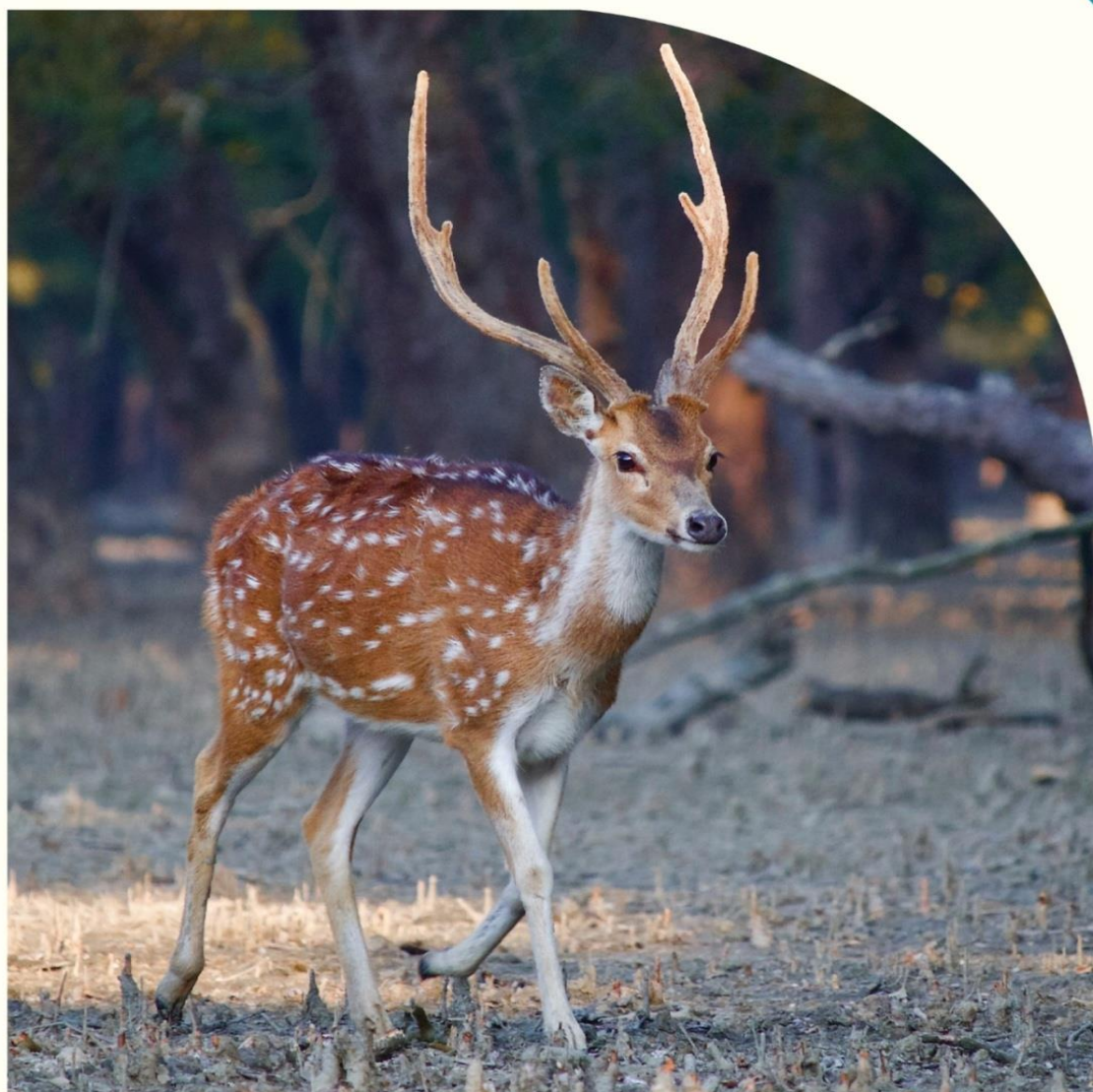




Ministry of Environment, Forest and Climate Change



## **The Sundarbans (Bangladesh) (N 798) Progress Report**

on  
the decisions of 44 COM 7B.91 the World Heritage Committee  
on the Sundarbans World Heritage Sites

2022

January, 2022

**The Sundarbans (Bangladesh) (N 798) Progress Report  
on the Decisions of 44 COM 7B.91 the World Heritage Committee on the  
Sundarbans World Heritage Site**

**January 2022**

**Ministry of Environment Forest and Climate Change  
Government of the People's Republic of Bangladesh**



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## **Acronyms and Abbreviation**

