



Second Global Tiger Stocktaking Conference and Sundarbans Tiger Conservation Landscape

Hotel Pan Pacific Sonargaon
Dhaka, Bangladesh
14-16 September 2014



Compiled by : **Tapan Kumar Dey Ph.D**
TRC Focal Point Bangladesh



Preface and Acknowledgment

The Global Tiger Recovery Program (GTRP) Implementation Plan is a significant step for Tiger Conservation of the Tiger Range Countries (TRCs). The leaders of the governments of 13 TRCs met in November 2010 at the “**International Tiger Forum**” in St. Petersburg, Russia and declared their collective political will to take all necessary actions to prevent the extinction of wild tigers.

Following the St. Petersburg Declaration, on October 22-23, 2012 in “**Second Asian Ministerial Conference**” was held in Thimphu, Bhutan where “**Affirmative Nine-Point Action Agenda on Tiger Conservation**” was adopted. The Global Tiger Initiative’s (GTI) international partners have similarly responded to support the TRCs goals. The World Bank is deeply committed to GTRP Implementation Plan.

The GTRP Implementation Plan includes about 200 different national actions which strengthen the frontlines in Protected Areas, protecting habitats, engaging and supporting communities that live in tiger landscapes, trans-boundary collaboration and restoring tigers where they have been extirpated, increasing domestic and international funding, building greater public awareness of tiger conservation; monitoring tigers, prey & habitat as well.

The Implementation of GTRP is gaining solid momentum and already making an impact on the ground and the activities were outlined for the year 2013-14 on the 29 July - 2 August, 2013 “**Kunming International Workshop**” in China. Considering the present situation of GTRP Implementation Progress, GTI partners, Global Tiger Forum (GTF) and Bangladesh Forest Department are collaborating to organize the **Second GTRP Stocktaking Conference for TRCs** to review the implementation plan on September 14-16, 2014 in Dhaka, Bangladesh. Dhaka Conference will sensitize the TRCs actors and partners for more dedication in tiger conservation.

Tiger is the national animal of Bangladesh and our present government has strong commitment for Sundarbans Tiger Landscape conservation.

Hon’ble Prime Minister of Bangladesh **Sheikh Hasina** in her speech at the international Tiger forum on 23 November, 2010 mentioned that the modern communication and transportation systems have also spurred poaching to a horrifying level; and as a result the population of tigers is being systematically killed to the point of near-extinction. She also mentioned that saving tigers and their natural habitats saves our environment.

This Brochure will help the participant to get an idea about conference objectives, overview of Bangladesh Sundarbans, conservation achievements, present status of Tiger Conservation, on going projects activities and also the conservation problems.

I like to acknowledge Bangladesh Forest Department, Global Tiger Initiative, Global Tiger Forum, World Bank other partners for financial and technical support to organize the conference. My colleagues and organizers have encouraged me to provide information of this conference to the participants. I wish every success of this conference.

Tapan Kumar Dey Ph.D

TRC Focal Point Bangladesh &
Conservator of Forests
Wildlife and Nature Conservation Circle
Bangladesh Forest Department.

Message

The tiger conservation is not only significant for the TRCs but also for the world and this conference proves that the world is united in saving our heritage, our culture and our willingness to conserve this charismatic species.

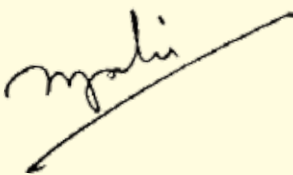
The Global Tiger Summit 2010, the first-ever devoted to an endangered species, marked a historic milestone in tiger conservation and in biodiversity conservation more broadly. The St. Petersburg Declaration represents a commitment to go beyond governments and NGOs creating isolated impacts to working collaboratively for collective impact to achieve a shared vision.

The comprehensive Global Tiger Recovery Programme comprises the National Tiger recovery Priorities of the 13 Tiger Range Countries and Global Support Programs to be spearheaded by international and national partners to bolster country efforts. The Global Tiger Recovery Programme outlines the concerted country-specific and collaborative actions required in the first five years of the program to move toward the 2022 goal.

The second Stocktaking Conference of the Global Tiger Recovery Program (GTRP) held in September 14-16, 2014 in Dhaka, Bangladesh is an added golden feather in the crown of tiger conservation of the world. This signifies the essence of orchestrated effort of the global community of the world. This conference is expected to create a tremendous momentum in the tiger conservation in Bangladesh and the world as well. I am pleased that the Ministry of Environment and Forests of Bangladesh, World Bank, Global Tiger Forum and Global Tiger Initiative has come forward to put together all Tiger Range Countries (TRCs), Universities, Research Organizations, Scientists, International Donors, International and National Non-government Agencies in this conference. I strongly believe that the conference would find a practical and effective way out to save our tiger and its' landscape of the world.


I am very much eager to look forward the meticulous implementation of the recommendations of Dhaka Declaration in a very effective and meaningful way which will save tigers from extinction. This compilation would help readers in getting information on tiger, tiger conservation, present and future initiative of the tiger conservation.

My heartfelt thanks goes to the World Bank and other associated partners for their intellectual support in making the conference happen in Bangladesh and I also feel proud for being a member of this auspicious event. Finally I am grateful to the Bangladesh Government and the officers and staffs of the Forest Department for their all out support to make this dream true.



Md. Yunus Ali

Chief Conservator of Forests
Bangladesh Forest Department



Second Stocktaking Dhaka Conference to Review Implementation of The Global Tiger Recovery Program (GTRP)

September 14-16, 2014, Pan Pacific Sonargaon Hotel, Dhaka, Bangladesh

The Global Tiger Recovery Program Implementation Plan is based on the Priority Implementation Activities (PIAs) of the Tiger Range Countries (TRCs). The St. Petersburg Declaration on Tiger Conservation, endorsed by the heads of government of the TRCs at the 2010 Global Forum on Tiger Conservation, committed the TRCs to work collaboratively to implement the **Global Tiger Recovery Program Implementation Plan** which represents a significant step forward in the GTRP, as does the Thimphu Affirmative Nine-Point Action Agenda on Tiger Conservation it builds on. The Tiger Range countries (TRCs) have done a remarkable job of translating the commitments of the Thimphu Agenda into a plan with concrete, measurable goals and actions. The Global Tiger Initiative's (GTI) international partners have similarly responded to support the TRCs goals. The World Bank remains deeply committed to the GTI. This is clear in the wide-ranging action it plans over the next few years to bolster the TRCs' efforts, ensure that the momentum of GTRP implementation does not flag and continue to foster innovation. The GTI's model of collective engagement to advance a common agenda and strive toward a shared goal is bearing fruit and this plan is strong evidence that the model is working.


The Implementation Plan outlines 200 different national actions that address strengthening the frontlines in protected areas, protecting habitat, engaging and supporting communities that live in tiger landscapes, trans-boundary collaboration, restoring tigers where they have been extirpated, increasing domestic and international funding, partnering with business and industry to advance conservation, building greater public awareness of tiger conservation and monitoring tigers, prey and habitat as well as progress toward the GTRP's goal of **doubling the number of wild tigers globally by 2022**. While it is clear that a massive amount of work needed to implement the plan is already in hand or in the pipeline, making it all the more feasible that the work can be completed in this implementation period.

"Saving of Tigers and their natural habitats also save our environment. On top of the food chain, these big cats require large areas to support viable population. They act as an umbrella, securing the future of other species which share their habitat". (HE Sheik Hasina, Hon'ble Prime Minister of Bangladesh, International Tiger Forum, 23 November, 2010, St. Petersburg, Russia). This speech is a milestone declaration and strong commitment for tiger conservation in the world.

In October 2012, the Royal Government of Bhutan hosted the **Second Asian Ministerial Conference on Tiger Conservation** and the TRC's unanimously adopted the "**Thimphu Affirmative Nine-Point Action Agenda on Tiger Conservation**". In the Thimphu Agenda, the Ministers in charge of wildlife in the TRCs collectively reaffirmed strong political will to focus the next phase of GTRP implementation on a few key priorities to make serious impact. Over the next months, the TRCs refined their Priority Implementation Activities (PIAs) for the next two years with the goal of translating the vision of the Thimphu Agenda and the political will it demonstrates into tangible and time-bound actions with clear results toward the shared goal of doubling the number of wild tigers globally by 2022.



Nypa Palm Forest of Sundarbans



In 29 July to 2 August 2013, **Kunming International Workshop for Transboundary Conservation of Tiger and other Endangered Species, and the Strategy for Combating Illegal Wildlife Trade** assist in identifying and establishing a mechanism to coordinate and monitor the use of the multi-donor trust fund allocated for tiger conservation and such as the uninhabited movement of tigers and the management of tiger conservation landscape and to eradicate poaching, smuggling and illegal trade of tigers. This was reaffirmed at the Second Asian Ministerial Conference on Tiger Conservation in October 2012, in Bhutan, where TRC ministers or delegates heads committed to enhanced collaboration in management of trans-boundary landscape and corridors, combating illegal trade and eliminating illicit demand in the **“Thimpu Affirmative Nine-Point Action Agenda Item 4”**.

Further to the political mandate from the International Tiger Forum in Saint Petersburg, Russia, and the 2nd Asian Ministerial Conference on Tiger Conservation in Thimphu, Bhutan, the implementation of the Global Tiger Recovery Program (GTRP) is gaining solid momentum and already making an impact on the ground in the Tiger Range Countries (TRCs). The activities of the current implementation phase are outlined in the 2013-2014 GTRP Implementation Plan launched in July 2013 in Kunming, China. Now, the stage is set for us to meet and take stock of our progress towards completing these activities and ultimately, doubling the number of wild tigers by 2022.

Considering the present situation of GTRP implementation progress, with the assistance World Bank supported **Strengthening Regional Co-operation for Wildlife Protection (SRCWP)** Project Bangladesh Forest Department, Ministry of Environment and Forests, Government of Bangladesh; the Global Tiger Initiative (GTI) Secretariat and the Global Tiger Forum (GTF) Secretariat are collaborating to organize the **Second GTRP Stocktaking Conference for TRCs and GTI partners to Review the Implementation Plan on September 14-16, 2014, in Dhaka, Bangladesh.**

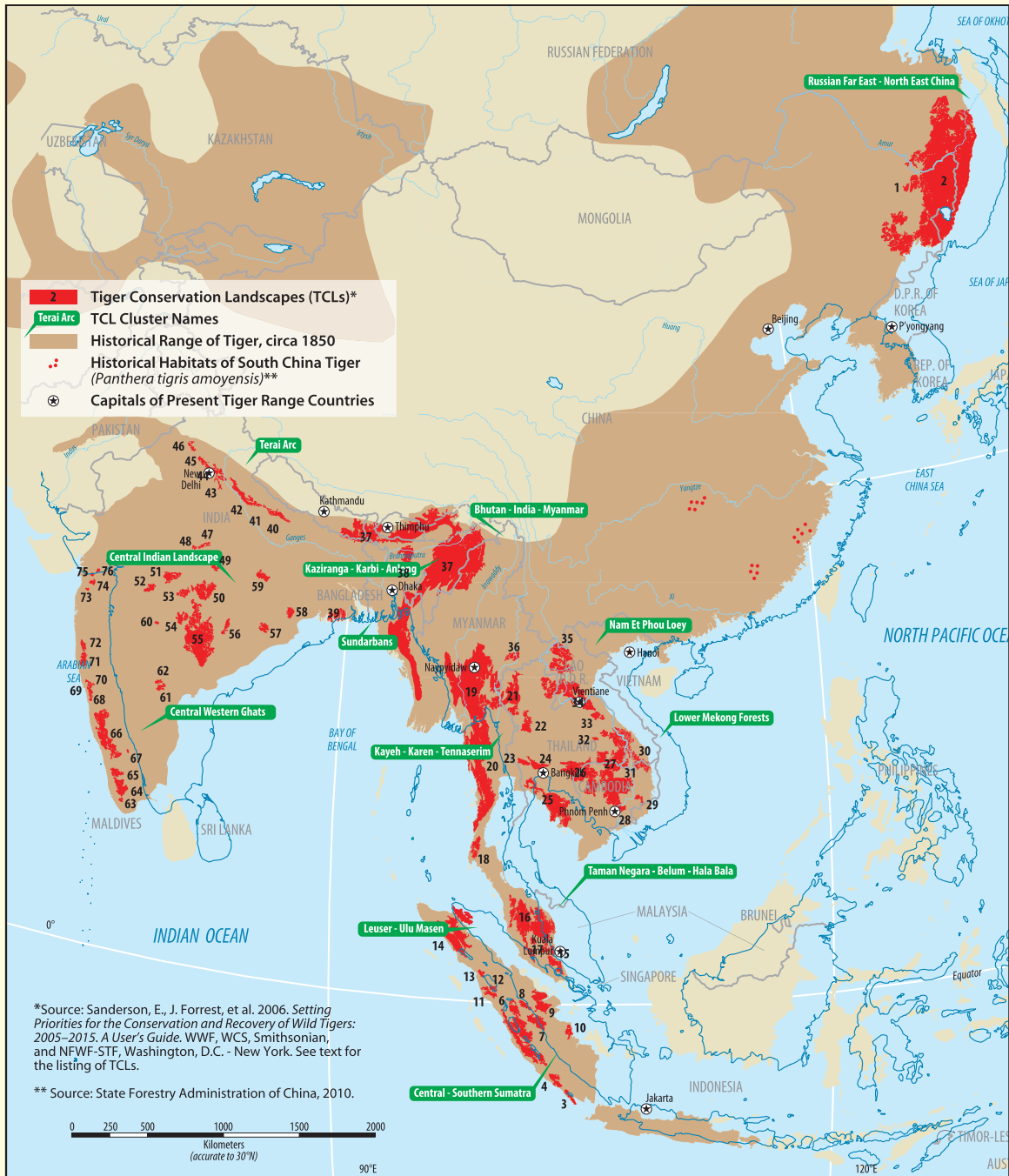
The Sundarbans is the world's largest contiguous mangrove forest and is listed as a UNESCO World Heritage site. With the designation in 1879 of the Sundarbans Reserve Forest, it is also the oldest continuously managed tiger landscape. May we suggest that our 2nd annual Stocktaking Conference focus on sharpening landscape-level implementation of the GTRP, with its integrated focus on wildlife, habitat, communities that heavily depend on tiger landscapes for their livelihoods, and the underpinning landscape resilience. Better management, maintained connectivity, stronger law enforcement, and coordinated resource management, leadership and partnerships with all advance landscape-level tiger conservation. We hope present of delegations and experts will make the programme successful and the partners to will be able to know the current phase of the GTRP implementation and Key Performance Indicators (KPIs).

