ The flight distance of animals and birds and their general demeanor in human presence is also an indicator of disturbance. In areas where hunting is common animals are generally wary and keep a larger distance between them and humans. This is also true for areas which have less frequent human visitation and this need to be factored in.



Royal Bengal Tigers in the Sundarbans

Chapter VIII

The Internet as a Tool for Illegal Wildlife Trade

The use of computer and the Internet has grown exponential over the last decade. Indeed, for many individuals it is an integral part of their daily lives. Which little more than a click of a mouse, people can communicate, trans information, engage in commerce or share any other mutual interest.

Especially with respect to bringing together commercial interests the internet as made physical location virtually redundant. Buyers and sellers can reach out to each other with ease and speed about their requirements and products, erstwhile constraints of time and space no longer being an insurmountable barrier before them. Unfortunately, wildlife criminals exploit these same technologies to offer products from threatened wildlife. Many such products are openly offered for sale on popular websites across the globe. These may include products from high profile species such as tigers, rhinoceros, elephants and marine turtles.

Recent studies by TRAFFIC have documented the growing trade in wildlife products on the internet. A TRAFFIC study published in July 2007 found 4291 advertisements for illegal wildlife products on auction sites serving mainland China, Hong Kong, and Taiwan over an eight-month period.

A 2004 study by TRAFFIC on the status of ivory trade in the United States of America also found an active internet trade in ivory, advertised as being derived from elephant tusks procured via sellers based in China. TRAFFIC found that the operators of these web-based “stores” routinely ship elephant ivory to the United States of America via express delivery service, and even offer falsely to label the shipments as containing “bone carving”.

Other reviews have also found evidence of such large scale trade on English language internet sites. For example, a one week intensive survey by the International Fund for Animal Welfare (IFAW) in January 2005 documented over 9000 wild animal products and specimens and live wild animals for sale, predominantly from species protected by law. The majority of these were offered for sale by private individuals.

Some Typical Characteristics of such Internet Based Trade are as Follows :

- ★ Legal trade in CITES listed species and derivatives. particularly for those listed in Appendix II is possible and the illegality of trade cannot be determined. Simply from an offer for sale on the Internet. Traders often take advantage of this.
- ★ Domestic trade in many species of wildlife could be legal in specific countries, even when their international trade is illegal. Offers for sale could deliberately obscure this significant fact or bury it in fine print.
- ★ There is rampant misdeclaration on the source of such products and many species could be offered for sale as "captive bred specimens" where no such facility may actually be registered with the relevant CITES authorities as required. In cases of ivory, carved specimens have also falsely been declared as pre-CITES Convention in Europe, although the actual depicted specimen on the web is certainly of very recent origin.
- ★ Auction sites which trade in wildlife have often limited voluntary information for users. Such information, if at all available, is often inadequate and difficult to access.

- ★ Typically, offers for sale usually do not mention requirements for CITES or other required documentation and when such documentation is promised, their authenticity and veracity also needs to be established.
- ★ All buyers and sellers may not be knowingly breaking the law. In the lack of clear, easily accessible information, people may unwittingly continue to be attracted to this trade.
- ★ Possibly a significant part of the trade could involve fraudulence, non delivery fraud is common for a wide range of consumer products in parts of the world and there is reason to believe that it is no different for wildlife products.
- ★ As websites have a virtual existence, it is even more difficult to track and verify products before the actual sale.
- ★ The websites could typically be hosted on servers in countries different from the source of the products they trade in, making it difficult in terms of legal jurisdiction for enforcement officials.

Bangladesh Perspective

Many websites, especially auction sites with region specific content have offered "illegal wildlife items" for sale from time to time.

Enforcement Challenges

The internet presents new and significant challenges for law enforcement across all levels. These include:

- ★ The need to track down and identify the actual face of the criminal behind such internet based wildlife offences.
- ★ Once they are indentified, a jurisdictional authority needs to be established for enforcement as often the criminal may be in a different country.
- ★ Electronic data are perishable, easily deleted manipulated and modified with little effort. Thus the collection, collation, evaluation and presentation of electronic evidence is challenge.
- ★ The need for trained and well-equipped personnel to gather evidence, investigate and prosecute these cases.
- ★ Increasing consumer awareness in key markets.

Enforcement Actions Include

- ★ Keeping track of such websites and the products they may offer.
- ★ Acting as decoy customers to explore and establish the nature of the products on offer and their specific illegality.
- ★ Identifying key players and apprehending them with evidence.
- ★ Interfacing with site managers to stop advertising of such merchandise and initiate appropriate legal action where such support is not forthcoming.

Chapter IX

Scene of Wildlife Crime

The place where a wildlife offence has been committed or a probable accident leading to wildlife mortality has occurred is referred to as a scene of crime.

As soon as any such incident is reported, the Investigating Officer (I.O), usually not below the rank of Ranger, should also inform other senior officials about the incident.

Significance of the Scene of Wildlife Crime

1. The scene of crime holds the key to successful investigation of the case. The offender is likely to leave behind **vital clues** at the scene of crime. Many critical evidences are likely to be lost if the place is overrun by a large number of people, which is often the case.
2. The **quality and quantity** of evidence available at the scene of crime are likely to change rapidly with the passage of time. Gathering of people at the scene, weather condition, light conditions etc. are some of the important factors that contribute to the destruction of much important evidence. Delay in visiting the scene of crime might affect the quality of investigation drastically.
3. **Prompt action** at the scene of crime may also lead to the arrest of culprits.
4. Promptness in reaching the scene of crime might lead to obtaining valuable information from the person who may have information related to the offence. The **first set of information** received from such persons may be very valuable in establishing the direction of the investigation while the version obtained at a later stage is likely to be modified or edited due to various other considerations.
5. It is important for the investigation officers to understand that in many wildlife offences, the carcass may have been moved, often by other carnivores etc. to a place other than where the offence was actually committed, thus further complicating the scenario. As such there can be a primary scene of crime and it is **possible to have several extensions**.
6. In order to investigate a crime successfully, it is absolutely essential for the investigation officer to **pay undivided attention** to protect, observe, process and record the scene of crime properly. Any damage, or tampering of the scene of crime, whether intentional or otherwise, would adversely affect the quality of investigation.
7. It is the job of the I.O. to **establish linkages** between the scene of crime and the suspect(s) through the circumstantial, corroborative and physical evidence. From the forensic point of view, it is only the physical evidences that provide the I.O. and the court the following information about the crime:
 - (i) Nature of crime
 - (ii) Time and place of commission
 - (iii) Targeted species
 - (iv) Manner in which the crime was committed i.e. modus operandi
 - (v) Particular weapon/tool used
 - (vi) Number and nature of persons involved (any specific group, tribe etc.)

From the interpretation and through analysis of the physical evidence, the I.O. decides about the follow up actions and the direction of investigation which may lead to recovery of the wildlife products and arrest of the suspect(s).