AIG	: Alternative Income Generation
AIS	: Automated Identification System
BCG	: Bangladesh Coast Guard
BFD	: Bangladesh Forest Department
BN	: Bangladesh Navy
BTAP	: Bangladesh Tiger Action Plan
BWDB	: Bangladesh Water Development Board
CBD	: Convention on Biological Diversity
CITES	: The Convention on International Trade in Endangered Species of Wild Fauna and Flora.
CMGC	: Co-Management General Committee
CMS	: Convention on Migratory Species
CPG	: Community Patrolling Group
CREL	: Climate Resilient Environment and Livelihood
DCT	: Dolphin Conservation Team
DoE	: Department of Environment
ECA	: Ecologically Critical Area
ECR	: Environment Conservation Rules
EIA	: Environmental Impact Assessment
EMP	: Environmental Management Plan
EPASIIAE	: Expanding the Protected Areas System to Incorporate Important Aquatic Ecosystems
EPZ	: Export Processing Zone
GDP	: Gross Domestic Product
GIZ	: Deutsche Gesellschaft für Internationale Zusammenarbeit
GoB	: Government of Bangladesh
GTF	: Global Tiger Forum
GTI	: Grand Tiger Initiative
ILL	: International Labor Law
IRMP	: Integrated Resources Management Plan
ISTAP	: Independent Scientific and Technical Advisory Panel
IUCN	: International Union for Conservation of Nature
JRC	: Joint River Commission
JWG	: Joint Working Group
LCA	: Life Cycle Assessment
LDC	: Least Developed Country
MAKC	: Mangrove Adaptation and Knowledge Centre
MoEFCC	: Ministry of Environment, Forest and Climate Change
MoU	: Memorandum of Understanding
MPA	: Mongla Port Authority
NGO	: National Government Organization
NOSCOP	: National Oil and Chemical Spill Contingency Plan
NTRP	: National Tiger Recovery Programme
OUV	: Outstanding Universal Value
PA	: Protected Area



PF	:	Peoples Forum
PMC	:	Project Management Committee
PPE	:	Personal Protective Equipment
PPPs	:	Policies, Plans and Programmes
RMM	:	Reactive Monitoring Mission
SAWEN	:	South Asia Wildlife Enforcement Network
SDBC	:	Sustainable Development and Biodiversity Conservation in the Sundarbans
SEA	:	Strategic Environmental Assessment
SEALS	:	Sundarbans Environmental and Livelihood Security
SEMP	:	Strategic Environmental Management Plan
SIZ	:	Sundarbans Impact Zone
SMART	:	Spatial Monitoring and Reporting Tools
SMART-OPs	:	SMART Operating Procedures
SMP	:	Management of the Sundarbans Mangrove Forests for Biodiversity Conservation and Increased Adaptation to Climate Change
SMP-II	:	Support to the Management of Sundarbans Reserved Forests
SOPs	:	Standard Operating Procedures
sq km	:	Square Kilometer
SRF	:	Sundarban Reserved Forest
SRU	:	Sundarbans Resource User
SRUG	:	Sundarbans Resource User Groups
STPP	:	Super Thermal Power Project
TCC	:	Tiger Co-ordination Committee
TCP	:	Tiger Conservation Project
USD	:	United States Dollar
VCF	:	Village Conservation Forums
VMS	:	Vessel Monitoring System
VTMIS	:	Vessel Traffic Management Information System
VRTT	:	Village Tiger Response Team
WCS	:	Wildlife Conservation Society
WHS	:	World Heritage Site

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## Executive Summary

This report contains responses of the state party (i.e. the Government of the People's Republic of Bangladesh) to each decision of 44 COM 7B.91 of the World Heritage Committee, current and future conservation initiatives for better management of the Sundarban ecosystem. In response to the recommendations, concerns and requests given in the Decisions of 41COM7B.25 and 43COM 7B.3 of the World Heritage Committee, the Government of Bangladesh has taken steps on the conservation and management of the Sundarbans in line with national policies, plans and programmes.

The government has taken number of additional measures and programmes for better ecological management of the property such as Expansion of Protected Area, SMART Patrolling, Activities for Dolphin conservation, Drone based monitoring in the Sundarbans, expand the coverage of dolphin Protected Area (PA) in around the Sundarbans, Tiger Conservation Project, Bangladesh Tiger Action Plan and National Tiger Recovery Programme. In order to resolve the Human-Wildlife Conflict Government has enacted "Reward for informer to detect offence Rules 2020". A new project (2021-2024) titled "Protection of Sundarban Mangrove Forest Project" has already been initiated by the Government for conservation of the Sundarbans with the emphasis on Ecological Monitoring.