We hope that the conference will bring an excellent output and help tiger conservation of the world through close cooperation among TRCs, partners, donors, and the private sector, to continue on our shared path toward successful implementation of the GTRP and doubling the number of wild tigers by 2022. Tigers are part of our cultural and natural heritage, and, most important, wild tigers thriving in their natural landscapes are a symbol and indicator of our ability to adopt a new paradigm of development that ensures the prosperity of human kind and wildlife.



Tiger is crossing a river

Tiger Conservation Landscapes and Historical Range of Tigers.



TCL Legend: 1 = Heilongjiang; 2 = Russian Far East - China; 3 = Bukit Barisan Selatan South; 4 = Bukit Balai Rejang – Selatan; 5 = Kerinci Seblat; Bukit Rimbang Baling; 7 = Bukit Tigapuluh Landscape; 8 = Tesso Nilo Landscape; 9 = Kuala Kampar – Kerumutan; 10 = Berbak; 11 = Bukit Barisan South; 12 = Rimbo Pantii – Batang Gadis West; 13 = Sibolga; 14 = Gunung Leuser; 15 = Endau Rompin; 16 = Taman Negara – Belum; 17 = Krau; 18 = Khlong Saeng; 19 = Tenasserims; 20 = Salak – Phra; 21 = Phu Miang – Phu Thong; 22 = Phu Khieo; 23 = Khao Yai; 24 = Thap Lan – Pang Sida; 25 = Cardamoms; 26 = Cambodian Northern Plains; 27 = Southern Annamites; 28 = Cat Tien; 29 = Bi Dup-Nui Ba; 30 = Kon Ka Kinh; 31 = Yokdon; 32 = Xe Bang Nouan; 33 = Hin Nam Ho; 34 = Northern Annamites; 35 = Nam Et Phou Loey; 36 = Nam Ha; 37 = Northern Forest Complex – Namdapha – Royal Manas; 38 = Kaziranga – Garampani; 39 = Sundarbans; 40 = Royal Chitwan; 41 = Royal Bardia South; 42 = Royal Bardia; 43 = Royal Suklaphanta; 44 = Corbett – Sonanadi; 45 = Rajaji Minor; 46 = Rajaji Major; 47 = Panna East; 48 = Panna West; 49 = Bandhavgarh – Panpatha; 50 = Kanha – Phen; 51 = Pachmarhi – Satpura – Bori; 52 = Melghat; 53 = Pench; 54 = Andhari – Tadoba; 55 = Indravati; 56 = Sunabeda – Udanti; 57 = Satkosia – Gorge; 58 = Simlipal; 59 = Palamau; 60 = Painganga; 61 = Nagarjunasagar South; 62 = Nagarjunasagar North; 63 = Shendurney; 64 = Periyar – Megamala; 65 = Anamalai – Parambikulam; 66 = Western Ghats – Bandipur – Khudrenukh – Bhadra; 67 = Biligiri Range; 68 = Western Ghats – Sharavathi Valley; 69 = Dandeli – Anshi; 70 = Dandeli North; 71 = Radhanagari; 72 = Chandoli; 73 = Mahabaleshwar Landscape – South; 74 = Purna; 75 = Mahabaleshwar Landscape – North; 76 = Shoolpaneswar.

Objectives of the Second Stocktaking Conference

The primary objective of the Conference is to take stock of progress made in implementation of the Global Tiger Recovery Program (GTRP) toward Tx2 by the Tiger Range Countries (TRCs) and their partners as directed by the Thimphu Affirmative Nine-Point Action Agenda on Tiger Conservation and the GTRP Implementation Plan 2013-14, including:

- Review current status of the GTRP Implementation Plan 2013-14;
- Discuss findings of the first reporting of the GTRP's Key Performance Indicators (KPIs);
- Review the status of frontline capacity, resources, and gaps;
- Recognize good practices and build on success to develop the way forward on all dimensions of the Thimphu Agenda, including wildlife law enforcement, landscape protection and management, community engagement and benefits, transboundary cooperation, recovery of tiger populations, business engagement, awareness and demand reduction, and monitoring;
- Energize and better coordinate the flow of funds toward the GTRP, including announcement and launch of new projects and partnerships (supported by the Global Tiger Forum, IUCN, KfW, Open Landscape Partnership Platform, Open Parks Network, USAID, others); and
- Enhance global support for the GTRP, based on updated TRC needs, by further aligning the roles of TRCs and partners in implementation.

Present Tiger Stock of the TRCs at a Glance

Name of the Country	Estimated Tiger Population (Update)	Area of Tiger Landscape (Sq.km)
Bangladesh	440	6000
Bhutan	115-150	28,000
Cambodia	50	75,000
China	40-50	29,000
India	1706	2,00,000
Indonesia	500	88,000
Lao PDR	20	63,000
Malaysia	500	55,000
Myanmar	85	2,50,000
Nepal	121	11,500
Russia	360	2,42,000
Thailand	200	1,16,000
Vietnam	10	37,000
Total =	4147	

Tiger Prey in Sundarbans



Spotted Deer



Wild Boar



Rhesus Monkey

Provisional Program of the 2nd Global Stocktaking Conference

	SATURDAY, SEPTEMBER 13, 2014
All Day	Arrival and Registration of Delegates. Bilateral and Small Group Meetings
13:00-14:00	Lunch
18:00-19:00	SPECIAL EVENT (tbc): Hard Talk with Industry Leaders. 'Win-Win' Solutions for Wildlife and Business in Asia – Are They a Reality? <ul style="list-style-type: none"> • Co-led by the Federation of Bangladesh Chamber of Commerce and Industry (FBCCI), Bangladesh Cricket Team, and the Indian Wildlife-Business Council (Confederation of Indian Industry)
19:00-21:00	Welcome Reception hosted by the GTI
	DAY ONE: SUNDAY, SEPTEMBER 14, 2014
8:00-9:00	Registration of Delegates
9:00-10:30	CONFERENCE OPENING AND INAUGURAL SESSION Arrival of Chief Guest HE Sheikh Hasina , Honorable Prime Minister, People's Republic of Bangladesh and formal opening of the Conference (Detailed program to be provided separately)
10:30-11:00	Official Photo. Tea/Coffee Break
11:00-11:15	Media Conference.
11:15-13:00	PLENARY 1: TAKING STOCK – STATUS OF PRIORITY IMPLEMENTATION ACTIONS Chair: Bangladesh; Co-Chair: Thailand <ul style="list-style-type: none"> • Introduction of Conference Agenda. Selection of Drafting Group. • Introduction of draft Implementation Report on the Thimphu Agenda (based on analysis of Form 1 inputs of TRCs and partners) – GTI Secretariat • Discussion - TRCs and partners
13:00-14:00	Lunch
14:00-15:30	PLENARY 2: MEASURING PROGRESS – KEY PERFORMANCE INDICATORS Chair: India; Co-Chair: Russia <ul style="list-style-type: none"> • Summary report on KPIs (based on analysis of Form 2 inputs of TRCs) – GTI Secretariat • Overview of KPIs and data collection – Chair and Co-Chair • Discussion – TRCs
15:30-15:45	Tea/Coffee Break

15:45-18:00	<p>PLENARY 3: BUILDING ON SUCCESS – RECOGNIZING GOOD PRACTICES Chair: Nepal; Co-Chair: Indonesia</p> <ul style="list-style-type: none"> • Each TRC (jointly with a partner it selects) reports on a success story/good practice that was new in the past two years – up to 10 minutes per country
18:00-19:00	<p>FEATURE PANEL: ICCWC Wildlife and Forest Crime Analytic Toolkit – Results from National Analysis</p> <ul style="list-style-type: none"> • Co-led by Bangladesh and Nepal, with UNODC
19:00-21:00	<p>SPECIAL EVENT: Bilateral meeting with India on the Progress of Sundarbans Tiger Landscape Conservation and sharing the Implementation Progress of the Bangladesh National Tiger Recovery Program supported by the World Bank-financed Strengthening Regional Cooperation for Wildlife Protection (SRCWP) Project, followed by Dinner & Cultural program hosted by the BFD.</p>
DAY TWO: MONDAY, SEPTEMBER 15, 2014	
8:30-10:30	<p>PLENARY 4: PLANNING FORWARD FROM THIMPHU AGENDA Chair: Bhutan; Co-Chair: Lao PDR</p> <ul style="list-style-type: none"> • Thimphu Agenda 1: Frontlines (incl. Law Enforcement) – Discussion led by Nepal, with INTERPOL • Thimphu Agenda 2: Habitats (incl. Smart Green Infrastructure) – Discussion led by Malaysia, with WWF
10:45-11:00	Tea/Coffee Break
11:00-13:00	<ul style="list-style-type: none"> • Thimphu Agenda 3: Communities (incl. Human-Wildlife Conflict) – Discussion led by Bangladesh, with WildTeam • Thimphu Agenda 4: Transboundary Collaboration – Discussion led by China, with CITES
13:00-14:00	Lunch. Special Presentations: Global Snow Leopard and Ecosystem Protection Program. Kazakhstan Tiger Reintroduction Program.
14:00-16:15	<p>PLENARY 4: PLANNING FORWARD FROM THIMPHU AGENDA (continued) Chair: China; Co-Chair: Thailand</p> <ul style="list-style-type: none"> • Thimphu Agenda 5: Restoration – Discussion led by Cambodia, with Wildlife Alliance • Thimphu Agenda 8: Awareness (incl. Demand Reduction) – Discussion led by Vietnam, with TRAFFIC • Thimphu Agenda 9: Monitoring – Discussion led by India, with WCS
16:15-16:30	Tea/Coffee Break
16:30-18:00	<p>PLENARY 5: IMPLEMENTATION CHALLENGES AND RESOURCE GAPS (Thimphu Agenda 6), incl. Donor Coordination and Program Governance Chair: Russia; Co-Chair: Myanmar</p> <ul style="list-style-type: none"> • Presentation of summary analysis – GTI Secretariat • Discussion – TRCs, donors, other partners

18:00-19:00	<p>SPECIAL EVENT: Introduction to the Integrated Tiger Habitat Conservation Programme funded by the Government of Germany</p> <ul style="list-style-type: none"> • Presentation – KfW and IUCN • Discussion – TRCs, partners
19:00-21:00	<p>SPECIAL EVENT: Bangladesh–USAID Partnerships Presentation and Bengal Tiger (Bagh) National Project Launch followed by Dinner & Cultural Program hosted by USAID <i>Draft Dhaka Recommendations distributed to delegates.</i></p>
DAY THREE: TUESDAY, SEPTEMBER 16, 2014	
8:30-10:45	<p>PLENARY 6: REVIEW AND ADOPTION OF DHAKA RECOMMENDATIONS Chair: Bangladesh; Co-Chair: India</p> <ul style="list-style-type: none"> • Presentation of the draft – GTI Secretariat • Discussion – TRCs, partners <p>Adoption of the Dhaka Recommendations – officiated by the Honorable Minister of Environment and Forest of Bangladesh</p> <p>Closing Ceremony – Stocktaking Conference Adjourned</p>
10:45-11:00	Tea/Coffee Break
11:00-11:15	Media Briefing.
11:15-13:00	<p>GLOBAL TIGER FORUM (GTF): 6th General Assembly Open to all TRCs and partners. Agenda to be provided separately.</p>
13:00-14:00	Lunch
14:00-15:30	<p>SPECIAL EVENT AND ROUNDTABLE: Open Parks Network and Regional Centers of Excellence in Wildlife Protection in Asia</p> <ul style="list-style-type: none"> • Co-led by Wildlife Center Bangladesh, Dhaka University, Jahangirnagar University, and Wildlife Institute of India, with Clemson University, GTI, GTF, ICIMOD, National Trust for Nature Conservation, National University of Laos, Smithsonian Conservation Biology Institute, others (<i>tbc</i>)
15:30-16:00	Tea/Coffee Break
16:00-18:00	<ul style="list-style-type: none"> • GTRP Multi-Donor Trust Fund Advisory Committee. • Other Bilateral and Small Group Meetings.
18:30-20:00	Dinner hosted by the GTF
WEDNESDAY, SEPTEMBER 17, 2014	
All Day	Departure of Delegates

2nd GTRP Stocktaking Conference

Optional Field Trip to Sundarbans: 17-18 September, 2014

Organized by the Bangladesh Forest Department

1. Tour Objectives

Sundarbans is the world's largest contiguous mangrove forest and it was declared as "Reserved Forest" in 1879. This is the only tiger habitat in Bangladesh and it has common boundary with India. This forest is located in the South-West corner of the country & it is about 200 km away from the capital (Dhaka). The objectives of the tour are as follows;

- ▶ To meet with the Co-management Committee (CMC) and Tiger Response Team at Chadpai Range Head Quarter of Sundarbans East Forest Division. The participants can share experience on community engagement as per Thimphu Agenda 3. They can also learn how Tiger-Human Conflicts are mitigating by BFD.
- ▶ There will be a presentation on "Camera Trapping" for tiger population estimation in the Sundarbans jointly by BFD & Wildlife Institute of India (Thimphu Agenda 9).
- ▶ Visit to Katka (Sundarbans East Wildlife Sanctuary) and Jamtala (open grassland) to see the eco-tourism facilities.

2. Travel, accommodation, food & clothing


The name of accommodation luxury vessel is Mahira. It has three decks with fully air-conditioned, 38 rooms with beds separately. In addition there will be two heritages launch named Bana Rani & Bana Kanna in the trip. There is a conference hall and a mini swimming pool. Sundarbans is well known for water borne eco-tourism and overnight stay will be in the vessel. Food will be arranged by BFD as international standard. Participants should not require carrying any matrax, pillow or mosquito net etc.

3. Mode of Payment:

Sponsored delegates are not required to pay any money. Non-sponsored delegates have to pay USD170.00 equivalent per person during pre-conference registration in Dhaka.

4. Tentative Schedule

Date	Time	Description
17 September	05:00	Depart for Mongla, Bagerhat by A/C Bus
	10:00	Arrive at Mongla and depart for Sundarbans by tourist accommodation vessel (Mahira) and briefing on Sundarbans trip
	11:00	Arrive at Chadpai Range Head Quarter & meet with Co-management committee and Tiger Response Team
	11:30	Depart for Katka and on board presentation on "Camera Trapping" for tiger population estimation in the Subdarbans jointly by BFD & Wildlife Institute of India
	17:30	Katka (Sundarbans East Wildlife Sanctuary) and visit to Jamtala and halt.
18 September	09:00	Depart for Mongla and on the way visit to Harbaria Ecotourism Center and Karamjal Wildlife Center
	16:00	Arrive at Mongla
	17:00	Depart for Dhaka by A/C bus
	22:30	Arrive at Dhaka and breakout



**Speech of Hon'ble Prime Minister of Bangladesh
Sheikh Hasina at the International Tiger Forum,
St. Petersburg, Russia on 23 November, 2010**

His Excellency, Mr. Vladimir Putin, honorable Prime Minister of the Russian Federation, honorable heads of governments and heads of delegations from the tiger range countries, honorable World Bank President, distinguished participants, guests, ladies and gentlemen.