Processing of the Scene of Wildlife Crime

Processing of the scene of wildlife crime (SOC) is a highly systematic task for the investigating officer. The various areas under:

1. Usually, the wildlife crime related offences in the field are detected by forest staff at the level of forest guards and foresters during their patrols or on the basis of specific information. Their first step should be to ensure that onlookers and undesirable persons do not disturb the scene or end up destroying valuable evidence.
2. The senior most field official at the spot should usually assume responsibility for the crime scene. He should take necessary steps to inform the Range officer in whose jurisdiction the crime has occurred and secure the scene of crime till the arrival of the Range Officer. The actual scene of occurrence should be cordoned off.
3. Once the Range Officer or equivalent has reached the scene of crime, he should take upon himself the responsibility of securing the scene of crime and undertake investigation till such time someone else is specifically nominated for this purpose by the Divisional Forest Officer/Wildlife Warden/Field Director to investigate the crime.
4. Search boundary-On the basis of a preliminary look at the scene of crime, the I.O. should decide the search boundary. This is especially important as most wildlife offences are likely to take place in forest areas. Natural features such as mullahs, trails etc. should be included within this search boundary as these are likely to yield more evidences about the crime.
5. In cases where poisoning appears to be a strong probable cause of death, large area needs to be searched in order to detect any other dead or affected wildlife or detect possible source(s) of poisoning and secure it before any further damage is done.
6. After deciding the search boundary, the I.O. should systematically and thoroughly search the scene of occurrence.
 - (a) The time required to search the scene of crime varies considerably and depends upon several factors such as size and nature of the area to be searched complexity of crime, abundance or scarcity of physical evidences, weather and light conditions, availability of support facilities, manpower etc.
 - (b) While searching crime scene, the I.O. should not restrict his search at the eye level only as there may be many important physical evidences both below and above the eye level.
 - (c) Tree tops around the scene should be especially examined in detail as these are likely to be used as vantage points by criminal.
 - (d) The search should always be conducted by persons in pairs so that nothing is lost.
 - (e) The I.O. should mark and assign a number to each physical piece of evidence discovered during the search.
 - (f) The I.O. should not leave the scene without completing the marking, numbering, recording (photograph and sketch), collecting and packaging of

all the physical evidence. It should be ensured that at any stage of investigation, physical evidence are not damaged/destroyed or contaminated.

- (g) The chain of custody of the physical evidence should be maintained properly and recorded till these are handed over to the Forensic Science and/or Veterinary Laboratory for examination.

7. Different search methods singly or in combination may be followed by the I.O. depending upon the nature of the area to be searched. Some of these are documented here. If the area of the scene of crime is small, strip or grid patterns should be followed. When the area is of significant size, the zone method should be adopted.

8. The search parties should be clearly briefed so that they know what to look for. They must not ignore anything, however small or insignificant this may appear to be. Some of the things they may look for are:

- a. Blood spoor
- b. Cloth or other fibres, caught on bushes
- c. Footprints
- d. Tyre marks
- e. Cartridge cases
- f. Implements possibly used for carrying out the crime
- g. Places where the offender (s) may have stayed or sheltered or laid an ambush in the forest. This could be above ground, on tree branches etc. These may yield other supplementary information such as wrappers of cigarettes or bidis smoked, of newspapers in which food or any other item may have been wrapped, salt packets, etc.

9. Analysing foot or shoe prints: Barefoot or shoe impressions are found in many crime situation. In forest areas, these are likely to be found on trails, water points near the crime scene etc. and as such an active search needs to be carried out specifically for this.

- a. Evidence may be available at the scene of crime in the form of a shoe, or a foot impression in blood, mud, dust or some other medium.
- b. Shoe or barefoot impressions are unique and individualistic.
- c. Whether barefoot or shoe, the impressions may be classified in two categories:
 - i. Sunken impression created when a person walks on a soft surface such as mud and a depression results due to body weight.
 - ii. Surface impression created when a person walks on a hard surface such as a hard forest trail and leaves behind impressions which may be due to mud, blood or any other materials.
- d. At all stages of processing footprints detailed photographs, preferably in colour, should be taken. A scale (usually a metre tape) should be placed by the side of the impression while taking photographs.

- e. Upon arrest, all shoes of the suspect should also be seized and examined. The details of the shoes should be mentioned in the arrest memo.
 - f. Details of the shoes should be noted and similarly physical abnormalities of the foot should also be taken note of.
 - g. Any soil or other particles that may cling to the shoes may be matched with the soil found at the scene of crime.
 - h. The barefoot or shoe impression found at the scene of crime are compared with the impressions obtained from the suspect.
 - i. An inked impression of the sole of foot/shoe of the suspect should be obtained may be with or without socks.
10. Sketch: Once the marking and numbering is over, the I.O. should take measurements of the area and relative distances of the carcass and other physical evidences and attributes such as a nearby tree. He should then draw a sketch showing these details. Photographs and sketches are complementary to each other.
 11. Photography: “A picture is worth a thousand words”. The I.O. should ensure that the scene of crime is photographed in detail. These would include long, intermediary and close-up photographs. A metre tape or any such well known article may be placed alongside to give an idea of scale. Macro close-up photographs of individual material evidence found at the scene of crime such as nature of cuts, wounds, spent cartridges etc. may be very useful.
 12. Preliminary examination of the carcass: While conducting the search, the I.O. should search the carcass systematically and thoroughly to collect physical evidence. This would primarily include any body parts missing (e.g. could include claws, canines etc. in case of carnivores and ivory, molars, tail hairs in case of elephants). Any abnormality or unique feature that may also contribute towards establishing the unique identity of the individual animal may also be noted.
 13. An ultraviolet lamp may be used to scan the carcass to bring out evidences which may hitherto be unseen to the human eye. This is especially true for fingerprints etc.
 14. Post-mortem: After the preliminary examination by the I.O., the carcass may be subjected to post-mortem examination. The post-mortem should focus on probable cause and time of death and any special factors leading towards this. Any and every factor brought out by the I.O. during the preliminary investigation should be studied in detail during the post-mortem. Special procedures such as collection, preservation, labeling and packing of viscera, skin tissue, blood and hair samples, body fluid discharges, scats around the carcass etc. Should be carried out with care and as per established procedure. In serious crimes, it may be useful to have the post-mortem video-graphed and photographed.
 15. Use of metal detectors: Wherever there is suspicion of gunshot injuries leading to death, the use of a metal detector is highly recommended. A handheld or plate metal detector may be used on the carcass during post-mortem and during search of the crime scene. this may lead to the discovery of any remains of gunshot, spent cartridges etc. Plate metal detectors should be preferred as they provide deep search opportunities.

16. All the persons concerned with the crime including the person(s) who first noticed the crime should be interviewed and their statements recorded.
17. In case the statements yield vital information about the crime, the same should be recorded before a Forest Officer not below the rank of an Astt. Conservator of Forests or a Magistrate so that later it is admissible as evidence during prosecution.
18. The I.O. should write a detailed observation report about the scene of crime. This needs to be re-emphasised as everything should be written down, irrespective of its immediate apparent significance. The faintest ink is more lasting than the strongest memory.
19. Follow up: On the basis of the circumstantial, oral and physical evidence, the I.O. should reconstruct the scene and decide follow up actions.
20. Some forensic tools: While specialised forensic tools for identification of samples from scat, hair, meat etc., some other basic forensic tools previously used only for human related criminal offences are increasingly gaining popularity in investigation of wildlife offences.



Wildlife Crime Scene Investigation

Chapter X

Post-mortem

A post-mortem can be a very valuable tool for collecting evidence that can lead to apprehension of the offenders in a poaching case.

It is important to approach the post-mortem with an open mind. Too often, even before the carcass has been opened, people on the spot have already concluded their opinion about the cause of death. This is compounded when such opinions are voiced by senior officials. This adds pressure on the personnel responsible for conducting the post-mortem and creates an unnecessary bias.

It is also useful to have the post-mortem conducted by veterinary doctors who have previous experience and expertise of working with wildlife.

In serious cases, the post-mortem should preferably be done by a specialised team of veterinary doctors.

It should be done in a clean and sterile manner so as to avoid any contamination of probable evidences and to ensure the safety of the personnel involved. All persons conducting the post-mortem should wear surgical gloves.