During the first meeting of India-Bangladesh Joint Working Group (JWG) held in 2016 in India, India and Bangladesh have agreed to conduct studies to develop indicators to measure health of the of the ecosystems of the Sundarbans and to identify impacts of climate change on its ecosystem. The 2<sup>nd</sup> meeting of the JWG was supposed to be held on 17-18 February, 2020 in Dhaka, but Indian side requested to defer the meeting due to unavoidable circumstances from their part. Bangladesh however, is eager to arrange the meeting as earlier as possible and the Ministry of Environment, Forest and Climate Change of Bangladesh has already proposed to hold the 2<sup>nd</sup> India-Bangladesh JWG meeting in Dhaka in the month of February/March, 2022.

The Government has already published National Oil Spill and Chemical Contingency Plan (NOSCOP) in February 2020. The allocation of funding, preparation of localized contingency plan and steps of implementation are underway.

Recently Bangladesh has graduated from the LDC and the economic growth trajectory has retained its smooth momentum even amidst the prevailing Covid-19 global pandemic. This steady but sure momentum has slingshot the economic growth within the last few decades grossing a total GDP of 411 billion USD in 2021 and has resulted in boosting the current foreign reserve of Bangladesh to 46 billion USD in 2021, and annual export to 45 billion USD in 2020-21 financial year. Some of the landmark successes that have been fueled by the economic growth include Bangladesh being placed 3rd in world in terms of fish production in 2021, 2nd in terms of Jute production and garments export, and 4th in terms of rice output. Recent statistics of World Bank marks the increase of agriculture production in the country as the second highest in the world during the last 20 years. This has culminated in an overall development in human index with average life expectancy increasing to 73 years as well as

increases in happiness index. Bangladesh has the Sundarbans with a total area of 6017sq km, out of which, 1397 sq km has been declared as world heritage site in 1997 by UNESCO. The Sundarbans is a famous biodiversity hotspot, harboring 320 species of birds, 53 reptiles, 49 mammals, and 290 fish, as well as protecting threatened and endangered species like the estuarine crocodile, Indian Python, and Bengal Tiger. Notably, it is the only area known to have Tigers that are ecologically adapted to mangrove habitats. According to the National Forest Inventory conducted during 2016-2019, total carbon stock in the Sundarbans was found 139 million tons, whereas, it was found 106 million tons in 2009. The inventories reveal that the Carbon Content in the Sundarbans has increased significantly by the years 2009 to 2019. According to the results of the camera trapping inventory of Tigers in the Sundarbans Reserved Forest (SRF) during 2015 and 2018, the number of Tigers were increased from 106 to 114. A survey using Camera Trapping method showed that the Bengal Tiger has increased to 114 from 106 between the years 2015 to 2018.

Bangladesh is one of the few developing countries that initiated the Strategic Environmental Assessment (SEA) process to safeguard its environment. The Strategic Environmental Assessment (SEA) report and Strategic Environmental Management Plan (SEMP) have been received by MoEFCC and these two reports are under Government endorsement process. The Sundarbans, the world's largest contiguous mangrove forest, is a national asset and pride for Bangladesh and the SEA has targeted the wellbeing of this heritage. The government reaffirms that it has not given any permission to any large-scale industry adjacent to the Sundarbans World Heritage Property since the decision of 41 COM7B.25.

EIA approval has been made mandatory for large projects around the Sundarbans with strict monitoring provisions for ensuring compliance to all mitigation measures suggested within the EIA report. Current and future development plans until 2041 in the Southwest region of Bangladesh revolving around preservation and conservation of the valuable Sundarbans ecosystems include dredging of Gorai River to divert water to the Southwest region, mandatory environmental clearance for any large-scale industrial projects in line with SEA (once it is completed), integrated freshwater inflow management plan to maintain freshwater flow and improve water quality, future dredging of the Pashur river, India-Bangladesh JWG on Conservation of the Sundarbans and SMART-based patrolling across the Sundarbans Reserve Forests (SRF).

The Mongla Port Authority has taken initiatives to procure and implement Vessel Traffic Management Information System (VTMIS). Standard Operating Procedures (SOPs) has been placed for Disaster Management for the Port. In addition, additional projects will be taken up to dredge upstream waterways to bring fresh water flow to the Sundarbans. In recent times, especially in the year 2020 and 2021, the state party has taken various measures for conservation of the natural ecosystem and Outstanding Universal Value (OUV) of the Sundarbans. Government has undertaken projects such as 'Protection of Sundarbans Mangrove Forests' project, 'Extension and Development of Eco-Tourism Facilities in the Sundarbans' Project, 'Pond excavation and Re-excavation for the supplying of fresh drinking water in order to sustainable Forest Management of the Sundarbans project'. These measures will enhance