Allow me at the outset to express my sense of thanks to Prime Minister Vladimir Putin for inviting me to the International Summit on the Preservation of Tigers in the historic city of St. Petersburg.

Indeed, I am happy to be in the Russian Federation, whose moral support and unique [inaudible] during our [inaudible] and in the reconstruction of our [inaudible] country, we shall never forget.

The holding of this summit reflects our profound concern over the future of one of the most majestic and awe-inspiring creatures that ever roamed on the face of our planet. It is a tragedy that the population of this beautiful animal over the past century has been reduced from over 100,000 to a mere 3,700 worldwide, now. The cause of this depletion, of course, lies with indiscriminate industrialization and unplanned human population growth which have forced human beings to transgress and encroach on the natural wildlife habitat of the tigers and all other such species.

The need of raw material for expanding industrialization and ever-increasing human population have led to indiscriminate felling of trees and razing of vast tracts of land for agriculture, food, and cash crops.

Driven from their natural homes, tigers and other animals keep on encroaching new areas in search of food and sanctuary. Sadly, all that the [inaudible] done is death, sometimes, through brutal, relentless [inaudible].

Moreover, the growing demand for various body parts of tigers for superstitious cures and uses that [inaudible] their skins for decoration homes have led to their end.

The modern communication and transportation systems have also spurred poaching to a horrifying level. The unfortunate result is that the population of tigers is being systematically killed to the point of near-extinction. So has been the case of many other species of animals.


It is a natural drive of human beings to strive for material growth, generating prosperity and following the ideal lifestyle. In our mindless drive to acquire this, we have been destroying the natural laboratory of our planet.

Ironically, our own actions are responsible for the destruction of all we are striving for; that is, our homes, lifestyle and, ultimately, human civilizations. Indeed, all these could be had even after caring for and preserving our ecological heritage and its divine balance of biodiversity and spaces.

Saving of tigers and their natural habitats also saves our environment. On top of the food chain, these big cats require large areas to support viable populations. They act as an umbrella, securing the future of other species which share their habitat. If these habitats regenerate and expand with the reclamation of forests and increased carbon absorption, the capacity, "reasons" [ph.] biodiversity and climate also improves. Truly, climate biodiversity and one life are all interconnected.

Excellencies, distinguished guests, and participants, Bangladesh, with 440 Royal Bengal Tigers, has one of the largest populations. Their home is the Sundarbans, the largest mangrove forest in the world with a unique bioclimatic role over an area of 6,017 square kilometers, and the Sundarbans also protects the southern coastal Bangladesh from tidal surges and cyclone, forming in the Bay of Bengal.

Declared as a natural World Heritage site in 1997 by UNESCO, the Sundarbans faces severe threats of global warming and sea level rise, climate change, and cyclones, saline water intrusions and tidal surges. Moreover, encroachment of 1.2 million people and the livelihood of the forest have made tiger/human conflicts common.



Over and above the recent cyclones like [inaudible] in recent times have made matters even worse. The Royal Bengal Tiger is our national animal. To protect this magnificent creature, our government has approved a Bangladesh Tiger Action Plan 2009 to 2010, enacted Bangladesh Wildlife Conservation Act 2010, with 12 years suggested sentence for tiger poaching and life sentence for second-time offense. Approved protocol on conservation of Royal Bengal Tigers of the Sundarbans within Bangladesh and India to improve cross-border wildlife crime control capacity building, share scientific research, et cetera; approved a World Bank project on strengthening regional cooperation for wildlife protection between Bangladesh, Bhutan, Nepal, and India; created 76 tiger response teams and 2 tiger immobilization teams in places around the Sundarbans to mitigate tiger/human encounters, and held a Global Tiger Day on 29 July, 2010, for awareness of the animals' predicament.

Since the Sundarbans needs to be saved for use [inaudible] storage of biodiversity, besides the precious Royal Bengal Tiger, our government is implementing the Sundarbans Management Support Project, 2005 to 2010; development and rehabilitation of a communication system in Sundarbans, 2009 to 2010; development and rehabilitation of infrastructure in Sundarbans, 2009 to 2012; USAID-assisted integrated protected area for management in three protected areas in Sundarbans; EU-assisted Sundarbans Environment and Livelihood Security Project, and tiger conservation landscape from the impacts of climate change.

The international community, including those who are present here, can join in our effort to save this natural green wonder, the Sundarbans, by clicking your support for it in the website, www.New7Wonders.com. This click of yours could help the world's largest mangrove forest becoming one of the new natural 7 wonders, thereby preserving along with it the Royal Bengal Tigers and millions of other species.

Excellencies, ladies, and gentlemen, today's forum is vitally important for finding ways and means of protecting tigers around the world. All the 13 tiger range countries are strongly represented here, displaying their commitment to preserve this beautiful animal. In support of the noble efforts of these countries, the World Bank, the Global Environment Facility, the Smithsonian Institution, and other important organizations have already launched in 2008 the Global Tiger Initiative to double the world tiger population by 2022.

However, much more is needed, particularly for tackling poaching, smuggling, and encroaching of the tiger's habitat. This summit, the first of its kind to save an animal, will no doubt succeed in attracting worldwide attention to these problems. Certainly, a unified voice and promise of the united action would succeed in saving this rare animal and its habitats from extinction. It could also be the beginning of a new era of saving other species and replenishing our Mother Earth with all its natural wonders.

Let us not forget that human civilizations are a productive, global, ecological balance with all species where existing in harmony and providing resources and essentials vital for our own survival and progress. Let us not forget that every species, particularly those endangered as the tiger, is important for its own defined role in our world ecological system. Indeed, all species, including the tiger as well as us are all linked in a mysterious, miraculous chain. Let us also not forget, therefore, that their existence and those of other species provides the natural support to our own existence in this planet.

I thank you all.

Key Performance Indicators

The final item on the Thimphu Action Agenda is a commitment to “Develop national action plans for a period of two years for each TRC with criteria and indicators to monitor NTRP/GTRP implementation”. In response to this, in July 2013, the TRCs agreed on a set of 13 Key Performance indicators (KPIs) to measure individual country progress in implementation of NTRPs and collective progress toward reaching the goals of the GTRP. This assessment, to be conducted annually in most cases, will supplement TRC reporting on the achievement or completion of the PIAs they have outlined here. The end of the first reporting period will be December 2013. Following this, some KPIs may be slightly customized, if necessary, to better meet the needs of the countries.

Indicator	Measure (numerator/denominator)
1. Extent of total needed resources actually allocated to implement NTRP	National resources (budget, other) actually allocated for implementing NTRP, starting from January 2011 to date
	Total (internal and external) resources needed to implement NTRP for five years (2011 to 2015) as per GTRP
2. Share of external support received as part of total resources needed to implement NTRP	Actual mobilization (i.e., donor projects signed or program budgets formally approved) from all external sources from January 2011 to date for implementing NTRP
	Total (internal and external) resources needed to implement NTRP for five years (2011 to 2015) as per GTRP
3. Extent of skill enhancement achieved	Total number of staff who have received skill development support since the launch of NTRP
	Total number of staff in all tiger protected areas/reserves who will need skill enhancement support during the five-year implementation of NTRP
4. Extent of park management effectiveness performance reviews conducted	Number of such reviews actually completed, starting from January 2011 to date
	Number of reviews of protected areas/parks planned during the five-year implementation of NTRP
5. Extent of critical tiger breeding areas made inviolate under national laws	Total area of all such areas actually declared inviolate under national laws
	Total area of all critical tiger breeding areas that need to be inviolate
6. Extent of adoption of “smart” patrolling	Size of tiger protected areas/reserves with full complement of staff, skills, equipment and mobility needed for “smart” patrolling
	Size of tiger protected areas/reserves that need to be covered by “smart” technology-based patrolling

**Reported annually, unless otherwise specified*

2. This set of KPIs was agreed upon by the TRCs as of July 2013. Slight revisions and customization are possible based on the results of first reporting cycle due December 2013.

Indicator	Measure (numerator/denominator)
7. Extent of tiger crime cases legally recorded leading to legal punishment	Total number of recorded tiger crime case leading to legal punishment
	Total number of tiger crime cases formally recorded in the national justice system
8. Extent of Cross-border collaborative interdictions leading to seizure and punishment	Total number of framed tiger crime cases emerging from cross-border collaboration leading to punishment
	Total number of legal cases framed as a result of cross-border collaborative interdictions
9. Extent to which losses due to incidents of human-tiger conflict are compensated	Total number of incidents of human-tiger conflict for which losses have been compensated
	Total number of reported incidents of human-tiger conflict with losses
10. Extent to which communities impacted by tigers have economic development/alternative income/benefit-sharing programs	Estimated total number of communities impacted by tigers with such programs
	Total number of man-days of employment generated by tiger conservation (India will report these numbers)
	Estimated total number of communities impacted by tigers Estimated number of families living in and around tiger reserves (India will report these numbers)
11. Extent of implementation of Priority implementation Activities (PIAs)	Actual score, based on 2 for completion, 1 for being underway and 0 for not done
	Total number of PIAs to be implemented, multiplied by 2 for completion
12. Extent of implementation of science-based monitoring of tigers, prey and habitat	Total area over which such a protocol has been applied
	Total area which should be covered by science-based monitoring of tiger, prey and habitat
13. Change in tiger population since the Summit	Estimated total area of habitat occupied by tiger at time of assessment
	Estimated total area of habitat occupied by tiger at the time of the Summit
14. Change in tiger population since the Summit	Estimated total tiger population at time of assessment
	Estimated total tiger population at the time of the Summit (2010)

**Reported annually, unless otherwise specified*

GLOBAL RESPONSE FOR TIGER CONSERVATION

Tigers (*Panthera tigris*), the Asia's most iconic animals, and the largest cat of all are majestic symbols in many ancient and modern cultures are recognized by various civil society, and governments as being important to save from extinction. As the top predator, the tiger plays an important role in keeping the ecosystem healthy for a range of animals and human communities who share its forest habitats. The presence of tigers helps to maintain the balanced herbivores population like Deer, Wild Buffaloes, Antelopes and Wild Boars in the forests.



Historically, tigers could be found over most of Asia and Central Asia. The world's population of wild tigers has plummeted by 95 percent in just over a century, from an estimated 100,000 in 1900 to approximately **3700** today.


Their habitats have shrunk by 93% and the remaining tiger range countries today are **Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Laos, Malaysia, Myanmar, Nepal, Russia, Thailand and Vietnam**. The World Conservation Union (IUCN) has listed the tiger as **Endangered to Critically Endangered**. Tigers, have already disappeared from Central Asia. In Java and Bali in Indonesia, they occupy only 7 percent of their historic range- and their range has shrunk by 40 percent in the last decade alone. Tigers are divided into six living subspecies: the **Royal Bengal** (*Panthera tigris*), **Indochinese** (*Panthera tigris corbetti*), **Malayan** (*Panthera tigris jacksoni*), **Sumatran** (*Panthera tigris sumatrae*) **Siberian** or **Amur** (*Panthera tigris Altaica*), and **South China tiger** (*Panthera tigris amoyensis*). The three extinct subspecies are the **Bali tiger** (*Panthera tigris balica*), the **Javan tiger** (*Panthera tigris sondaica*) and the **Caspian tiger** (*Panthera tigris virgata*). The South China tiger is critically endangered, with as few as 20 remaining in the wild. The remaining tiger habitat is spread across 13 countries and faces many challenges as a result of human population growth and development pressures. These pressures vary from country to country, so solutions must be customized for each country and region. The priority actions of global communities for tiger conservation is given below :

- ▶ Strengthening wildlife protection activities for protection Tiger and Prey base;
- ▶ Strengthen wildlife crime enforcement to tackle illegal trade in wildlife;
- ▶ Curtail international demand for tiger parts and other wildlife;
- ▶ Safeguard tiger forest from development;
- ▶ Scientifically manage tiger landscapes;
- ▶ Develop economic incentives and alternative livelihoods for local people;
- ▶ Create innovative and sustainable conservation financing mechanisms;
- ▶ Build conservation skills in tiger countries; and
- ▶ Spread the recognition that tiger habitats are high-value diverse ecosystems with the potential to provide immense benefit-both tangible and intangible.

Common Threats for Tiger Existence

Tigers have been reduced in number throughout their range primarily due to a combination of over hunting and poaching, loss of prey, and habitat degradation.

(a) Poaching and illegal Trade: Although trade in tiger parts and derivatives is illegal, the poaching of tigers for their meat and parts to feed this illegal trade is the most urgent threat facing tigers today.



Tiger parts such as skin are highly coveted in certain cultures as status symbols, decorative items and souvenirs, as well as for their purported medicinal value.

(b) Habitat loss : Growing human populations have reduced and fragmented the tiger' former range. Agriculture, clearing of forests for timber and palm oil plantations, as well as infrastructure development, has forced tigers into small, fragmented and scattered areas of remaining habitat.

(c) Prey loss: Tigers have suffered from a severe loss of natural prey populations such as wild deer, wild boars, goats, sheep and pigs, either due to hunting by people or through competition with domestic.


(d) Conflict with human : As tigers continue to lose their habitat and prey, they are increasingly coming into conflict with human as they attack domestic animals. In retaliation tigers are often killed or captured by authorities or angry villagers.

Necessity of Tiger Conservation

Tiger is an umbrella species and its conservation automatically ensures the conservation of large number of flora and fauna including their ecosystems. Wild tigers are not only a symbol of all that is splendid, mystical and powerful about nature. They are also a beacon of biodiversity, linking together the forests they inhabit and the natural resources and ecosystem services that their habitats produce for people. Sadly, the next decade may be the last one for the wild tiger. The loss of tigers and degradation of their ecosystems would inevitably result in a historic cultural, spiritual and environmental catastrophe for the Tiger Range Countries.

Habitats where wild tigers live have high economic and ecological value. Tiger lands provide vital services to humans, such as carbon sequestration, hydrological balance, pollination services, protection from natural disasters and soil erosion, medicinal plant genetic diversity and bio-prospecting. A majority of the Tiger Conservation Landscapes (TCLs) lie in one of the designated 25 biodiversity hotspots of the world.