Finally, a post-mortem procedure is a specialist job and should be left to suitably qualified persons. These notes are aimed to guide the understanding of the process by the personnel with a professional interest in these proceedings.

Every detail of the procedure must be dutifully recorded using a voice recorder or a note pad. Never trust these to memory or keep it pending for writing at some later stage.

Doubtful cases should also be photographed and videographed. Please remember that this can be useful for training your own staff later.

A post-mortem procedure should address the following issues

- ★ General history and management of previous ailments in case of captive animals.
- ★ General condition in which carcass was found: good photographs will be of great help.
- ★ External examination
- ★ Species
- ★ Sex
- ★ Age
- ★ General condition: healthy or otherwise, external injuries if any, swellings, punctures or lacerations, trauma wounds, sign of capture or trapping, discharge, if any, from body orifices, position of penis-extended or relaxed, skin condition, eye condition etc.
- ★ All external punctures and wounds must be fully opened and investigated in detail to understand the probable cause of such a puncture or wound.
- ★ Any stool or blood at site of death should be collected for later examination.

Rigor mortis and post-mortem changes:

- ★ A carcass takes up to 24 hours to cool down. This is governed also by the general health condition of the animal, ambient temperature and the exposure of the carcass to rain and wind.
- ★ Sometimes, body temperature may rise for some time after death, due to tissue metabolism.
- ★ Rigor mortis or stiffening of the carcass sets in early in weak and emaciated animals. Usually, this begins to appear within 1-4 hrs. after death and lasts for about 20 h or even longer in exceptional cases. When decomposition sets in the muscles soften and become reddish and watery.

Examination of Internal Organs

All parts of an organ must be examined carefully and in detail. The following should be observed:

- ★ Location and orientation
- ★ Sized and shape, including swelling, shrinkage, colour change etc., if any
- ★ Presence of abnormal fluid including blood in body cavities: quantity, consistency and color of such fluids should be noted and samples should be collected for further examination.
- ★ Nature of contents in hollow organs.
- ★ Examination of eyes, pericardium, heart, lungs, liver, kidneys, spleen, stomach and intestine should be carried out in detail.
- ★ Parasites, if any, should be recorded.
- ★ The consistency of blood in the heart should be carefully examined.
- ★ In ruminants, the rumen should be examined.
- ★ All samples should be clearly labelled.
- ★ Samples for histopathological examination
 - Tissue samples collected should be fixed in a solution of 10% buffered neutral solution. While collecting tissues, samples from different locations including some from normal portions, should be collected.
 - The fixing solution should be at least 10 times the volume of the samples.
- ★ For forensic examination, usually in cases of suspected poisoning, the samples are collected in rectified spirit or in saturated salt solution. The following generally collected:
 - Stomach contents and walls ~ 1kg
 - Intestinal contents ~ 1kg
 - Liver ~ small portion
 - Spleen ~ small portion
 - Kidney ~ small portion

Cause of death :

All deaths can be attributed to the failure of one or more of the essential pillars of life - the heart, lungs and the brain.

Common indicators of cause of death :

Lung Failure :

- Right ventricle dilated and filled with blood
- Left side of heart dilated and filled with blood
- Lung congested
- Spleen contracted

Heart Failure :

- Pale colour of carcass
- Heart contracted and empty

Brain Failure :

- Haemorrhage and infraction in brain

Electrocution :

Burn marks on points of contact and exit of electrical current

- Nature and intensity of external marks will depend on strength and duration of electrical current
- Hardening of the brain
- Endocardial haemorrhage
- Ventricular fibrillation



Wildlife Post Mortem

Chapter XI

Intelligence Gathering, Seizure Documentation and Steps During Arrest or Detention

Intelligence

Intelligence is information collected, collated, analyzed and disseminated, in an effort to anticipate, prevent or monitor criminal activity. From sporadic incidents of poaching (mainly for meat), wildlife crimes have now grown into organized criminal activity having international ramifications. Collection of intelligence about such organized criminal networks, and their activities and collation of such information on a real time basis is the need of the hour to combat wildlife crimes effectively.

Setting up an Intelligence Network to Fight Wildlife Crimes

The prevention and control of most wildlife offences is governed by the typical ground situation in which these resources are found naturally. Intelligence is a key tool in the battle against wildlife crime. Any serious effort to identify individuals and groups indulging in wildlife crime requires a systematic approach to information collection and analysis.

Intelligence gathering for law enforcement refers to the collection, collation, evaluation, analysis, and dissemination for appropriate enforcement action, of information relating to criminal or suspected criminal activities.

Simply stated, intelligence is active information which is valued for its relevance rather than its detail or accuracy. This is typically in contrast with "data" which refers to information which is precise or particular, or "fact", which typically refers to verified information.

The key thing that distinguishes intelligence from news or other information is that it is based on analysis of primary information that can be acted upon to meet a specific set of objectives. Basic information, howsoever collected, is not intelligence in the practical sense until it has undergone a series of analytical processes that determine its utility for tactical or strategic law enforcement purposes.

Intelligence is valuable as it helps pre-empt criminal action, identifies offenders and their modus operandi, provides evidence for their conviction and generally helps prepare a proactive response to crime rather than a reactive one. Intelligence refers integrally to active data as well as the process and the result of gathering and analysing such information.

Good intelligence begins by trying to understand what needs to be known.

Intelligence Gathering

Intelligence gathering is basically of two types -

- ★ **Covert intelligence:** This is the gathering of intelligence using undercover operators, informers and informants in a clandestine/secret manner.
- ★ **Overt intelligence:** This is intelligence gathered openly. The strength of this form of intelligence gathering is that it is based on facts, mostly already available and based on excellent analysis. Open and regular interaction with communities living around the protected area is as good example of such a technique.

While the collection of intelligence may be done either covertly or overtly, using human resources (HUMINT) or electronic resources (ELINT) including communications intercepts (COMINT), spy satellites (IMINT) to specialised technical methods (MASINT), it is the analysis and assessment which provides the cutting edge to such intelligence.

Source of Intelligence

The primary source of intelligence on wildlife crimes can be communities who live on the periphery of wildlife resource rich areas such as Protected Areas. These would include forest dwelling communities or those living in the neighbourhood of forests. Other sources of intelligence could be:

- ★ Persons from amongst communities/groups traditionally involved in wildlife crime.
- ★ Well meaning and motivated citizens, who may be interested in preserving biodiversity.
- ★ Paid informers or bounty hunters, interested in reward money.
- ★ Interested parties/persons who may want to seek other favours in return for information.
- ★ Other enforcement agencies.
- ★ NGOs working for conservation who in turn gather information from one or several of the sources above.

Running an Informer Network

The motivation of each of these sets of persons is very different and accordingly they need to be handled very differently. This is most critical in the running of a good intelligence network. The person running the operation, usually one individual known as the “handler”, must be able to instil quiet confidence amongst those who wish to share this information with him and must outwardly be able to encourage people to approach him freely.

On several occasions, the person providing the information chooses to remain anonymous and establishes contact on his own choice randomly and by phone or letters etc. While erratic, many times such maverick informants come up with some of the most valuable nuggets of intelligence.

The gathering of information can be done generally in two ways-Passive, where the handler waits for information of all kinds to reach him and then sifts through this to choose what is relevant, as against Active, where the field agents are guided to collect information along particular lines. A mix of both is generally the norm as the immediate significance of the information collected may not always be evident to the person collecting it in the first place.

All intelligence must feed into a database, so as to institutionalise the flow of such information and to facilitate its analysis, sharing and planning of response accordingly.

Per-requisites of the Flow of Good Intelligence

- ★ Who/where to provide information must be widely publicised and the address/telephone contact number provided must be monitored regularly. This should be regularly verified by random check by senior officers.

- ★ All information received must be screened and acted upon without delay.
- ★ Identity of the informer must be concealed if so desired by him.
- ★ Resources MUST be readily available to buy the information/provide reward whenever required.
- ★ Promises made, if any, to the informer must be fulfilled without any delay.
- ★ The person who handles the informant must enjoy the trust of the person/s providing information.
- ★ Regular contact/meetings must be maintained with local communities.

Steps Towards Organising and Intelligence Network

- ★ Do a SWOT (Strength Weakness Opportunities Threats) analysis of forest and wildlife security at local and regional level.
- ★ Based on the SWOT analysis, create special intelligence units at vulnerable locations.
- ★ Members of this unit must be carefully screened for aptitude.
- ★ Provide specialised training, equipment and incentives to such units in surveillance and interception.
- ★ Establish well-defined procedures for intelligence flow and analysis.
- ★ Identify potential informers and cultivate them.
- ★ Try and identify potential criminals, based on parameters such as past records, associations etc. Monitor their movements and associations.
- ★ Provide for adequate resources under a Secret Fund.
- ★ Conduct regular mock drills and random checks/cross-checks to verify readiness of teams and worthiness of information received.
- ★ Coordinate with other units/agencies at regional and state levels to share intelligence and work together.

Criminal Profile Directory

One of the major weaknesses identified in the prevention and control of illegal wildlife trade is the absence of a structured mechanism for collating, analysing and sharing of information on criminals engaged in such offences. A criminal profile directory is a useful tool for meeting these requirements.

The need :

- ★ Understanding ethnic groups/communities/persons/regions which are more sensitive from the point of poaching and wildlife trade.
- ★ Understanding Linkages amongst criminal groups/persons
- ★ Identifying their modus operandi
- ★ Identifying repeat offenders
- ★ Planning a response

The directory should ideally be centralised, which should be shared at various levels as per the need. Thus, while there could be a national database at the WCCU.

Elements of a criminal Profile :

- ★ Photograph, frontal and profile
- ★ Name, including alias
- ★ Fingerprints
- ★ Details of family members: Father/mother/spouse/children etc. with name and other identification details
- ★ Date of birth
- ★ Native village/town
- ★ Ordinary place of residence
- ★ Physical features, including distinguishing features: height, weight, colour of eyes, hair, beard, shape of nose, chin, face & other attributes such as tattoos, scars amputations.
- ★ Identification documents: voter ID card details/ration card/bank account details/PAN No. etc.
- ★ Languages spoken
- ★ Details of arms licence, if any
- ★ Past activities/offences including those in which a prosecution is pending in any court of law
- ★ Modus operandi
- ★ Close associates
- ★ Pending warrant, including details of court that issued the warrant, date of issue and other details.
- ★ Convictions, if any, under any act.
- ★ Any other relevant details.

Checklist for a Seizure of Wildlife Products

- ★ Has the specimen in question been conclusively identified?
- ★ If yes, what species?
- ★ Is the species listed under the Wildlife (Conservation & Security) Act, 2012?
- ★ If yes, what schedule, and what serial number?
- ★ Who is the person making the identification?
- ★ If identification is not 100% sure, what is the probable species?
- ★ Is the species listed under the EXIM policy?
- ★ If yes, at what serial number?
- ★ What are the specific notifications in the EXIM policy regarding this species?

Documentation of Seizure

- ★ Has the person, from whose possession this specimen has been obtained, been asked to produce any document/permit/certificate related to it?
- ★ Has he produced or offered to produce this document/permit/certificate?
- ★ Is this authentic/valid?
- ★ Does it have contact details of the issuing authority so it can be verified?
- ★ Do the products described in the documentation and those actually present match? Are there any discrepancies in quantity/quality/form etc?

Documentation for International Shipments

- ★ Does the cargo appear in the appropriate manifest?
- ★ Is the packaging original or does it appear tampered with?
- ★ For live specimens, does it comply with guidelines of the International Air Transport Association (IATA)?
- ★ Does it have any CITES documentation?
- ★ Which airline/shipping line was the cargo booked on?
- ★ Which agents were handling this consignment?

Steps to be followed in all Cases of Arrest or Detention

1. Police personnel carrying out the arrest and handling the interrogation of the arrestee should bear accurate, visible and clear identification and name tags with their designation. The particulars of all such police personnel who handle interrogation of the arrestee must be recorded in a register.
2. That the police officer carrying out the arrest of the arrestee shall prepare a memo of arrest at the time of arrest and such memo shall be attested by at least one witness, who may be either a member of the family of the arrestee or a respectable person of the locality from where the arrest is made. It shall also be counter signed by the arrestee and shall contain the time and date of arrest.
3. A person who has been arrested or detained and is being held in custody in a police station or interrogation centre or other lock-up, shall be entitled to have one friend or relative or other person known to him or having interest in his welfare being informed, as soon as practicable, that he has been arrested and is being detained at the particular place, unless the attesting witness of the memo of arrest is himself such a friend or a relative of the arrestee.
4. The time, place of arrest and venue of custody of an arrestee must be notified by the police where the next friend or relative of the arrestee lives outside the district or town through the Legal Aid Organization in the District and the police station of the area concerned telegraphically within a period of 8 to 12 hours after the arrest.
5. The person arrested must be made aware of this right to have someone informed of his arrest or detention as soon as he is put under arrest or is detained.
6. An entry must be made in the diary at the place of detention regarding the arrest of the person which shall also disclose the name of the next friend of the person who has

been informed of the arrest and the names and particulars of the police officials in whose custody the arrestee is.

7. The arrestee should, where he so request, be also examined at the time of his arrest and major and minor injuries, if any present on his/her being, must be recorded at that time. The “Inspection Memo” must be signed both by the arrestee and the police officer effecting the arrest and its copy provided to the arrestee.
8. The arrestee should be subjected to medical examination by a trained doctor every 48 hours during his detention in custody by a doctor on the panel of approved doctors appointed by District civil surgeon.
9. Copies of all the documents including the memo of arrest, referred to above, should be sent to the Magistrate for his record.
10. The arrestee may be permitted to meet his lawyer during interrogation, though not throughout the interrogation

Chapter XII

Wildlife Forensics

Wildlife forensic biology is concerned with the use of technology, such as molecular biology (DNA profiling and DNA sequencing) to fight against wildlife crime. There are a growing range of modern DNA approaches that can be used in wildlife crime investigations.

Forensic sciences refers to a diverse spectrum of scientific tools used to answer legal questions, generally about crimha offences. Although the significance of such tools has begun to be truly recognised only now the need for medico-legal investigation have been recognised by all civilizations.

Wildlife forensics is a relatively new field of forensic science. Here the focus of the investigation is crimes related to plant and animals and their derivatives. Wildlife forensic labs primarily help in two major ways:

- ★ Identifying the specimen, i.e the species involved in the offence.
- ★ Linking of the suspects, victim and the crime through scientific collection and analysis of physical evidence.

The major difference between forensic science as it is generally understood and wildlife forensics is that the victim is an animal or plant species and the victim cannot speak for itself. The use of tools for wildlife forensic investigation is generally made more difficult by the fact that rarely whole specimens are seized. The wildlife products seized are generally parts and derivatives, which may be modified, altered or finished in a way where immediate identification of the species may be very difficult.