The tiger is an indicator of how human society is doing on the larger question of sustaining environmental quality in the face of ever-increasing demands on finite resources. The tiger's presence will be a barometer of the critical question. Are we making the right choices to sustain the planet? Success in saving the tiger would energize ongoing efforts to fight species extinction and to protect our planet's increasingly threatened biodiversity, which is its very life- blood.



Estuarine Crocodile on river bank

The Challenges

Changing this trajectory to extinction is a challenging task. Policy makers remain unaware of the immense economic and ecological value of living tigers and their natural habitats, leading to neglect of conservation objectives in national planning. Poaching continues due to the weak institutional capacity for wildlife law enforcement in most Tiger Range Countries and the burgeoning global demand for tiger parts. Infrastructure planning and changes in land use that disregard the loss of tiger habitats and biodiversity, lead to habitat reduction and fragmentation. Tiger landscapes are also surrounded by pockets of poverty. Nearby communities depend on resources in these landscapes for survival. When over-exploitation of forest resources occurs, the wildlife habitats

are compromised. Lack of scientific monitoring and ineffective management of landscapes contributes to habitat deterioration.



INTERNATIONAL ORGANISATIONS WORKING FOR TIGER CONSERVATION

There are lot of international intergovernmental and non-governmental organization who are working with conservation of tiger and its landscape. Among them Global Tiger Initiative (GTI), Global Tiger Programme (GTF), Smithsonian Institution for Conservation Biology, World Wildlife Fund (WWF), TRAFIC, US Fish and Wildlife Services, World Conservation Society (WCS) Save the Tiger Fund and CITES etc. are in party. GTI and GTF are playing and important role in the field of tiger conservation.

(a) Global Tiger Initiative

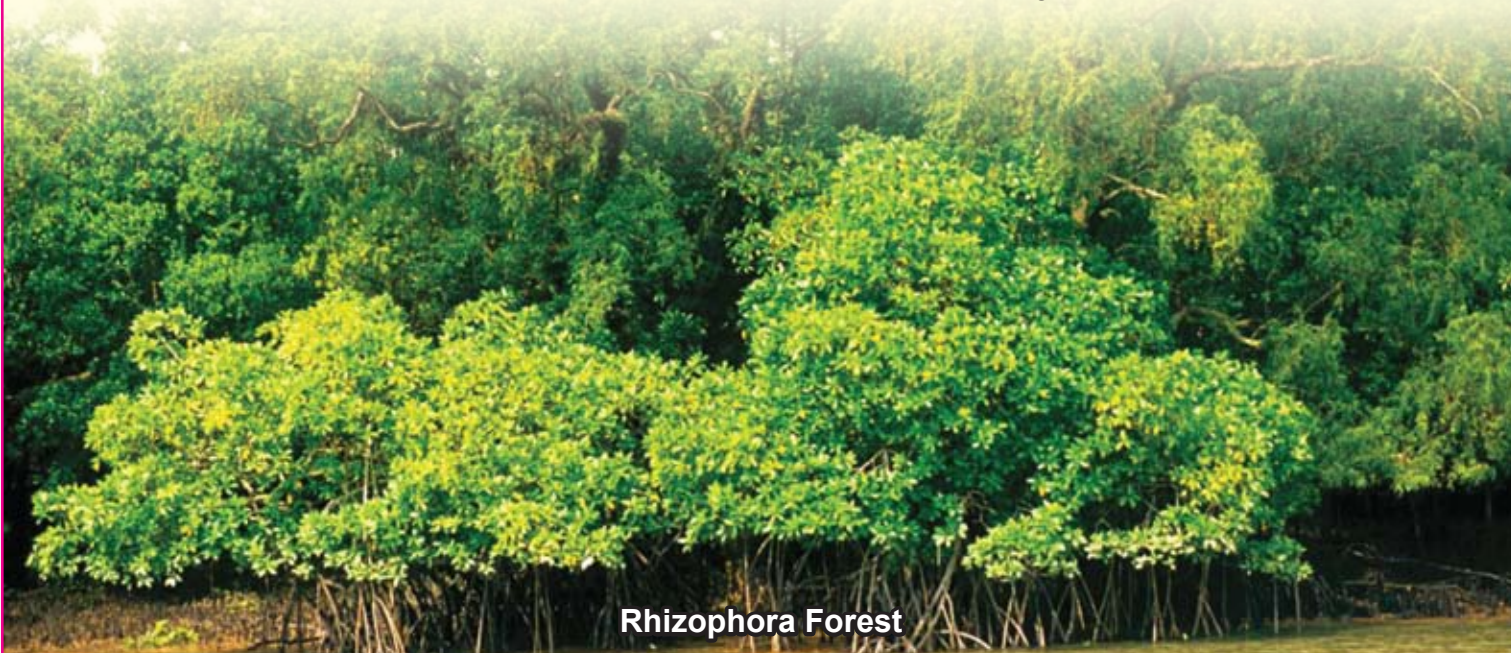
The Global Tiger Initiative was launched by President Robert B. Zoellick of the World Bank, the Smithsonian Institution, GEF and an alliance of governments and international organizations in June 2008. The GTI envisions a reversal in trends for the wild tiger, helping it to recover and repopulate its habitats in sustainable numbers. Today's challenge is to fulfill the growing development needs of people and to manage natural resources, of which the tiger is one, in a sustainable way. In other words, a new development paradigm.

The GTI works with Tiger Range Countries, utilizing the convening power of the World Bank and a broad coalition of international organizations such as the World Wildlife Fund, Wildlife Conservation Society, and Smithsonian Institution to bring support to the international conservation community. It is a vehicle to infuse a sense of urgency and energy into tiger conservation and seeks to bring about a paradigm shift in the way ecosystems are valued and governed. Leading up to the 2010 **Year of the Tiger Summit** (International Tiger Forum) at St. Petersburg, Russia, GTI will bring 'game-changing' strategies and political commitment to strengthening policies in favor of biodiversity and ecosystem sustainability by:

- ▶ Making the world aware of the tiger and wildlife crisis;
- ▶ Harvesting knowledge from the world's top scientists and practitioners; and
- ▶ Securing highest-level political support and influencing.

(b) Global Tiger Forum

GTF is the only International government Organization of the TRCS for conservation of wild tiger. It was established in 1994 with a goal to highlight the rationale for Tiger conservation, provide leadership and common approach through out world in order to safeguard the survival of the Tiger, its prey and habitats. The forum started function after ``The Dhaka Declaration on Tiger Conservation'' at the First



Rhizophora Forest

General Assembly on 18-20th January 2000. GTF has several members from the Tiger range countries, non Tiger range countries, international and national NGOs. Vietnam, Bangladesh, Bhutan, Cambodia, Myanmar, China, Russia, Nepal, Lao PDR, Malaysia, Indonesia, Thailand, United Kingdom and India are all working in tandem to secure the ecological landscape.

At present, India is the Chair of the Forum. The Secretariat, headed by a Secretary General, is located in New Delhi, India. GTF has its own technical, communication and administrative staff. The forum is addressing following issues:

- ▶ Tiger conservation;
- ▶ Capacity building;
- ▶ Policy mitigation;
- ▶ Research & reports monitoring of global tiger recovery program;
- ▶ The loss and degradation of habitat;
- ▶ The reduction of prey base;
- ▶ Poaching and illegal trade; and
- ▶ Reconciling human development needs and tiger conservation.

The GTF has 10 points action plan and agenda. The 15th Meeting of Executive Committee was held on 25-27 October, 2010 at Sariska Tiger Reserve, India, where all member countries have presented National Tiger Action Plans. This organization also is working with promoting protocol on trans boundary issue; share information and knowledge; strengthen technical and operational activities for tiger conservation.

On the 3rd day (16 September 2014) of Dhaka conference, the **6th General Assembly** will be hold. The meeting will review the GTF agenda as well as implementation progress of NTRP and future actions.

Salient Features of St. Petersburg Declaration on Tiger Conservation

The head of the governments of the Tiger Range Countries (TRCs) recall and endorse the Manifesto on Combating Wildlife Crime in Asia, adopted in Pattaya, Thailand, in April 2009; The Recommendations of the Global Tiger Workshop in Kathmandu, Nepal, October 2009; The Hua Hin Declaration on Tiger Conservation at the First Asian Ministerial Conference on Tiger Conservation (1st AMC) in Hua Hin, Thailand, January 2010; and the Work Plan of the Pre Tiger Summit in Bali, Indonesia, July 2010; welcome the adoption of National Tiger Recovery Programs (NTRPs) and the Global Tiger Recovery Program (GTRP), and also acknowledge and appreciate the presence and support of other governments, international organization, non-governmental organizations, and other supporters of tigers, because it is there obligation to future generations as following :-



Pneumatophores in Forest Floor

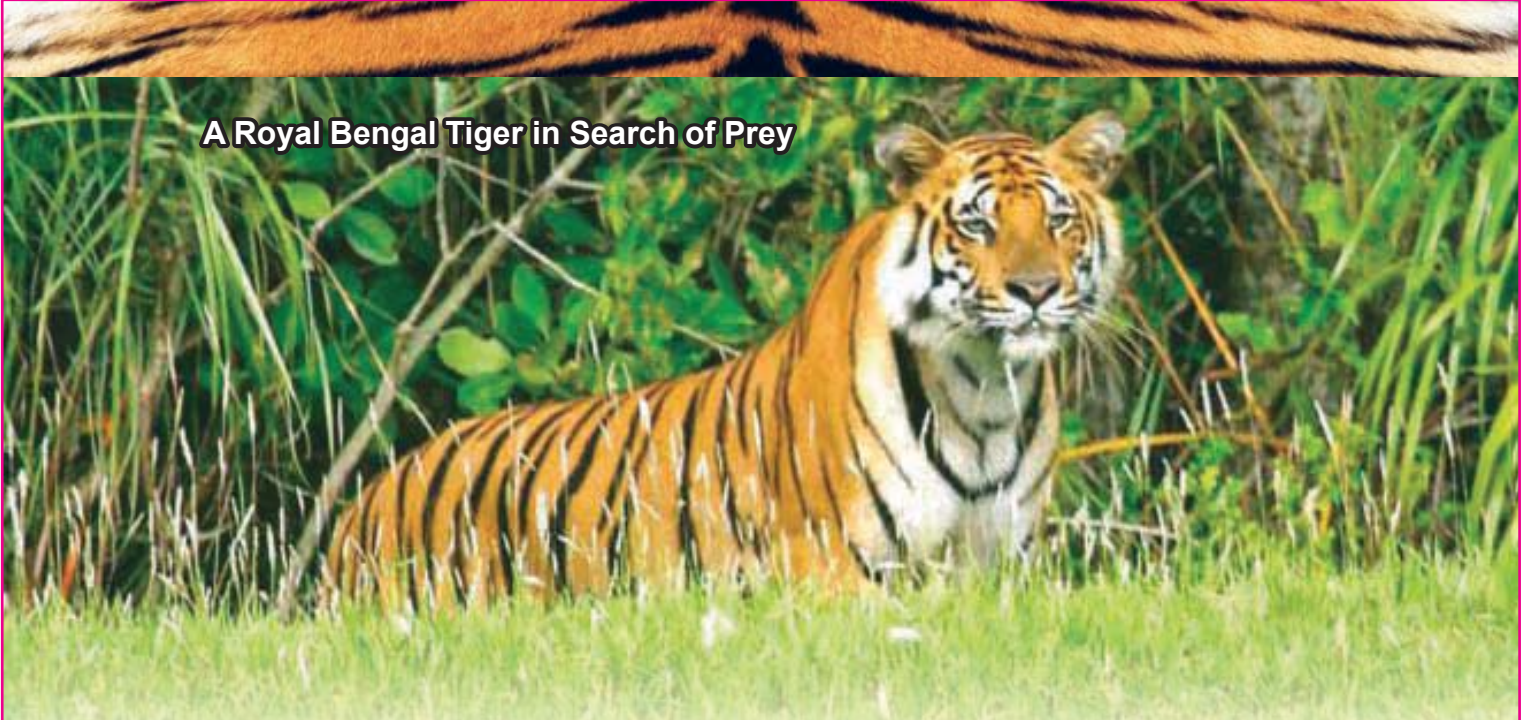
Strive to double the number of wild tigers across their range by 2022.

1. doing everything possible to effectively manage, preserve, protect, and enhance habitats, including:
 - a. Mainstreaming biodiversity conservation in planning and development processes in tiger habitat;
 - b. Making critical tiger breeding habitats inviolate areas within the larger tiger conservation landscapes where no economic or commercial infrastructure development or other adverse

- activities are permitted; and maintaining the landscapes and creating corridors around and between them where all permitted development activities are tiger and biodiversity-compatible;
- c. Improving protection by using systematic patrolling to safeguard tigers, their prey, and habitats; and
 - d. Working collaboratively on trans-boundary issues, such as the uninhibited movement of tigers and the management of tiger conservation landscapes.
2. Working collaboratively to eradicate poaching, smuggling, and illegal trade of tigers, their parts, and derivatives through:
 - a. Strengthened national legislation, institutions, and law enforcement to combat crime directed against tigers;
 - b. Strengthened regional law enforcement activities through bilateral and multilateral arrangements such as Association of South East Asian Nations Wildlife Enforcement Network (ASEAN-WEN), South Asia Wildlife Enforcement Network (SA-WEN), and the Protocol between the Government of the People's Republic of China and the Government of the Russian Federation on Tiger Protection;
 - c. Strengthened international collaboration, coordination, and communication;
 - d. Specialized expertise, where relevant, from international organizations including the CITES Secretariat, INTERPOL, the UN Office on Drugs and Crime, the World Bank, and the World Customs Organization, (recognizing that some of these agencies may, themselves, require additional resources); and
 - e. Long-term national and global programs to create awareness of the value of wild tigers and their ecosystems and thus eliminate the illicit demand for tigers and their parts.
 3. Engaging with indigenous and local communities to gain their participation in biodiversity conservation, minimize negative impacts on tigers, their prey, and habitats, and reduce the incidence of human-tiger conflict by providing sustainable and alternative livelihood options through financial support, technical guidance, and other measures.
 4. Increasing the effectiveness of tiger and habitat management, basing it on:
 - a. The application of modern and innovative science, standards, and technologies;
 - b. Regular monitoring of tigers, their prey, and habitat;
 - c. Adaptive management practices; and
 - d. Building capacity of institutions involved in science and training and creating a platform for interactive knowledge exchange at all levels.
 5. Exploring and mobilizing domestic funding, including new financing mechanisms based on forest carbon financing including REDD+, payment for ecosystem services (PES), ecotourism, and private sector, donor, and non-governmental organization partnerships.
 6. Appealing for the commitment of international financial institutions, such as World Bank, Global Environment Facility, Asian Development Bank, bilateral and other donors and foundations, CITES Secretariat, non-governmental organizations, and other conservation partners to provide or mobilize financial and technical support to tiger conservation.
 7. Looking forward to the establishment of a multi-donor trust fund or other flexible arrangements to support tiger conservation.
 8. Requesting financial institutions and other partners, including the Global Tiger Initiative, to assist in identifying and establishing a mechanism to coordinate



A Honey Bee Colony



A Royal Bengal Tiger in Search of Prey

and monitor the use of the multi-donor trust fund allocated for tiger conservation and the implementation of the GTRP, including its Global Support Programs for capacity building and knowledge sharing, combating wildlife crime, demand reduction, and the GTRP progress report. In the interim, we request the Global Tiger Initiative to fulfill this role.