Some examples may be :

- Meat
- Cooked meat
- Feathers
- Products like Shahtoosh shawls woven of

- Animal hair
- Medicines containing Tiger bone parts
- Raw wool from animal hair
- Fur coats
- Animal skins
- Finished products made of reptile skin, such as purses, belts, and shoes
- Raw and carved ivory
- Sea turtle shell jewellery
- Bear bile
- Powdered rhinoceros horn

What further complicates matters is that many such products could be fake!

Sample Collection :

The collection of samples for subsequent forensic examination is often the key to a successful investigation. All the effort in building a good case for prosecution can be undone if sample collection is not done properly. This may lead to contamination of the samples, thereby invalidating any subsequent investigations.

Samples for Wildlife Forensics :

Some of the samples that may be considered for wildlife forensic examination include the following:

- Hair
- Meat
- Blood
- Visceral organs
- Bones
- Faeces

Collection of Samples :

The basic underlying principle of sample collection is that the collection process should not in any way contaminate the sample. Thus, the specimen to be collected should be handled carefully and sterile gloves and equipment must be used by personnel at all times. Containers and other chemicals used for storage and transport should also be free from any contamination.

Chain of Custody :

Chain of custody is an important consideration in any criminal investigation. It refers to the sequence of individuals who have held custody of the various samples from the point of collection to when they were finally analysed in the laboratory. This is important to establish that the samples were not tampered with at any point of time and thus the investigation is not adversely influenced in any manner. Lack of clear “Chain of custody” may jeopardise the admissibility of vital evidence that is crucial to successful prosecution.

Some general guidelines for sample collection are as follows :

Diagnostic Activity	Type of Specimen	Preservation Method	Type of Container	Comments
Histopathology	Tissues and lesions	10% buffered formalin	wide mouthed leak-proof glass or plastic	sections no more than ¼ inch thick. Ratio of 10:1 formalin to tissue. Storage at room temperature.
Toxicology	Organs, fat, blood and ingesta or suspected contaminated foods. (all these are collected separately, sealed and kept under safe custody. A clear record of the chain of custody should be retained.)	Refrigeration or freezing methanol	Clean glass, plastic, or metal foil.	Accurate records are critical. Appropriate sampling varies with suspected toxin.
Parasitology	Worms	5% formalin	Glass or plastic	Storage at room temperature
	External parasites	70% alcohol or 5% formalin	Glass or plastic	Storage at room temperature
	Blood parasites	Air dried blood films or whole blood in anticoagulant	Glass slides or tubes	Blood slides stored at room temperature. Tubes of whole blood refrigerated

Wildlife Forensic Sample Collection Kit :

A Wildlife Forensic Kit can be developed with the help of veterinary doctor. The kit will help forest staff to collect samples in a standardised manner, analysis of which will lead to accurate investigation of the crime scene.

Often forensic samples from the wildlife crime scene are not collected in a standardised and appropriate manner. By the time they reach the forensic lab, they are damaged or have changed their nature, making it difficult for the scientist to provide accurate results. The forensic kit will help the forest staff in following a standardised protocol in collection of these samples. The kit contains most of the equipment required to collect samples such as surgical gloves, a plastic pouch screw-capped vials, an injection syringe, a scalpel blade, forceps, scissors, a slide case, a glass slide, silica gel, filter paper measuring tape, etc.

Chapter XIII

Wildlife Crime Control Initiatives in Bangladesh

Wildlife and Nature Conservation Circle, Bangladesh Forest Department is working for wildlife management in the country in consists with following 07 wildlife divisions:

1. Wildlife Management and Nature Conservation Division, Dhaka
2. Wildlife Management and Nature Conservation Division, Khulna
3. Wildlife Management and Nature Conservation Division, Chittagong
4. Wildlife Management and Nature Conservation Division, Moulvibazar
5. Wildlife Management and Nature Conservation Division, Hobigonj
6. Wildlife Management and Nature Conservation Division, Rajshahi
7. Wildlife Management and Nature Conservation Division, Sherpur

Other than these specialized divisions all territorial forest divisions of the Forest Department are also working for wildlife management, nature conservation and law enforcement.

To combat wildlife crime Forest Department has collaboration with following law enforcement agencies of the country:

- ★ Rapid Action Battalion (RAB)
- ★ Bangladesh Police
- ★ Border Guard Bangladesh (BGB)
- ★ Bangladesh Coast Guard
- ★ Customs Intelligence

Wildlife Crime Control Unit (WCCU)

Bangladesh Forest Department is implementing an innovative project title on “Strengthening Regional Cooperation for Wildlife Protection Project” with the assistance of by World Bank. Institutional arrangement has been established to do research, conservation and combat wildlife under this project. Wildlife Crime Control Unit was established in 2012 under the Wildlife (Conservation & Security) Act, 2012.

Section 31. Creation of wildlife crime control unit -

- (1) The Government may, to ensure strict compliance and effective implementation of wildlife related international convention, protocol, treaty etc. establish wildlife crime monitoring units comprising custom officer, law and order enforcing agents at any place all over Bangladesh including strategic air, land and seaports.*
- (2) The Government may specify constitution, power and function of wildlife crime monitoring units under sub-section (1) by rule.*

Interim Arrangement of WCCU

- ★ Director/Conservator of Forests - 01
- ★ Assistant Conservator of Forests-01
- ★ Veterinary Surgeon-01
- ★ Wildlife and Biodiversity Conservation Officer-01
- ★ Wildlife Inspector-03
- ★ Junior Wildlife Scout-01



WCCU members with Director
Dr. Tapan Kumar Dey

Regular Activities of WCCU

- ★ Drive for seizure/recovering illegal occupancy of wildlife and trophy in and around Dhaka city
- ★ Treatment of seized wildlife if necessary
- ★ Release wildlife into wild and relevant habitat
- ★ Run instant 'mobile court' with the support from Metropolitan Magistrate to recover wildlife, body parts and derivatives.
- ★ Prosecution against offenders
- ★ Intelligence networking- source creation and database maintain
- ★ Receive wildlife offence information via **HOTLINE (01755660033)** and act accordingly, raid or information dissemination to the concerned forest division
- ★ Maintain linkage with TRAFFIC, CITES, SAWEN, ASEAN-WEN, Hazrat Shahajalal International Airport, Dhaka and Singapore Airport authority
- ★ Establishment of Forensic lab is in process under WCCU
- ★ WCCU is also developing Wildlife Crime Data base with the support from CEGIS
- ★ Maintain collaboration with national law enforcement agencies eg. Police, Customs, RAB, BGB and Coast Guard in controlling wildlife crime
- ★ Collection of wildlife crime via email, facebook (<https://www.facebook.com/groups/512649812162191/>), email and act accordingly
- ★ Conducting conservation education and awareness program



Wildlife conservation awareness Program and Quiz contest in a school of Norsingdi.



WCCU Officer distributing leaflet among the local



Awareness Programme at Kishorgong



WCCU won First Prize at Bird Fair arranged by Jahangirnagar University

Wildlife Rescue And Rehabilitation Center

Wildlife rescue and rehabilitation center is a new dimension in the Forest Department to treat the injured and rescued animals from different places of country. A responsible Veterinary Doctor and some attendees are always available at the centre to facilitate animals. After treating cured animals will be rehabilitated at its origin but if some of them will not be able to survive in its natural environment then it transfer into the Safari park for long time monitoring. Some time sever injured animals may die in that case the authority will take initiatives for stuffing by the help of taxidermist.

There are five rescue centers established by the Forest Department in different location.

- ★ Wildlife rescue and rehabilitation center in Dhaka.
- ★ Wildlife rescue and rehabilitation center in Khulna.
- ★ Wildlife rescue and rehabilitation center in Sylhet.
- ★ Wildlife rescue and rehabilitation center in Banghabandhu Sheikh Mujib Safari park, Cox's bazar.
- ★ Wildlife rescue and rehabilitation center in Banghabandhu Sheikh Mujib Safari park, Gazipur.

Legal Status of Biodiversity Conservation

For biodiversity conservation importance has been given in Bangladesh Constitution-15th Amendment (in 2012) of Bangladesh Constitution under the title “Protection and improvement of environment and biodiversity”. According to the Section 18 A of Bangladesh Constitution:

The State shall endeavour to protect and improve the environment and to preserve and safeguard the natural resources, bio-diversity, wetlands, forests and wild life for the present and future citizens.

Policy & Legal Instrument for Wildlife Management

Government of Bangladesh has taken some legal initiatives to conserve and protect biodiversity and wildlife, such as :

- ★ Wildlife (Conservation and Security) Act, 2012
- ★ Bangladesh Tiger Action Plan (2009-2017)
- ★ National Tiger Recovery Program, 2010
- ★ A MoU has been signed in 2011 between Bangladesh and India on “Conservation of the Sundarbans”.
- ★ A billeted protocol has been signed in 2011 between Bangladesh and India on “Conservation of the Royal Bengal Tiger of the Sundarbans”.
- ★ Deer Rearing Policy, 2009.
- ★ Compensation Policy for Wildlife Victims, 2010
- ★ The Bangladesh Elephant Rearing Policy, 2011
- ★ Co-management Formation Policy, 2011
- ★ 18 draft rules has been formed including Crocodile raring rule, Crabs export rule, protected area management rule, Cage birds rule etc.

Sections under Wildlife (Conservation & Security) Act, 2012 controlling Import, Export and Punishment

Wildlife (Conservation & Security) Act, 2012 clearly refers about how to import and export CITES listed species and specimen. The act also mentions about the penalties for wildlife crime.

Section 28. Import. — (1) No person shall import — through any other route except customs port of entry; without CITES certificate, where applicable; and without licence; any wild animal or parts thereof, trophy, uncured trophy, or plants mentioned in schedule IV or its part or derivative thereof.

(2) The Quarantine certificate issued by the appropriate authority of the country of import, shall be produced for each imported wild animal or plants mentioned in schedule IV or derivative thereof, upon arrival at customs port of entry.

29. Export. — No person shall export or re-export— through any other route except custom port of exit; without CITES certificate, where applicable; and without licence; any wild animal or parts thereof, trophy, uncured trophy, or plants mentioned in schedule IV or parts or derivatives thereof.

34. Penalties for certain offences. — *If any person —*

(1) Forges, exchanges or interferes with any other means or alters registered mark and fixed registered mark under section 11; or

(2) Purchases, sells, imports or exports any wild animal or parts thereof, meat, trophy or any derivative thereof or forest product or any plant mentioned in schedule IV or derivatives thereof, from any other person without having license or permit —

he shall be deemed to have committed an offence and for such offence, be punished with imprisonment for a term not exceeding 1 (one) year or with a fine of Taka not exceeding 50 (fifty) thousand or with both and in case of his repetition of the same offence, he shall be punished with imprisonment for a term not exceeding 3 (three) years or with a fine of Taka not exceeding 2 (two) lac or with both.

36. Penalties for killing tiger, elephant, etc. — *(1) If any person kills any tiger or elephant mentioned in schedule I without obtaining any licence under section 24, he shall be deemed to have committed an offence and shall be non-bailable for such offence and, be punished with imprisonment for a term not less than 2 (two) years and not exceeding 7 (seven) years and also with a fine of Taka not less than 1 (one) lac and not exceeding Taka 10 (ten) lac and, in case of his repetition of the same offence, he shall be punished with imprisonment for a term not exceeding 12 (twelve) years and with a fine of Taka not exceeding 15 (fifteen) lac:*

Provided that the provisions of this section shall not apply, when a person is attacked by a tiger or elephant causing threat to life of such person and such tiger or elephant is killed for saving life of such person:

Provided further that when questions of filing a case in this respect arise, the station officer may, in consultation with the warden, file a case.

(2) If any person collects, acquires or purchases or sells any trophy, uncured trophy, meat, parts of body of any tiger or elephant mentioned in schedule I without obtaining a permit under section 10, he shall be deemed to have committed an offence and for such offence, be punished with imprisonment for a term not exceeding 3 (three) years or with a fine of Taka not exceeding 3 (three) lac or with both and in case of his repetition of the same offence, he shall be punished with imprisonment for a term not exceeding 5 (five) years or with a fine of Taka not exceeding 5 (five) lac or with both.

37. Penalties for killing cheetah, lam cheetah, hoolock, sambar deer, crocodile, gharial, whale or dolphin, etc. — *(1) If any person kills any cheetah, lam cheetah, hoolock, sambar deer, crocodile, gharial, whale or dolphin mentioned in schedule I, he shall be deemed to have committed an offence and for such offence, be punished with imprisonment for a term not exceeding 3 (three) years or with a fine of Taka not exceeding 3 (three) lac or with both, and in case of his repetition of the same offence, he shall be punished with imprisonment for a term not exceeding 5 (five) years or with a fine of Taka not exceeding 5 (five) lac or with both:*

Provided that the provisions of this section shall not apply, if a person is attacked by a cheetah or crocodile causing threat to life of such person and the cheetah or crocodile is killed for saving life of such person:

Provided further that when questions of filing a case in this respect arise, the station officer may, in consultation with the warden, file a case.

(2) If any person collects, acquires or purchases or sells or transports any trophy, uncured trophy, meat, parts of body of cheetah, lam cheetah, hoolock, sambar deer, crocodile, gharial, whale or dolphin mentioned in schedule I, he shall be deemed to have committed an offence and for such offence, be punished with imprisonment for a term not exceeding 2 (two) years or with a fine of Taka not exceeding 1 (one) lac or with both, and in case of his repetition of the same offence, he shall be punished with imprisonment for a term not exceeding 4 (four) years or with a fine of Taka not exceeding 2 (two) lac or with both.

38. Penalties for killing birds or migratory birds, etc. — (1) If any person kills any birds or migratory birds mentioned in schedule I and II, he shall be deemed to have committed an offence and for such offence, be punished with imprisonment for a term not exceeding 1 (one) year or with a fine of Taka not exceeding 1 (one) lac or with both, and in case of his repetition of the same offence, he shall be punished with imprisonment for a term not exceeding 2 (two) years or with a fine of Taka not exceeding 2 (two) lac or with both.

(2) If any person collects, acquires or purchases or sells or transports any trophy, uncured trophy, meat, parts of body of birds or migratory birds mentioned in schedule I and II, he shall be deemed to have committed an offence and for such offence, be punished with imprisonment for a term not exceeding 6 (six) months or with a fine of Taka not exceeding 30 (thirty) thousand or with both, and in case of his repetition of the same offence, he shall be punished with imprisonment for a term not exceeding 1 (one) year or with a fine of Taka not exceeding 50 (fifty) thousand or with both.

43. Cognizability, non-cognizability, bailability, non-bailability and compoundability of offences. — Offences committed under section 36 shall be cognizable and non-bailable and the offences committed under other sections, except the section, shall be non-cognizable, bailable and compoundable subject to compensation.

What type of Information should know Wildlife Manager ???