9. Agreeing to convene high-level meetings on a regular basis to review the progress of NTRPs and the GTRP and to help ensure continued high levels of political commitment to tiger recovery.
10. Building tiger conservation awareness by celebrating Global Tiger Day annually on 29 July.
11. Welcome and sincerely appreciate the pledges made during the Tiger Summit, we also appreciate the continued support of the Global Environment Facility, Save the Tiger Fund, Smithsonian Institution, US Fish and Wildlife Service, Wildlife Conservation Society, and WWF, and other partners in the Global Tiger Initiative, and welcome the participation of new ones.


By the adoption of this, the St. Petersburg Declaration, the tiger range countries of the world call upon the international community to join us in turning the tide and setting the tiger on the road to recovery.

The Thimphu Affirmative Nine-Point Action Agenda on Tiger Conservation

The leaders of the government of the 13 Tiger Range Countries (TRCs) met in November 2010, at the International Tiger Forum in St. Petersburg, Russia and declared their collective political will to take all action necessary to prevent the extinction of wild tigers. They set the goal of doubling the numbers of wild tigers globally by 2022 in the St. Petersburg Declaration on Tiger Conservation and endorsed the Global Tiger Recovery Program (GTRP) as a road map to reach that goal, supported by international partners to mobilize needed external resources.

The TRC Ministers or their representatives who are charged with implementing the GTRP and its constituent National Tiger Recovery Priorities, met on October 22-23, 2012 at the Second Asian Ministerial Conference on Tiger Conservation in Thimphu, Bhutan, to reflect on advances thus far, enhance the action agenda through 2014, and re-emphasize their political will for tiger conservation demonstrated at the International Tiger Forum.

Progress in reversing the wild tiger's decline toward extinction has been significant based on actions undertaken by TRCs, Nonetheless, the threats to wild tigers and their natural habitats are seen to be increasing. Tiger landscapes are economically and politically undervalued and their importance to human well-being poorly recognized.



Building on the pledges of the St. Petersburg Declaration, the Ministers or the Heads of Delegations of the TRCs have indentified an affirmative nine-point action agenda up to 2014 and ask partners to intensify their support to:

1. **Actively strengthen Frontlines** : Urgently enhance rewards, recognition and resources for frontline staff (in the form of numbers, institutional capacity, skills, tools, technology, infrastructure, operating costs and insurance against loss of life and injury) in all TRCs over the next three years.
2. **Diligently conserve tiger habitat, inside and outside protected areas, against current and future threats** : Strengthen and continue programs to extend protected areas, remove current encroachments in core breeding areas and ensure full public disclosure through land-use plans, mapping current and future threats, application of the principles of Smart Green Infrastructure, better science to maintain quality habitats, smart patrolling to increase management effectiveness and improved monitoring, with necessary programs and disclosure completed over the next two years.
3. **Significantly enhance engaging and sharing the benefits of conservation with communities** : Making them partners in tiger and habitat conservation and expanding sharing of benefits from conservation, expanding alternative livelihood programs and promptly and adequately compensating villagers for losses due to/caused by tiger in all TRCs in two years.
4. **Enhance and mainstream Collaboration among TRCs** : in management of trans-boundary landscapes and corridors, combating illegal trade and eliminating illicit demand through bilateral/multilateral mechanisms and with the support of organizations such as ASEAN-WEN, SAWEN, INTERPOL and others.
5. **Support TRCs with low tiger densities to launch tiger testoration programs** : Build on lessons of success, create the conditions essential for successful restoration and find suitable sources of tigers in at least two different national programs over three years.
6. **Significantly accelerate the flow of national and external funds to support actions on the ground** : Focus new support on gaps and accelerate projects to implement National Tiger Recovery Priorities (NTRPs) and fully fund the Global Tiger Recovery Program by 2014.
7. **Develop a new partnership with business and industry** : Engage business and industry in habitat conservation, valuation of ecosystems, sustainable finance and outreach to consumers and other stakeholders, with five pilots that minimize and compensate for impacts to be launched across the TRCs in the next two years.
8. **Develop and implement comprehensive national awareness strategies and initiatives** : to instill pride and bring people closer to nature to counteract the negative impacts on tigers from urbanization, disengagement of youth, development and loss of cultural heritage and to widely disseminate the value of tiger conservation landscapes.
9. **Develop national action plans** : for a period of two years for each TRC with criteria and indicators to monitor NTRP/GTRP implementation.

By issuance of the Thimphu Affirmative Nine-Point Action Agenda on Tiger Conservation, the TRCs Ministers or the Heads of Delegations re-confirm their commitment to collective action and political leadership, together with the continued support of international partners to reach the goal of doubling the number of wild tigers globally by 2022. On the 2nd Day in the **Plenary Session-4**, progress of Thimphu Agenda will be discussed.

Bangladesh Tiger Action Plan 2009-2017

Bangladesh Tiger Action Plan (2009-2017) was approved by the Government and it was jointly prepared by Forest Dept. and Wildlife Trust of Bangladesh (WTB). It marks the beginning of a structured approach to achieving though following long term tiger conservation in Bangladesh :-

- ▶ Long Term Strategic Goals
- ▶ Marginally Increase or stabilize the Sundarbans tiger population by reducing key threats to tigers, prey and habitat.
- ▶ Maintain sufficient prey base to support the Sundarbans tiger population
- ▶ Maintain sufficient habitat to support the Sundarbans tiger and prey population
- ▶ Improve conservation capacity in the FD and mainstream tiger conservation into the GoB's development agenda

(a) Future Challenges to Achieve the Strategic Goals of BTAP

There remains considerable scope to expand the list and understanding of threats. However, due to the risk of losing more tigers during the lengthy time needed to collect more information, conservation activities need to be implemented now. The development of an effective tiger conservation effort is a huge challenge; a complex and urgent task requiring a holistic approach that can be swiftly adapted to changing conditions and the emergence of new information.

(b) Institutional development and policy

The FD is the custodian of wildlife and forests for the entire country, and in recent years is strengthening its commitment to biodiversity conservation. The FD was formed in 1864 during the colonial period and is responsible for the management of the Sundarbans and all other forests in Bangladesh. It has a number of territorial divisions that are responsible for the prevention of illegal activities, regulation of legal extraction, permit issuance, and revenue collection. Wildlife and Nature Conservation Circle (WNCC) was formed in 2001, which established dedicated posts to safeguard wildlife, primarily in protected areas. The WNCC does not yet have sufficient institutional presence or resources to fully carry out its intended role. In the Sundarbans the territorial DFOs, rather than WNCC staff, currently administer both the reserved forest and the wildlife sanctuary areas.

As an initial step and to progress BTAP implementation, WNCC staff could be assigned to coordinate BTAP activities. Duties would include the development of a BTAP implementation plan; design of a monitoring and evaluation approach; liaison with decision-makers in the FD, MoEF, and other ministries; and the creation of a platform to facilitate collaboration. Selected Sundarbans FD staff can be trained to deal with THC incidents, wildlife crime investigation, and tiger, prey, and habitat monitoring activities.

(c) Forest protection and law enforcement

In addition to the development of institutional biodiversity conservation capacity, an effective FD patrolling force is essential for the prevention of illegal and damaging activities such as poaching or unsustainable wood harvesting. There is an urgent need to improve human resources, infrastructure, and patrolling efforts.

In addition, there is no risk allowance to compensate for the unique dangers faced by FD staff in the Sundarbans. Two FD staff were killed by tigers in 2005 and one staff member was killed by a cyclone in 2007. In 2009, two more FD staff were killed in confrontations with dacoits (local term for robbers and pirates). There is also no budget set aside to cope with emergency situations such as periodic cyclones. Cyclone Sidor struck in November 2007 and Aila in 2009 destroyed many guard posts in the eastern side of the Sundarbans. More than a year later, little repair work has been done, several guard posts are still deserted, and others have no boats or regular source of drinking water. A disaster recovery process is needed to ensure that patrolling levels are returned to normal as quickly as possible after these devastating storms.

National Tiger Recovery Plan

On the basis of Bangladesh Tiger Action Plan (BTAP), we have developed National Tiger Recovery Program (NTRP). The main vision of the NTRP is to stabilize or marginally increase the current tiger population by reducing some key threats to tigers, prey and habitat.

NTRP aims to present the incremental effort that Bangladesh needs to make in order to accelerate the implementation of its Tiger Action Plan with a focus on actions of the highest priority. These efforts are over and above major ongoing or planned project. Priority actions are :

- ▶ Building Institutional capacity;
- ▶ Engaging local communities;
- ▶ Protecting the habitats;
- ▶ Trans-boundary collaboration
- ▶ Reduce tiger human conflict
- ▶ To reduce tiger & prey poaching
- ▶ Education & Awareness
- ▶ Research & monitoring



Monitor Lizard

SUNDARBANS: THE TIGER CONSERVATION LANDSCAPE

The Sundarbans Reserved Forest (SRF) in Bangladesh is the single largest mangrove forest in the world. The SRF is a unique bio-climatic zone in a typical geographical situation in the coastal region of the Bay of Bengal. It is a landmark of ancient heritage of mythological and historical events and bestowed with magnificent scenic beauty of natural resources, which is internationally recognized for its wide biodiversity of mangrove flora and fauna both on land and water. The SRF the immense tidal mangrove forests of Bangladesh is in reality a mosaic of islands of different shapes and sizes, perennially washed by brackish water shrilling in and around the endless and mind-boggling labyrinths of trusting water channels. This is the only habitat for where natural population of the tiger is confined.

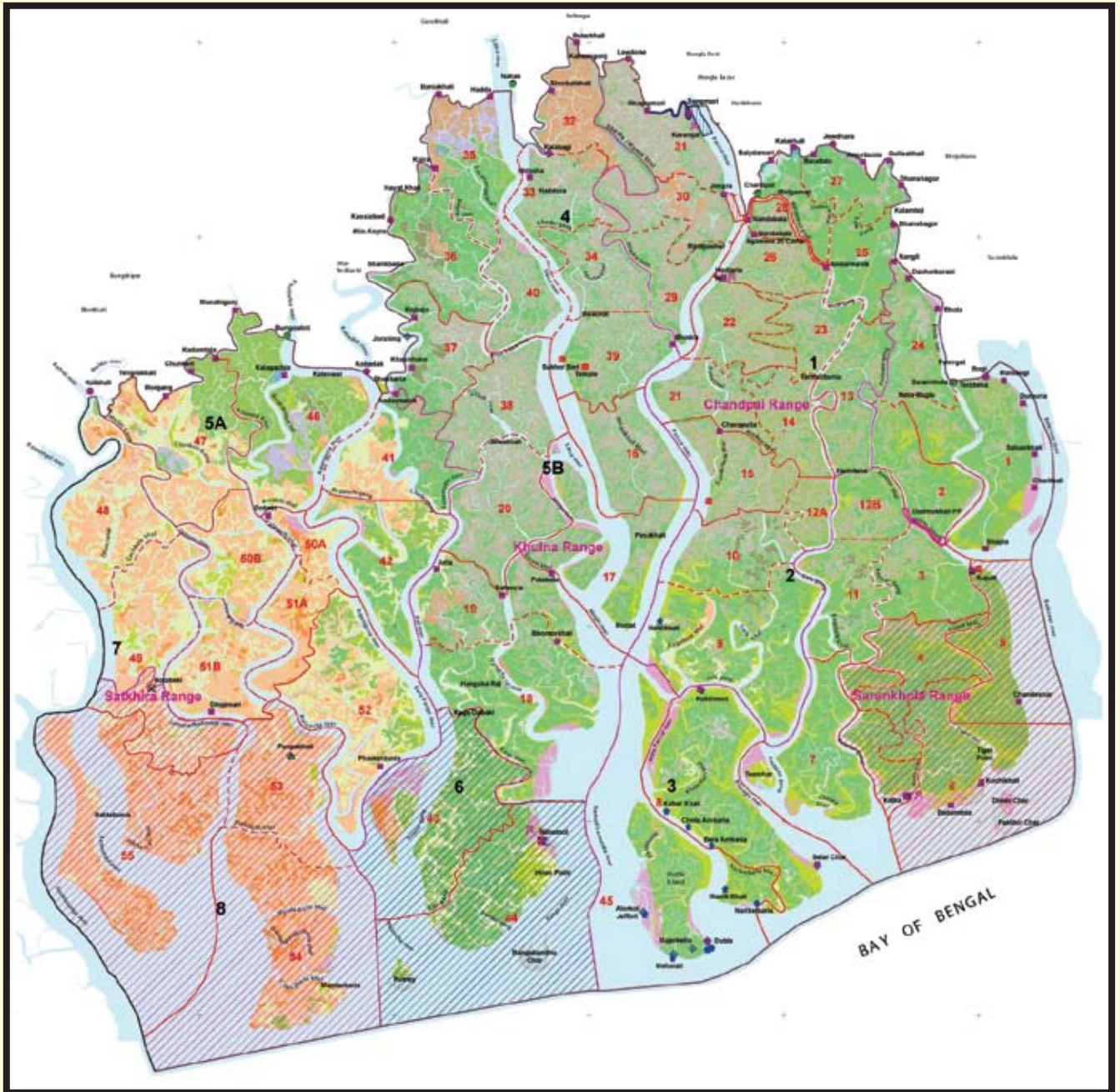
Location

The SRF is situated in the extreme southwest of Bangladesh between the river Baleswar in the East and the Harinbanga in the West adjoining to the Bay of Bengal. The forest is lying between latitude 21°27'30" and 22°30'00" North and longitude 89°02'00" and 90°00'00" East at the southern part of Khulna, Bagerhat and Satkhira civil districts.

Area

The forest has an area of some 6017 sq. km (7620sq. km including the marine zone) determined from the visual interpretation of multispectral SPOT satellite data. Land area including exposed sandbars occupies 4,14,259 hectares (70%), water bodies 1,87,413 hectares (30%).

Sundarbans Reserved Forest Showing The Major Vegetation Types



CLASSIFICATION

	Sundri		Gewa Sundri		Keora
	Sundri Gewa		Goran		Non Mangrove
	Sundri Passur		Goran Gewa		Grass and Bare Ground
	Sundri Passu r Kankra		Passur Kankra		Sandbar
	Gewa		Passur Kankra Baen		Waterbody
	Gewa Goran		Baen		

Description	Area (Km ²)
Land area (including sandbars)	4142.6
Marine zone	1603.2
River, channels, streams & canals	1874.1
Total area including marine zone	7620.0
Total area excluding marine zone	6016.7

Geology

The upper SRF forest grows on geologically recent soil formations. The substratum consists entirely of Quaternary Era sediments, sand and silt, intercalated with marine salt deposits and clay. A number of geomorphologic and resultant hydrological changes have contributed to the present location and condition of the Sundarbans. The rising of the western part of the delta caused separation of ancient branches of the Ganges from the area, which today comprises the Indian Sundarbans. This resulted in the accretion at the river mouth and increase in salinity waters intruding in the western part of the delta.

Topography

The forest floor rises 0.9m to 2.11 m above mean sea level. The entire forest is inundated twice a day with the high tide.

Water

Salinity of the estuary varies seasonally. During monsoon, salinity decreases for heavy downpour in the upstream. Considering salinity, the forest area is divided into 3 (three) zones e.g. fresh water zone, moderate saline water zone and saline zone.

Soil Characteristics

The SRF soil is finely textured and the sub-soil is stratified and at greater depth is compacted mentioned that soils were slightly calcareous, uncured or partly cured clayey deposits which were homogenous both: critically and horizontally. Organic carbon and nitrogen in the topsoil (15 cm depth) were 0.62% and 0.05% respectively on dry weight basis.

River System

A complex network of streams and rivers varying considerably in width and depth intersects the entire area. Some of the big rivers are several kilometers in width. The Sundarbans receives large volumes of fresh water from inland rivers flowing from the north and of saline water from the tidal incursions from the sea. The fresh water is charged with alluvium containing plant nutrients. This together with the salinity of the tidal water is the major factor determining the productivity of the forest ecosystem.

Soil and Water Salinity

The salinity increases from East to West and North to South. But remains less than 6 ds m⁻¹ even in the driest month. Soil salinity in April- May remains between 2 and 4.5 ds m⁻¹ in most parts of the Sundarbans. The range is considered to be at low salinity level. However, salinity has considerably increased in recent years due to diversion of Ganges water upstream at Farkka in the Indian territory. Water salinity along the northern part of the Sundarbans ranges from 1 to 9 ppt in the late monsoon (September). This range in water salinity during the dry season (May) varies from 4 to 28 ppt.



Gyps bengalensis

Climatic Condition

The climate of the SRF is humid. Temperature is fairly equable due to the proximity of the sea. Highest temperatures occur in April and May and lowest in December and January. Mean annual maximum and minimum temperature vary between 30° and 21°C, mean annual relative humidity varies from 70% to 80%. Annual rainfall in the Sundarbans is in the range of 1640-2000 mm. July, August and September are the wettest months and December, January and February the driest.

Forest Types

Sir David Prain (1903) for first time systematized the Sundarbans forests into three main areas, viz, (i) Southern coastal strip and South. Western part, with dominant mangrove and species; (ii) Central zone of *Heritiera* sp and (iii) North-Eastern part with savannah type of vegetation.

Champion and Seth (1968) described the Sundarbans under the following sub-divisions (i) Mangrove scrub (ii) Mangrove forest (iii) Salt water mixed forests or *Heritiera* forests and (iv) Brackishwater mixed or *Heritiera* forests.


Flora : The mangrove tract in Sundarban signifies the species ecological effect due to tidal ingress of sea undeterred by upstream flow and plant community manifests abnormal adaptation like development of pneumatophores (breathing roots, stilt roots etc).

It has considerably high floral diversity and in total about 334 plant species, additionally 165 algae and 13 orchid species are also recorded. Among them Sundri (*Heritiera fomes*), Keora (*Sonneratia apetala*), Baen (*Avicennia officinalis*), Passur (*Xylocarpus mekongensis*), Kankra (*Bruguiera gymnorhiza*), Goran (*Ceriops decandra*), Golpata (*Nypa fruticans*), Singra (*Cynometra ramiflora*), Bhola (*Hibiscus tiliceae*), Hental (*Phoenix paludosa*), Khulshi (*Aegicerus corniculatum*), Gewa (*Excoecaria agallocha*) etc. are most important.

All the plant species in the Sundarbans Reserve Forest are indigenous. There is no endemic or exotic species and so far none is considered rare. But Sundri is considered threatened due to its uncontrolled natural dying.



Sundarbans Fishermen



Most of the mangrove spp. are also characterized by viviparous germination as in case of germination as in case of Kankra, Goran, Gajan, Khalsi, Tora etc providing anchorage with pencil- like roots developed before detachment of the seed from the parent.

The floristic composition of the SRF is rich compared to many other mangroves of the world. Prain (1903) recorded 334 species of plants belonging to 245 genera and 75 families and additionally 165 algae and 13 orchid species. *Heritiera fomes* and *Exoecaria agallocha* are the principal species. Sundari (*Heritiera formes*) covers about 73% and Gewa covers 16% of total landmass constitutes about 65% of the total merchantable timber. Canonizado and Hossain (1998) have identified nine different vegetation types with % of vegetation cover namely Sundri (18.77%), Sundori-Gewa (26.52%) Sundri-Passur-Kankra (2.39%), Gewa (5.38%) Gewa-Sundri (18.95%), Gewa-Goran-Passur (8.66%), Gora-Gewa-Keora (16.22%), Passur-Kankra-Baen (10.08) and Keora-Gewa open area (2.07%).

Fauna : There are 693 species of wildlife which include 49 mammals, 59 reptiles, 8 amphibians, 315 birds, 210 white fishes, 24 shrimps, 14 crabs and 43 mollusks species exist in Sundarbans. The major wildlife species include Royal Bengal Tiger (*Panthera tigris tigris*), Spotted Deer (*Axis axis*) Wild Boar (*Sus scrofa*), Rhesus Monkey (*Macaca mullata*), Estuarine Crocodile (*Crocodylus porosus*), Python, turtle, dolphin, otter, Jungle Cat, Fishing Cat and a variety of bird species. Among fishes fin fish, shrimp and crabs and important.

Overview of Tiger & Prey Base Population Status

Tiger lived in Bangladesh for centuries, but at present it had become endangered in the country. It has been reported that tiger were present in major district of the country in 1930s (Bangladesh Tiger Action Plan, 2009-2017). However, habitat degradation, fragmentation, monoculture, encroachment, forest clearing, legal hunting, illegal poaching has caused the tiger habitat and number reduced to a minimum state. Now, it is only the **Sundarbans (6017 sq. km)** where the tigers are still thriving in Bangladesh. The Sundarban is densely covered by mangrove forests, and is one of the largest reserves for the wild tiger.


There are debates on the population size of tigers and there are different methods of estimating the number of tigers in Sundarbans. The last population estimate indicates tiger population in Bangladesh Sundarbans varies from **300-500**.

The main prey base of tiger is Spotted Deer (*Axis axis*) and occasionally they prey on Wild Boar (*Sus scrofa*), Barking Deer (*Muntiacus muntjak*) and Rhesus Monkey (*Macaca mulatta*) etc. The systematic survey of Spotted Deer population was done in 2000-2002 using there different census methods and population size varies from **83,000 to 95000** approximately during non-breeding and breeding season. The population density also varies with the vegetation types. The mean density of Spotted Deer was lowest (3-4/sq. km.) in pure Sundri forest of north-eastern side of the Sundarban and highest was in the Keora-Gewa- open grass land (112 to 175/sq. km.) in the south-eastern part of the forest. Total population size of Barking Deer was 2,150, Wild Boar 28,000 & Rhesus monkey 51,000 approximately (Dey, T.K, 2007).

Importance of Sundarbans Tiger Conservation Landscape

Sundarbans hold one of the largest remaining populations wild tigers with an estimated of 300-500 tigers. This forests represents ideal focal point for our conservation efforts, particularly for the Sundarbans. Bangladesh therefore, has an opportunity to contribute significantly to the conservation of tigers and to benefit from their continued presence.

Royal Bengal Tiger is the national animal in Bangladesh. Sundarban is the unique bioclimatic zone covering an area of 6017 sq. km. at the south-west of Bangladesh support one of the largest populations of Wild Tiger. Three Wildlife Sanctuaries have been declared as 798th Natural World Heritage Site by UNESCO in 1997.



Due to global warming, climate change, saline water intrusion and ecological change Sundarban mangrove forest is under serious threat of sea level rise, tidal surge and cyclonic storm. We all know the consequence of 'Sidr' in 2007 and 'Aila' 2009 which pass through this forest. This forest acts as green shelter belt in south of Bangladesh during cyclonic storm and it also support the livelihood of 1.2 million peoples. Government imposed ban of tree felling and minor forest produce extraction to stop illegal felling, wildlife crime and restoration of tiger habitats. We have to protect and save Sundarbans Tiger Conservation Landscape due to following reasons:-

- ▶ In Bangladesh it is the only remaining tiger habitats;
- ▶ Source of livelihood of millions of people;
- ▶ It plays major role in carbon recycling;
- ▶ Largest contiguous mangrove in the world;
- ▶ Breeding ground of fresh water and marine cetaceans and fishes;
- ▶ Prevents the coast from being washed away;
- ▶ Protects villages from cyclones preventing loss of human life and cores of damage; and
- ▶ Mitigates climate change - produces oxygen and stores carbon.

Common Threats to Sundarbans Ecosystem

- ▶ Direct Tiger loss due to poaching and Tiger-Human Conflict;
- ▶ Sea level rise and climate change effects;
- ▶ Forest produce extraction, habitat loss and degradation;
- ▶ Reduction of sweet water flow and saline intrusion;
- ▶ Industrial waste and water pollution;
- ▶ Polder construction around Sundarbans; and
- ▶ Navigation route through Sundarbans.

(a) Direct Tiger Loss

Tiger poaching and associated trade have potential to decimate a population over a short period of time. Little is known about tiger poaching in Bangladesh, with cases only being documented from opportunistic arrests or seizures by the authorities. At present, low numbers of poaching incidents are reported from the Sundarbans, with up to two incidents each year (FD records), but the majority of incidents are unlikely to be detected due to the covert and illegal nature of this activity. There is also little known about the national demand for tiger parts, although a 1997 survey reported substantial trade in tiger skins, teeth, and claws. However, there is a high regional demand for tiger products and an established international trade, so it is unlikely that Bangladesh will be overlooked as a source of tiger parts, particularly as other tiger populations dwindle.

Some tigers are also killed through retribution killings associated with tiger-human conflict (THC). FD records show that up to three tigers are killed each year. These retribution killings are a result of bad feelings towards tigers due to human- or livestock-killing incidents or simply because the tiger is perceived as a threat when it strays into a village. THC creates negative attitudes in local communities towards tigers, making achievement of long-term conservation objectives difficult.

But due to recent tiger conservation initiatives tiger killing incidences as well as human death incidences have been reduced substantially (Table-1).

Table-1: Human and Tiger Killing Incidences in Sundarbans

Year	Name of Forest Division	Human killed by tiger	Tiger killed/died			Comment's
			Killed by human	Died due to old age/ disease	Total	
2000	Sundarban Forest Division	30	5	0	5	tiger incidence and livestock killing was not recorded.
2001	Sundarban (West and East)	19	1	2	3	-do-
2002	-do-	28	3	0	3	-do-
2003	-do-	21	4	0	4	-do-
2004	-do-	15	3	0	3	-do-
2005	-do-	13	0	1	1	-do-
2006	-do-	6	0	1	1	-do-
2007	-do-	10	3	1	4	-do-
2008	-do-	21	1	1	2	65 tiger incidence occurred ; 3 persons were injured and 32 livestocks were killed.
2009	-do-	32	3	0	3	58 tiger incidence occurred; 1 persons were injured and 4 was livestocks were killed.
2010	-do-	50	2	0	2	52 tiger incidence occurred; 17 persons were injured and 16 was livestocks were killed.
2011	-do-	42	1	4	5	41tiger incidence occurred; 15 persons were injured and 18 was livestocks were killed.
2012	-do-	29	0	3	3	38 tiger incidence occurred; 11 persons were injured and 16 was livestocks were killed.
2013	-do-	8	0	0	0	23 tiger incidence occurred; 7 persons were injured and 12 were livestocks were killed.
2014 (Up to June)	-do-	4	0	0	0	13 tiger incidence occurred;3 persons were injured and 9 were livestock were killed.
	Total =	328	26	13	39	

(b) Tiger-Human Conflict : Bangladesh also suffer high level of Tiger-Human Conflict and on an average **25-40** peoples are killed by the tiger every year and on an average **2-3** tigers (stray-tiger) killed by the local people per year. Human killing incidences are more is the north-western side of the forests. This trend has been reduced substantially due to the preventive measures of BFD and other partners conservation activities.

Due to human-killing & livestock depredation incidence, killing of stray tigers by affected local communities in increasing. Tigers are directly threatened by poaching to supply the increasing demand for tiger products.

Human-killing usually affects people entering the forest to harvest resources, and is mainly concentrated in the west. An average of 25 to 40 people are killed each year according to FD records, although up to 96 cases in a year have been documented in earlier periods (Curtis 1933).

Steps to Reduce the Human-Tiger Conflict

- (i) **Formation of Tiger Response Team:** Bangladesh Forests Department in collaboration with NGO like WildTeam and others partners has formed Tiger Response Teams (TRT). A boat-based team tackles human-killing inside the forest by providing medical assistance, transporting victims, retrieving bodies, and patrolling areas where human-killers are active. Village Tiger Response Teams (VTRT) are being created in the bordering village areas to deal with stray tigers and monitor livestock-killing. The teams are reached through a Tiger Hotline number published in Forests Department patrol posts and villages. Since 2013, 1 (one) TRT and 49 VTRT have been formed. They are working closely with local community. So number of Tiger killing incidence is decreasing gradually.
- (ii) **Compensation Policy:** Ministry and Environment and Forests has declared compensation policy for wildlife victims in 2012. On the basis of this policy Tiger victim family (killed) will get Tk. 1,00,000/- (US\$ 1250.0) and injured person will get Tk. 50,000/- (US\$ 625.0). Since today 53 families have got Tk. 48,00,000/- (US\$ 60,000.0). As a result stray Tiger killing incidence in the Sundarbans surrounding villages has been reduced substantially.