A park manager should know following aspects to protect wildlife from hunting, poaching:

- ★ Methods of poaching
- ★ Mostly target/demand Species
- ★ People/groups involved in illegal trade
- ★ Volumes of wildlife crossing borders
- ★ Perception of enforcement/punishment for wildlife crime
- ★ People/groups offering protection
- ★ Border guard and other law enforcement agencies
- ★ Market hubs
- ★ Transport routes
- ★ Trade networks
- ★ Methods of transportation/smuggling (Car, Plane and Water vessel)
- ★ Areas of origin and end of destinations
- ★ Use (Food, medicines, trinkets etc.)

Emerging Technologies to Fight Wildlife Crime

Some new technology has altered the trade of wildlife products including ivory, rhino horn, pangolin scales, exotic birds and live species. The Internet has boosted trafficking by lowering barriers of entry into criminal markets, facilitating communication and exchange of information, as well as reconfiguring relations among supplies, intermediaries and buyers. However, technology can also offer support to national environment, wildlife and law enforcement agencies. In 2013, for example, Chinese authorities launched "Skynet Action", a key component of which is to stop online wildlife crime and trade with the support of e-commerce websites and companies (CGN, 2013).

However, new technologies cannot substitute traditional anti-poaching measures. Some technologies may not be appropriate for use in low capacity environments, where there is little expertise or technical support. A long term solution will require efforts to address supply and reduce demand, using methods that encourage deterrence, transparency, legal enforcement, behavioral change and alternative livelihoods. Broad-scale collective action is needed, and must include strengthening and harmonizing of environmental legislation as well as greater support to those with insufficient resources to enforce legislation and prosecute smugglers. Additional empirical evidence and mapping of transnational crime syndicates and illegal wildlife trade chain would be useful. The enhanced technologies being employed to counter the illegal wildlife trade offer hope, and will continue to play a significant role in conservation. Greater investment is needed to support the increased use of technology by national Governments, wildlife and law enforcement agencies.

Acoustic Traps

Also known as "echo" technology, acoustic traps are increasingly used to augment traditional anti-poaching patrols and monitor sound waves for sharp disturbances such as gun shots, chain saws, truck engines, blasts or airplane engines. Most systems consist of unattended, monolithic sensors that can be stationed throughout forests, but which then triangulate the source of suspicious sounds and provide detailed real-time information via a wireless network as to the precise location of the sound. Some are even equipped to automatically deploy drones or other unmanned aerial devices with GPS headings to collect evidence, photos or infra-red footage.

Mobile Technology

The potential for mobile technology—hand-held devices linked through satellite communications—to empower the general public to fight back and play a pivotal role is only just being realized. TRAFFIC, the wildlife trade monitoring network, recently launched a mobile phone application ("app") in collaboration with the Taronga Conservation Society, Australia. The app encourages the public to report illegal activity involving wildlife, and a host of other apps coming into the marketplace offer similar options.

Radio Frequency Identification (RFID) Tags

Although most anti-poaching efforts focus on broad national or even regional campaigns, some technology is designed to be implemented one animal at a time. Radio frequency identification (RFID) tags are microchips that are implanted into specific animals in order to track their movements through ground or mobile sensors and ensure that the animal is

behaving normally. If an animal falls off the grid, RFID captured location coordinates can help identify the animal's last position and greatly enhance rapid-response capacity.

Camera Traps

Camera traps have been monitoring wildlife without human interaction for decades and have been adapted to anti-poaching. With the advent of highly sophisticated digital cameras and image capture, camera traps are increasingly being used to track the movement of poachers. Recent models come with video feeds, automatic (instead of timed) triggers, heat sensing, vibration detection, infrared detection, and acoustic elements that can transmit data quickly and accurately.

Radio Collars

Cumbersome, short-lived radio collars that were once used simply to monitor an animal's movement a few decades ago have been transformed through advances in satellite technology, permitting researchers access to data that can aid in the fight against poachers. Accelerometers inside individual collars can now transmit information such as animal's health and deviations in ranging patterns suggesting the presence of poachers. When animals wearing collars meet their collars automatically share data to expand the network. Innovations in the size, cost and durability of radio collars now means that a growing number of species can be collared, including tiny birds, rodents and larger elephants.

Satellite Imaging

High-resolution images taken from satellites have been used to track illegal deforestation and protected area encroachment for the past decade. Global Forest Watch, which was launched by the World Resources Institute in February 2014, is a dynamic, online forest monitoring and alert system that facilitates forest management by combining satellite technology, open data and crowd sourcing to guarantee access to timely and reliable information about changes in forests. Analysts are increasingly making the link between illegally logged areas and the illicit trade in wildlife. Ships that move contraband timber sometimes also transport other wildlife. Furthermore, seemingly innocuous roads cut into virgin forests can lead to the establishment of massive logging, mining and hunting camps deep in the forest that are impossible to identify from the ground. Satellite imaging can help monitor such changes.

DNA Analysis

Investigation techniques are increasingly relying on modern forensics and DNA technology. Genetic sequencing is already being used to fight illegal logging and illegal trade in rhino horns or for ivory. It can be used to identify wildlife body parts - ivory tusks, horns or antler, for instance—following a confiscation in order to confirm the sub-species, country or region of origin, and isotope analysis to identify the age of ivory. If one is killed for its horn, the database aids prosecution. DNA profiling is also increasingly being used in cases involving live animals.

The Spatial Monitoring and Reporting Tool (SMART)

The Spatial Monitoring and Reporting Tool (SMART) is an open-source software programme that was created by, and for, the conservation community in order to engage those on the frontline of fighting wildlife crime in Africa, Asia and elsewhere. SMART is available in six languages and the software is designed to wildlife conservation activities

and wildlife law enforcement patrols more effective. SMART quickly crunches the data derived from patrols and reports from the field and presents information that can support quick action. The software has been effectively used by the programme "Monitoring the Illegal Killing of Elephants" (MIKE). The programme is managed by the CITES Secretariat.

Illegal Trade Databases

A number of databases track aspects of illegal trade, but most are limited by voluntary contributions from countries. Often they have outdated data that has little relevance to the current situation in the field, or heavy restrictions regarding privacy and use. Modern databases increasingly embrace ways to be more flexible and involve input from multiple sources. An example includes the Elephant Trade Information System (ETIS), which tracks confiscation records involving elephant products and produces quick results. ETIS has been managed by TRAFFIC on behalf of the CITES Parties and is currently housed at the TRAFFIC East/Southern Africa office in Harare, Zimbabwe.

Metal Scanners

Wire snares and metal traps used to catch wildlife have been a mainstay of illegal activity for decades, but poachers are increasingly working to hide their traps by either burying them underground or camouflaging them in vegetation. In India, TRAFFIC imported standard metal detectors to help forest guards uncover metal tiger traps, and several organizations in Africa have employed standard wand metal detectors used for airport security to help teams in the field identify snares. Metal detectors have also played an important role when investigating crime scenes involving dead or injured wildlife, as they can quickly pinpoint a bullet, which can be used as evidence and also help identify suppliers.

Military-Style (MESH) Digital Networks

Mesh networks are digital communications systems that permit sensitive data to be transmitted quickly and safely without easily being monitored or hacked. One of the biggest problems with mobile technology is that it is available to all, and poachers are quick to pick up frequencies that monitor collared or micro-chipped animals, giving them a head-start towards their targets. But Mesh networks, which are now standard among military units, operate through complex routing algorithms that essentially scramble data upon transmission and then de-code it upon receipt, affording rangers and conservation teams the opportunity to communicate without poachers being able to listen in. It should be noted that not all mesh networks have encryption, and not all encrypted networks are mesh networks.