(c) **Livestock depredation** occurs in many villages along the forest boundary, particularly in the east. Results from preliminary surveys suggesting that on an average 50 livestock are killed every year, but the causes and potential solutions for livestock depredation have yet to be identified.

(d) **Prey Depletion :** The number of tigers that an area can support is largely dependent upon the number of suitable prey. The main prey for tigers in the Sundarbans is Spotted Deer (*Axis axis*) and to a lesser extent Wild Boar (*Sus scrofa*). Barking Deer (*Muntiacus muntjak*) are also present in low numbers, and may fall prey to tiger.

Prey depletion is a serious threat to any tiger population and there are signs that it is occurring in the Sundarbans, with snaring apparently the most common practice. This technique can also kill non-target species such as tigers.

Prey could also be depleted through disease introduced by domestic animals; in some northern parts of the forest, deer share habitat with cows and goats which graze illegally inside the forest.

(e) **Forest Produce Extraction, Habitat loss and Degradation :** Habitat loss and degradation imperil tigers by reducing, thinning, and fragmenting the area in which they can live and reproduce.

There are a number of potential threats to the Sundarbans, perhaps the most immediate of which is the unsustainable harvesting of timber and non-timber forest products (NTFP). The burgeoning population along the Sundarbans periphery have few alternative livelihood options and therefore little choice but to depend upon the forest for their survival; thousands of people enter the forest on a daily basis to harvest timber, fuel wood, fibres, and other non-timber forest products. The most economically valuable wood species is **Sundri**, a hardwood generally used for building houses, making boats, anchor posts, and fuelwood. The legal harvest of Sundri has been suspended since 1990 due to declining stock, but some illegal felling continues. Gewa is the second most valuable timber species. It was cut for paper production in government owned newspaper



Tiger Response Team boat unit patrolling

mills until their closure in the early 2000s when they became a losing concern. Gewa continues to be used for building materials, out rigging for boats, fishing materials, and fuelwood . Goran trees are cut extensively for fuelwood, used by local communities and industries such as brick manufacturing. Goran bark is rich in tannins which are used to preserve fishing nets and sails. Other timber species are Keora (*Sonneratia apetala*), Kankra (*Bruguiera spp.*), Baen (*Avicennia* spp), Dhundal (*Xylocarpus granatum*), Passur (*Xylocarpus mekongensis*), and Singra (*Cynometra ramiflora*), which are used as substitutes for Sundri and Gewa. Legal extraction of kinds of woods have been suspended to control the illegal logging inside Sundabans.



A wood cutter with loaded boat

Nypa Palm (*Nypa fructicans*) and Sungrass (*Imperata sp.*) are also collected for thatching materials. Honey and wax are collected by specialist teams of honey hunters hired by businessmen who then sell the products on the national market. Fishermen also enter the mangroves to gather fish, crabs, and other marine life. The FD licenses fishing and maintains records of this activity, but there is no scientific monitoring or management fish stocks.

There is no human habitation permitted inside the forest other than Forest Department, Coast Guard, Border Guard of Bangladesh (BGB) and Navy camps. Infrastructure within the forest is generally limited to the buildings of these camps and some tourist facilities such as walkways and watch towers. However, there are some semi-permanent fishing communities operating at the southern edge of the forest. These fishermen use forest materials for fuelwood and in the constructions of their jetties, shelters, and fish drying beds. The impact of these encampments on the forest, tigers, and prey has not yet been quantified. Some forest areas close to the villages in the north and north east appear to be degraded from local wood collection, and there is also illegal grazing of domestic livestock which could reduce the available food for prey.



Nypa Palm Leaf Collection

sources may be damaging the Sundarbans. However, except for preliminary identification of some toxins, little work has been published on the extent and impact of pollution . Large-scale mineral and gas exploration and extraction has not been carried out so far in the Sundarbans, and its potential impact on the ecosystem, in terms of pollution and habitat destruction, has not been estimated. **Establishment of Rampal Coal-based Power Plant** is a national debate and monitoring the effect of the plant is a critical issue.

(e) Navigation Route through Sundarbans TCL : Navigation Route through Sundarbans TCL is a recent complicated issue and it become a burning issue for Tiger Conservation Landscape. Due to the siltation on the river bed of Mongla-Ghosiakhali

Pollution of the rivers from industrial, shipping, tourism, urban, agricultural, and aquaculture



Fish drying stands at Dubla Island

Channel, majority of the water vessels now pass through the three Dolphin Wildlife Sanctuaries of Sundarbans from the North-East part upto the Baleshwar river. This is a hazardous situation in the TCL.

Sundarbans Eco-system Services

The Sundarbans continues to be shaped by the tones of sediment deposited by the rivers and ocean currents, and changes in human land use . The Sundarbans represents nearly half of the remaining forests of Bangladesh and is dominated by halophytic tree species. This forest support 334 species of plants and 693 species of wildlife species.

As well as protecting a unique array of biodiversity, saving the Sundarbans will also secure essential ecological services such as (1) trapping of sediment and land formation, (2) protection of human lives and habitation from regular cyclones, (3) its role as a nursery for fish and other aquatic life, (4) oxygen production, (5) waste recycling, (6) timber production, (7) supply of food and building materials, and (8) carbon cycling. Such services are of global and national importance, and fundamental to the livelihoods of the local people living along the Sundarbans border; 1.2 million people directly depend upon the collection of timber, fuelwood, fibres, fish, shells, wax, honey, and other non-timber forest products. This resource extraction feeds both local needs and industry, with the forest producing almost half of the total timber and fuelwood for Bangladesh.

Each year as many as 200,000 local and tourists make day trips to Sundarbans.

Regulation of resource extraction, tourism, revenue collection, and law enforcement is carried out by the FD, under the Ministry of Environment and Forests. For management purposes, the forest and its waterways have been delineated into four ranges and 55 compartments, guarded by over 90 FD posts.

This forest mainly focus on waterborne tourism, exploring narrow creeks by silent country boat and observing wildlife. The Sundarbans has a unique entity of attracting tourists not only domestic but also from the abroad. The pleasure of cruising in the rivers and creeks of the Sundarbans knows no bound. Fishing in the Sundarbans is equally interesting. In addition, there are other options and some interesting recreation activities; beach relaxation, walking, jungle trails, wildlife watching specially Spotted Deer, Tigers, Wild Boars, Birds, Crocodiles, whale and Dolphin etc. There are several tourist hot spots in the Sundarbans that can easily attract tourists. Some of the important tourist spots are Karamjol, Katka, Kochikhali, Dubla Island, Nilkamal, Harbaria Eco-tourism Center, Shekertek temple, Mandarbaria, Notabeki and Dobeki etc.

The Important seasonal events are honey collection (April- June), Bonbibi Mela (January), Dubla Rash Purnima Mela (1st week of November), Bay of Bengal Exploration (December-February), fishing with trained otters (October-February) and Shisu Mela (Nov-Dec) etc.

Honey Collection

There are plenty of Honey plants (different species) in the Sundarban Mangrove forest. Honey collectors get permit from Forest Department at fixed revenue rate. Honey collection starts from 1st April and continues up to 15th June every year. On an average 1,50,000 kg honey is being collected from the Sundarban every year. About three thousand families are involved with honey and wax collection.



Masked Finfoot



Lesser Adjutant Stork

Sundarbans Information and Education Centre

Sundarbans information and education centre established in the Sundarban West Forest Division office, Khulna in 2000 under the Sundarban Biodiversity Conservation Project to get primary information regarding Sundarbans. This information and education centre gives us ideas on the the Sundarban Reserve Forest, wildlife & aquatic resources etc. Authority is thinking to make it more attractive.

Sea-level Rise and Climate Change

Sea-level rise caused by climate change has been noted as a serious threat to habitat in the Sundarbans, with current predictions suggesting substantial land loss from increased inundation over the next 50 years. These predictions do not take into account the changes in compensatory factors such as sedimentation rate and mangrove adaptation, the coastal areas of Bangladesh are currently growing by about 20 km² a year and mangroves in other areas are known to have flourished despite sea-level rises of at least 3.8 mm a year. Although improved understanding of this issue is required, some current estimates of sea-level rise are over 1 m by 2100, so it is prudent to develop mitigation solutions before it is too late. Tropical cyclones are a regular occurrence in the region with approximately one cyclone per year hitting Bangladesh . Climate change is expected to increase cyclone frequency, which may be an additional source of stress to the forest. The MoEF has developed a 10 year Bangladesh Climate Change Strategy and Action Plan that outlines programmes to tackle the predicted effects of climate change, including expansion of the coastal greenbelt through mangrove afforestation.

Legislation and Penalty for Tiger Poaching

Prior to 1973, tiger hunting in Bangladesh was legal, and bounties were offered as an incentive. The Bangladesh Wildlife (Preservation) (Amendment) Act 1974 defines the tiger and the Spotted Deer as 'protected animals'; they cannot be killed or captured, except for cases of self defence, protection of crops and livestock, approved scientific research, or sanctioned transport or possession. In addition, where a tiger becomes a threat to human life, the animal can be officially notified by the Chief Conservator of Forests (CCF) for capturing or killing.

Promulgation of Wildlife (Conservation and Security) Act. 2012 is a millstone for Tiger and other wildlife conservations. Under the section-36 of the Act, a Tiger hunter or poacher will get 2-7 years jail with Tk. 1.0 lac to 10.0 lacs fine and it will be none-bailable case. For second time offence there will be life sentenced jail.

World Heritage Site

The UNESCO world Heritage Committee declared Sundarbans as its 798th heritage site on the 6th December 1997. The honorable Prime Minister of Bangladesh Sheikh Hasina ceremonially unveiled the World Heritage Plaque on the 4th February 1999 which includes three wildlife Sanctuary with an area of 1,39,700 ha. It is expected that UNESCO will co-operate in development and conservation of all flora and fauna of Sundarbans.

Sundarbans as Ramsar Site/Wetland

The Sundarbans has been declared as a 560th Ramsar Site in 1992 due to covering all criteria of wetland as well as Ramsar site. Contiguous with the Sundarbans there is an additional 20km. wide marine zone with an area of 1603 sq. km. that is included in the Sundarbans.



WH Plaque was unveiled by Hon'ble Prime Minister Sheikh Hasina on 4 February 1999



Wildlife Sanctuaries as Core Tiger Breeding Area

Three areas in the Sundarbans were declared as Wildlife Sanctuaries under this Act, the first in 1960 and the second and third in 1996 namely (i) Sundarbans East Sanctuary, (ii) Sundarbans South Sanctuary & (iii) Sundarbans West Sanctuary. These are situated in areas deemed to have wildlife management potential and as representative portions of natural areas in the three different biotypes which are free from timber extraction and other forms of harvesting and maintained as undisturbed breeding ground for wild animals and fishes. The total area of the sanctuaries are 1,39,700 ha.

(i) Sundarbans East Sanctuary: This sanctuary is consisting of the compartment 4,5,6 and part of 7 with an area of about 31,227 ha. Out of which land and water areas are 22,575 ha. And 8,652 ha. Respectively. This sanctuary is bounded by Arozboni and Baki Khal, part of Supati Khal in the North, Baleshwar river in the East, the Betmore & Chana Betmore Gang in the West and Bay of Bengal in the South. Its Headquarter is situated at Katka.

(ii) Sundarbans South sanctuary: It consists of compartment No. 43 & 44 with an area of about 36,670 ha. Of which 21,100 ha. Is landmass and the rest is water body. The sanctuary is bounded in the North by Kaga and Dobeki Khal, East by Kunga and Mordat river, West by Malancha & Bora Pangasia and south by Putney island and the Bay of Bengal.

(iii) Sundarban West sanctuary : It consists of compartment No. 53,54,55 and part of compartment No. 49 with an area of 71,502 ha. Of which 47,354ha. Is landmass and 24,148 ha. Is water body. This sanctuary is bounded in the North by Buriganga, Hilshamari and Notabeki khal, the East by the river Jamuna, the West by the river Harinbhanga and in the South by the Bay of Bengal including Talpatty Island.

Dolphin Wildlife Sanctuaries

For conservation of different species of dolphins 3 (Three) wildlife sanctuaries under Sundarbans East Forest Division have been declared in 2012. The area of Chandpai W.S, Daingmari W.S and Dudmukhi W.S is 560.0 ha, 340.0 ha and 170.0 ha respectively. These areas are well known for Gangetic, Irawady and Bottleneck Dolphin.

Scope of Education and Awareness Program

Without political support, the tiger and biodiversity conservation will continue to remain low on the government's agenda and separate from economic development plans and poverty reduction agendas. Support is also needed across a wide range of parties, from industry and private companies, to public organizations and local communities.

Strategic use of education and awareness raising can support changes in knowledge, attitudes, and behavior to help achieve conservation objectives. A tiger conservation education and awareness strategy is needed to guide the development of carefully targeted and measurable campaigns that are integrated with other BTAP programmes. Successful campaigns need to be creative in their messages and use targeted methods to engage different audiences. Training is needed to develop conservation communication and social marketing specialists in Bangladesh, who will then be able to design, implement, and evaluate campaigns.

Scope of Research and monitoring

Information is vital for policy formulation, development of field-level strategies, and monitoring tiger, prey, and habitat levels as indicators of overall success. Without basic understanding of a species or the ecosystem in which it lives, it is not possible to assess the impact of various threats or predict and evaluate the outcome of management activities.

Public universities generally do not have enough funds to give national students the opportunity to undertake often costly Sundarbans fieldwork. Scholarships would increase the number of students able to undertake Sundarbans research and build a new generation of tiger conservationists for the country.

Field stations could also be established close to the Sundarbans by universities and NGOs to facilitate research activities. A centre for tiger and Sundarbans conservation research would make research findings freely available and provide access to the latest approaches and techniques from around the world. This would encourage collaborative efforts and innovative research.

Tiger Population Estimation in Sundarbans TCL using Camera Trapping Method with the Assistance of Wildlife Institute of India.

There are several methods for determining tiger population in the world but above all, the **camera trapping** is been proved a very effective method in the tiger range countries. This methods was also applied in the Indian Sundarbans Forests. So application of similar methodology on both side of Sundarbans TCL is a strong demand of Tiger expert. However, Bangladesh Forest Department (BFD) in collaboration with **Wildlife Institute of India** with the financial assistance from IDA funded **Strengthening Regional Cooperation for Wildlife Protection Project (SRCWP)** is conducting this study first time to estimate the tiger number in Bangladesh Sundarbans.