Mikrokopters

Mikrokopters are universal aerial platforms that hover. They can identify a position and hold it as long as necessary to identify images, collect data, or calculate distances. Most mikrokopters are equipped with GPS, compasses, altitude control, telemetry and automatic systems that report back on altitude, power consumption, and so forth. Like drones, mikrokopters can either be pre-programmed to fly specific routes, or operated manually by means of a control stick and can be equipped with sophisticated camera systems.

About TRAFFIC and SAWEN

TRAFFIC

TRAFFIC, the wildlife trade monitoring network, is the leading non-governmental organization working globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development.

TRAFFIC was established in 1976 in what remains a unique role as a global specialist, leading and supporting efforts to identify conservation challenges and support solutions linked to trade in wild animals and plants.

TRAFFIC is governed by the TRAFFIC Committee, a steering group composed of members of TRAFFIC's partner organizations, WWF and IUCN. A central aim of TRAFFIC's activities is to contribute to the wildlife trade-related priorities of these partners.

TRAFFIC specializes in :

- ★ Investigating and analysing wildlife trade trends, patterns, impacts and drivers to provide the leading knowledge base on trade in wild animals and plants;
- ★ Informing, supporting and encouraging action by governments, individually and through inter-governmental cooperation to adopt, implement and enforce effective policies and laws;
- ★ Providing information, encouragement and advice to the private sector on effective approaches to ensure that sourcing of wildlife uses sustainability standards and best practice;
- ★ Developing insight into consumer attitudes and purchasing motivation and guiding the design of effective communication interventions aimed to dissuade purchasing of illicit wildlife goods.

(<http://www.traffic.org>)

South Asia Wildlife Enforcement Network (SAWEN)

South Asia Wildlife Enforcement Network (SAWEN) is an inter-governmental wildlife law enforcement support body of South Asian countries namely - Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. SAWEN was officially launched in January, 2011 in Paro Bhutan. It promotes regional cooperation to combat wildlife crime in South Asia. It focuses on policy harmonization; institutional capacity strengthening through knowledge and intelligence sharing; and collaboration with regional and international partners to enhance wildlife law enforcement in the member countries. SAWEN operates its activities from the Secretariat based in Kathmandu, Nepal.

Member Countries : Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka

SAWEN provides a platform for its member countries to cooperatively work together in the fight against the burgeoning wildlife crime. It focuses on harmonization of policies and laws; strengthening institutional capacity; sharing of knowledge, experiences and technologies among the member countries; and promoting collaboration with national, regional and international partners to enhance the wildlife law enforcement in the region.

(<http://www.sawen.org>)

Definitions and Abbreviations

"*Species*" means any species, subspecies, or geographically separate population thereof;

"*Specimen*" means:

- (i) any animal or plant, whether alive or dead;
- (ii) in the case of an animal: for species included in Appendices I and II, any readily recognizable part or derivative thereof; and for species included in Appendix III, any readily recognizable part or derivative thereof specified in Appendix III in relation to the species; and
- (iii) in the case of a plant: for species included in Appendix I, any readily recognizable part or derivative thereof; and for species included in Appendices II and III, any readily recognizable part or derivative thereof specified in Appendices II and III in relation to the species;

"*Trade*" means export, re-export, import and introduction from the sea;

"*Re-export*" means export of any specimen that has previously been imported;

"*Introduction from the sea*" means transportation into a State of specimens of any species which were taken in the marine environment not under the jurisdiction of any State;

"*Scientific Authority*" means a national scientific authority designated in accordance with Article IX;

"*Management Authority*" means a national management authority designated in accordance with Article IX;

"*Party*" means a State for which the present Convention has entered into force.

The process of making a declaration to be bound by the provisions of CITES is called '*ratification*', '*acceptance*', '*approval*' or '*accession*'.

Ratification, acceptance and approval are legally equivalent actions but are only applicable in relation to the States that signed the Convention when it was open for signature, between 3 March 1973 (when it was concluded) and 31 December 1974. (Acceptance and approval are the actions taken by certain States when, at national level, constitutional law does not require a treaty to be 'ratified'.)

All States that had signed the Convention have now ratified, accepted or approved it. The term '*accession*' is used in relation to the States that did not sign the Convention.



Reference

Ahmed Abrar Fraudulence in Indian Live Bird Trade: An Identification Monograph for Control of Illegal Trade; TRAFFIC India, New Delhi. 1999.

Ali, S and Ripley, S.D; Handbook of the Birds of India and Pakistan (Compact Edition. Oxford University Press New Delhi). 1983.

Anon. Statistics of Marine Products Exports. MPEDA. 1999.

Chakraborty. R, Chakraborty. S and DE. J.K (1999): Identification of dorsal guard hairs of the species of Indian lesser cats (Carnivora: Felidae), *Mammalia* 65 (1): 93- 104.

Daniel, J.C- The Book of Indian Reptiles and Amphibians. Bombay Natural History Society, Oxford University Press, Mumbai. 2002.

Dey, T.K. introduction to Wildlife Management in Bangladesh. Banbhaban, Agargaon, Dhaka-2011.

Dey, T.K. Deer population Ecology in Sundarbans, Bangladesh. Banbhaban, Agargaon, Dhaka-2010.

Gee, E.P. The Wildlife of India. Collins, London 1964.

Hanfee, Fahmida A WWF India Field Guide to Freshwater Turtles and Tortoises of India.

Kazmierczak Krys, A Field Guide to the Birds of India; Om Book Service, New Delhi. 2000.

Khan, Qureshi and Awan (2006); Impact of Musk Trade on the decline in Himalayan Musk Deer Population in Neelum Valley, Pakistan. *Current Science*, Vol 91, No. 5, 10 Sep, 2006.

Menon, V.et.al. Wildlife Trade- A Handbook for Enforcement Staff. TRAFFIC-India, (WWF-India), New Delhi. 1994

Menon V, R.Panjwani, P.Capilla, A. Sharma and M.Ghosh, 1994 Wildlife Trade. A handbook of Enforcement Staff. TRAFFIC India-WF India

Menon Vivek, A Field Guide to Indian Mammals. Dorling Kinderslay (I) Pvt. Ltd. 2003.

Menon, V. and Kumar, Ashok-Wildlife Crime-An Enforcement Guide, 2 Edition, Natraj

Nair, S.M. - Endangered Animals of India and Their Conservation. National Book Trust, India. 1992.

Prater S.H., The Book of Indian Animals. Bombay Natural History Society. 1971.

Roy Chowdhury Abhijit, Trade in Wildlife- A Threat to Wildlife Conservation in India; *Proc. Zool. Soc. Calcutta*, 45 (Suppl A); 161-167. 1992.

Sinha, Samir. Handbook on Wildlife Law Enforcement in India. TRAFFIC India/WWF India, New Delhi. 2010.

Talbot, Lee Merriam. A Look at Threatened Species. *Oryx* Vol. 5, Nos. 4 & 5. Fauna 445 Preservation Society, London 1960.

The IUCN Red List of Threatened Species (Web: www.iucnredlist.org)

Tikader B.K. Threatened Animals of India, Zoological Survey of India.

Wroghton, R.C., et al Bombay Natural History Society's Mammal Survey of India. Reports 1-46. *J. Bombay Nat. Hist. Soc.* Vol. 21, No. 2 to Vol. 33, No.3; 1912-1929.

Website :

www.bforest.gov.bd; www.cites.org; www.iucnredlist.org; www.livingunderworld.org;
www.orientalbirdclub.com/images; www.sawen.org; www.traffic.org; www.wccb.gov.in;
www.wii.gov.in; www.zsi.gov.in

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