The prime objectives of the camera trapping are:

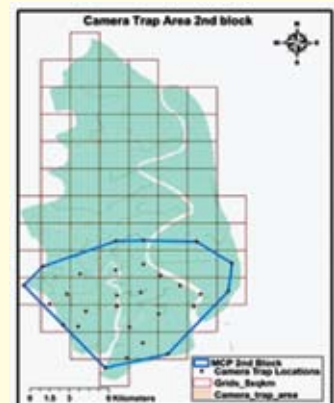
- ▶ To estimate and monitor the size of tiger population and density in the Bangladesh Sundarbans
- ▶ To know about the relative abundance of tiger using Khal survey and line transect methods.

Training on Camera Trapping for tiger estimation in the Sundarbans has been imparted to the forest staffs by the Wildlife Institute of India during the period May 03, 2013 to May 06, 2013. In that training a one-day indoor training and three-day field training was provided by Dr. Y.V. Jhala and Dr. Qamar Qureshi of India and the whole work is done with the technical support of **Wildlife Institute of India (WII)**.

Trap Camera : *Cudde Back Attack* digital infrared cameras with thermal and motion detector sensors that fired instantaneously when triggered. Associated materials such as SD card, D-Size battery, GPS, GPS battery, range finder, earthen pot, nylon net, rope, wooden stick, sting bomb, grid map, data sheet etc.

The study of tiger population estimation has been started in November 2013 in the selected three blocks of the Satkhira, Sarankhola and Khulna Ranges of Bangladesh Sundarbans. Field survey has completed by the Wildlife Management and Nature Conservation Division (WMNCD), Khulna in the month of 1st November 2013 to 10th April 2014 in collaboration with two territorial divisions.

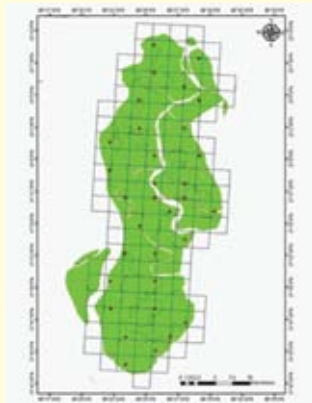
Blocks : Three blocks have been selected for this study during a preliminary field visit of WII researchers and senior officers in May, 2013. The blocks are i) South-Eastern Block which covers the Sundarbans East Wildlife Sanctuary ii) Central block and iii) North Western Block (see map below). The Sundarbans is divided into 5 sq km grids and a total of 271 grid points which cover 1,355 sq km area under this study.



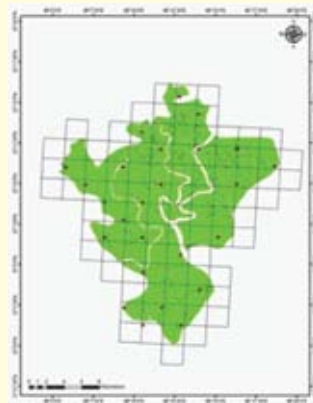
Sarankhola Range:
South-Eastern Block

- South-Eastern Block** : This block falls into Sarankhola Range of SE Forest Division and consists of Compartment number 3, 4, 5, 6 and part of 7. It has got 71 grids which covers a total area 355 square kilometer. The study of this block has been completed during 1st November 2013 to 25th January 2014.
- Central Block** : This block falls into Khulna Range of SW Forest Division and consists of compartment number 41 and 42. This has 128 grids and covers an area of 640 square kilometer. Each of the grids will be covered under camera traps (Figure-ii). This block will be done into three sessions where 43 pairs of camera will be placed in each session. Moreover during the exercise some more grid station will be determined to represent the area. This block will be covered in the financial year 2014-15.

iii) **North-Eastern Block** : This block includes compartment no 46, 47 and 50B of Satkhira Range and covers an area of 360 square kilometer. This has 72 camera stations and has completed field survey in two sessions during 1st February to 10th April 2014.



Khulna Range: Central Block



North Eastern Block: Satkhira Range

Camera Setting Techniques: First step is the reconnaissance survey where suitable trap station is being identified and GPS locations of the possible places are noted down. The GPS locations of those points are plotted in the grid maps with the help of ArcGIS software for geo-rectification. Second step is the camera setting where the selected trap stations are being cleared properly to avoid unnecessary photographs. Two cameras at each trap station are then placed approximately opposite to each other maintaining a distance of 15 to 20 feet at a height of 1 to 1.5 ft above the ground and tied with standing straight tree or pole. Nylon nets and branches of trees are being placed on the camera side to get clear pictures of both the flanks. Attractants are being used to allure tigers to the trap stations.

Camera Checking : After successful setting of the camera in the whole study areas, the next step is to check the cameras at a certain period of intervals. Cameras are being checked at every 3rd day and SD cards were replaced at every 6th day for checking whether any tiger individuals came or not. During camera checking we used to check attractants, battery efficiency and camera setting. We deployed cameras for 35-40 days in each session depending upon capture-recapture rate.

Data Analysis : Tiger pictures collected during field study used for individual identification with windows media gallery manually as well as with matching software. We have prepared a capture history and capture matrix with the collected data for each block. Program **Mark-Capture-Recapture** software will be used for determining absolute density of tigers in each block.

Conclusion : Population estimation of tiger is a difficult task as they are nocturnal, solitary, elusive and cryptic in nature. There is no definite tracks in this forests so it becomes very difficult to trap the Tiger photographs. However, estimation of tiger density and population size is urgently needed with a statistically robust approach to formulate management plans for Sundarbans. Though camera trapping method is more scientific and reliable but it is not possible to conduct this study throughout the Sundarbans within a statistical framework. Wildlife Institute of India and Bangladesh Forest Department are working together to model tiger densities across the Sundarbans by using double sampling approach of calibrating tiger sign indices with camera trap densities. The upcoming model might solve our quarries regarding tiger densities in Sundarbans.



Setting of camera

BFD has completed field works in 2 blocks out of 3 blocks. We will start camera trapping programme at the central blocks in November 2014. After completion field data collection we can be able to project the Tiger population in Bangladesh Sundarbans.



Camera Trapping Survey Team



Mobile Camp for Camera Trapping



Team members are checking Capture Camera



Md. Yunus Ali, CCF in field visit during camera trapping session



Orientation of team member on Camera Trapping method



Demonstration of Capture Camera by Dr. Jhala (WII) and Dr. Tapan Kumar Dey, CF Wildlife

Camera Trapped Individual Tiger



Tiger 1 (Left Flank)



Tiger 1 (Right Flank)



Tiger 3 (Left Flank)



Tiger 3 (Right Flank)



Tiger 7 (Right Flank)



Tiger 7 (Left Flank)

Rehabilitation of 3 Smuggled Wild Tiger Cubs

Three wild Bengal Tiger cubs were seized at Shyamoli, Dhaka on 11 June 2012 by the RAB (Rapid Action Batelion) in collaboration with BFD. The cubs were poached from Kakra Khali area of Koikhali Check Station under Sathkhira Range of Sundarbans West Forest Division. From the investigation we come to know that the smugglers have purchased the cubs from honey collectors. The cubs handed over to a mini rescue center for transitional period under care of Bangladesh Forest Department, Dr. Tapan Kumar Dey, Conservator of Forest, Wildlife and Nature Conservation Circle with the assistance of SRCWP project involved two veterinarians, two animal nursing staffs and security staffs at different level for their hand rearing, quarantine, health monitoring and safety. The age of the cubs was to months hold and their average weight was 2.0 kg. The name of the male cub is **Joy** and other two female cubs is **Jothi** and **Jui**.

A National Committee was formed by BFD for close monitoring and advise. According to National Committee guideline, the cubs were quarantine and hand reared up to 6 months of age at the National Botanical Garden mini rescue center. They have feed with Milk Repressor and Nutri-Plus Gel along with life saving different vaccine. After 6 months they have gain weight 20.00 kg. and it was very difficult to keep them in mini rescue center. Tiger experts from the Tiger Temple of Thailand visited several time and they provide us important advise. Due to the active nursing, feeding and play, they have grown up normally without any complex disease.

On 13 October 2012 this 3 cubs were transfered to BSM Safari Park, Cox's Bazar under the supervision of Dr. Tapan Kumar Dey and veterinary surgeon Dr. Zahid Mohammed Malekur Rahaman. At present their age is 2 years 3 months and the **Joy** has gained weight of 120.0kg. Jothi and Jui upto 75.0 kg. Now they are in good health. In the Safari Park they have got training to kill the guinea pig, goats and boars etc. On experimental basis one tigress (**Jothi**) will be released in Sunderbans East Wildlife Sanctuary with satellite collar for home range & ecological study. It is a good success story of Bangladesh Forest Department.



Rescued 3 Tiger cubs from smuggler



Tiger cubs released in the Mini-enclosure of Safari Park



Feeding of tiger cubs with milk repressor



Transportation of Tiger cubs at 6 months age to the Safari Park



Young Tiger and Tigress at the age of 2 years 3 months in Safari Park



Young Tiger and Tigress at the age of 2 years 3 months in Safari Park

Rescue of an Injured Stray out Tigress from Laodobe Village Adjacent to Sundarbans

It was 27 January, 2014. British film company “Tiger Tiger” and tourists of Guide Tours Ltd first cited this injured female in Lawdobe area of Chandpai Range under Sundarbans East Forest Division. They took some pictures and found an injury on front left leg with a snare (rope) below the knee level. The tigress was badly injured and need to be rescued immediately. As per instruction of Dr. Tapan Kumar Dey, CF, Wildlife Circle a team of trained staffs with auto shut down wooden trap case to rescue the tigress. The team was also equipped tranquilizing gun, dart, medicine and other accessories. A team of vets from Bangbandhu Sheikh Mujib Safari Park, Gazipur and Wild Team member were present there. They started working under direct supervision of DFO, Wildlife Management and Nature Conservation Division, Khulna.

Firstly, they placed the case with bait at Bonobibi Shrine, very close to the area where the tigress was first cited. Then they have done pugmark survey in the nearby areas to get an idea about the possible location of the tigress. Pugmark Survey data showed that tiger was roaming with 4-5 km Square area and could not even able to cross the small creek. Location of trap case then shifted to another place based on pugmark survey but the team could not able cited the tigress between 27 January to 2nd February.

On 3rd February, the team and forest staffs of Lawdobe Camp cited the tigress in their campus at midnight but she did not come close to the trap. On 5th February trap case was shifted and placed on the south bank of the pond on Lawdobe Camp. Sting bomb was also used to attract the animal to the case. The area was a fringe area and tigress might come to the locality. People were very anxious and were passing sleepless nights. Two awareness meetings were hold with school boys, VTRT (Village Tiger Response Team) and local people.

On 7th February, day time the team cited the tigress twice within one km of the forest camp. On that mid night, tigress came into the trap case, took the life goat bait but due to some mechanical fault, door of the case did not shut down and tigress has managed to escape. Next day on 8th the team repaired the case, gave bait and passed the whole day. After sunset at 6.30 she came, entered into trap case and she was trapped. The team covered the case with black cloth and sent her to Bangabandhu Seikh Mujib Safari Park for better treatment.

Results: The injured female might come to locality for food and create anarchy among the community. This is the first time in Bangladesh where a tiger was trapped in case and rescued for better treatment.



Snared Laodobe Tigress trapped in the cage and transported to the BSM Safari Park, Gazipur on 07th Feb. 2014




Snared Laodobe Tigress under operation in BSM Safari Park, Gazipur on 09 Feb. 2014



Snared Laodobe Tigress at mini rescue center of BSM Safari Park on 07 March, 2014

Achievements During the Years 2009 – 2014

1. Promulgation of **Wildlife (Conservation and Security) Act, 2012** is a millstone for Tiger and other wildlife conservations. Under the section-36 of the Act, a Tiger hunter or poacher will get 2-7 years jail with Tk. 1.0 lac to 10.0 lacs fine and it will be none-bailable case. For second time offence there will be life sentenced jail.
2. Documentation and approval of National Tiger Recovery Program (NTRP) as well GTRP (Global Tiger Recovery Program) for 2010 to 2022 with the assistance Global Tiger Initiative (GTI).
3. Development and approval of Bangladesh Tiger Action Plan (2009-2017) with the collaboration of ZSL (Zoological Society of London) and WildTeam.
4. Approval of **Compensation Policy for Wildlife Victims-2012** for killing or permanent disability of human by Tiger has been done and amount of Tk. 48,00,000/- (US\$ 60,000) has been given to 53 victim families.
5. With assistance of World Bank a regional project named **“Strengthening Regional Co-operation for Wildlife Protection”** between Bangladesh, Bhutan and Nepal have been taken to strengthen wildlife protection, capacity building and restoration of biodiversity in the region through this project all sorts of logistic support, water vessels, patrol boats and accommodation facilities of frontline staffs have been developed in the Sundarbans.

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6. Arrangement of the 2nd Stocktaking Conference of senior officials and experts to review the implementation of Global Tiger Recovery Program (GTRP) on 14-16 September 2014 with the assistance of World Bank supported by SRCWP project, GTI, GTF and other partners.
 7. Formation of Wildlife Crime Control Unit (WCCU) centrally in collaboration Police, Bangladesh Border Guard, Customs, Coast Guard in Khulna area is playing vital role in Tiger Conservation.
 8. Formation and training of 49 Village Tiger Response Team (VTRT) and 1 (one) FD Tiger Response Team (TRT) surrounding communities of SRF in collaboration with WildTeam to mitigate tiger human conflicts (THC) and to save the stray tiger.
 9. Completion of training of FD staffs and officers on immobilization, capture and release of strayed out tiger with the collaboration of WII supported by SRCWP project.
 10. Formation of 4 co-management council and committee for collaborative management through USAID supported IPAC (Integrated Protected Area Co-Management Project) and CREL (Climate Resilient Environment and Livelihood) project.
 11. A MoU has been signed 2011 between Bangladesh and India on **“Conservation of the Sundarbans”**.
 12. A bilateral Protocol has been signed 2011 between Bangladesh and India for **“Conservation of the Royal Bengal Tigers of the Sundarbans”**.
 13. Camera Trapping Survey of Tiger in Sundarbans is going on with the assistance of WII supported by SRCWP project.
 14. Nation wide celebration of Global Tiger Day on 29 July since 2010.
 15. With the assistance of European Union “Sundarban Environment and Livelihood Security (SEALS)” Project is under implementation for development of FD logistic support and AIG support to the Sundarbans communities.
 16. Training and Implementation of MIST and SMART Patrolling system has been developed with the assistance of SEALS and SRCWP Projects.
 17. A Tiger Co-ordination Committee (TCC) has been formed in 2014 headed by Secretary, MoEF with all law and enforcement agencies working in Sundarbans area.



**Tiger is Our National Animal
Be Kind to Save Them**