the sustainability of forest management of the Sundarbans. Other projects include ‘Re-establishment of Telecom system in Sundarbans Project’, ‘Support to the Management of Sundarbans Reserved Forests (SMP II) Project’, ‘Mobile Apps based Development and Post-development Support of Eco-tourism in Sundarbans for Bangladesh Forest Department (BFD)’ etc. The Bangladesh Delta Plan 2100 a 100-year strategic plan adopted by the Government of Bangladesh, seeks to balance ecosystem conservation and economic development – in line with the country's goal to achieve the vision 2041 – with the longer-term challenge of managing water, ecology, the environment and land resources, and the risks from natural disasters and climate change. Recently, Bangladesh has drafted the Mujib Climate Prosperity Plan Decade 2030 with a vision to shift Bangladesh’s trajectory from vulnerability to resilience and prosperity. Both Plans emphasize the need to protect the Sundarbans and provide the basis for adopting effective strategies to manage this very important mangrove forest.



## 1. Introduction

Bangladesh, as a South Asian biodiversity rich country, is committed to preserve and conserve its natural resources. Although Bangladesh is a very low carbon emission country, unfortunately it is one of the most vulnerable countries in the world to the effect of climate change. Climate Change poses significant risks to the sustainability of the conservation efforts of the Sundarbans as well as to the sustainable development of the country. Despite the threats of climate change induced hazards such as sea level rise resulting salinity intrusion into the Sundarbans, cyclones, droughts and other extremities in climatic variables which has laid immense pressure on the conservation efforts, the country is investing significant amount of resources in the conservation of its as well as the Sundarbans.

The Sundarbans, the world's largest contiguous mangrove forest, is a national pride for Bangladesh. It is safeguarding the south west region of the country from the climate change induced hazards. Thus, the Government of Bangladesh is determined to conserve and preserve the Sundarbans as a whole. The Sundarbans Reserved Forest (SRF) has three wildlife sanctuaries that cover about 1, 39,700 ha which was declared as World Heritage Site (WHS) in 1997. In June 2017, the State Party extended the area of this 3 (three) Wildlife Sanctuaries to about 3, 17,950 ha from 1, 39,700 ha to facilitate undisturbed breeding ground for the Bengal Tiger and other wildlife in the Sundarbans and WHS. At present, this three-wildlife sanctuary area covers approximately 52% of SRF.

The local community in the Sundarbans has been dependent on agro-based economic activities such as aquaculture and hatchery, paddy processing for rice production, betel-nut processing etc. The Mongla Port was established in Southern part of Bangladesh in 1954. Various kinds of secondary and tertiary economic activities emerged in the region after establishment of the Port. An export processing zone (EPZ) was developed in 1998 in the region to utilize the port facilities. According to the Wildlife (Conservation and Security) Act, 2012, there is no access to the sanctuary area for the resource collectors - living around the vicinity of the Sundarbans and any kind of economic activities are strictly prohibited within the wildlife sanctuaries.

The decisions adopted during the 44 COM 7B.91 in 2021, 43COM 7B.3in Baku, Azerbaijan in 2019 and 41 COM 7B.25 in Krakow, Poland in 2017, are being complied by the Government of the People's Republic of Bangladesh. The Government is taking a number of additional measures to maintain and improve the existing diversity and richness of the ecosystem of the property as well as the entire Sundarbans area.

## **2. Response to the Decision of the World Heritage Committee (Decision: 44 COM 7B.91)**

Government of Bangladesh has prepared comprehensive response on the decisions of 44 COM 7B.91 of the World Heritage Committee. The responses to each decision are as follows:

### **2.1. Decision no 1-2**

- 1. Having examined Document WHC/21/44.COM/7B.Add*
- 2. Recalling Decisions 41 COM 7B.25 and 43 COM 7B.3, adopted at its 41<sup>st</sup> (Krakow, 2017) and 43<sup>rd</sup> (Baku, 2019) sessions respectively.*

#### ***Response***

A comprehensive response on the decisions 41 COM 7B.25 and 43 COM 7B.3 has already been sent to the WHC on 29.11.2018 and 30.01.2020 respectively.

### **2.2. Decision no.3**

*Notes with satisfaction the conclusion of the 2019 Reactive Monitoring mission that the property's Outstanding Universal Value (OUV), including its hydrological and ecological processes and its biodiversity, remains present;*

#### ***Response***

The state party is delighted to acknowledge the comments and expresses its determination to conserve the Sundarbans including the OUV of the Property.

### **2.3. Decision no.4**

*Notes that possible impacts from large-scale industrial developments may result in a high risk for the property's OUV if no further measures are taken based on a comprehensive assessment of existing and possible future negative factors and pressures;*

#### ***Response***

Bangladesh has institutional setups to control pollution and protect its environment. At the national level, the Ministry of Environment, Forest, and Climate Change (MoEFCC) is mandated to coordinate all matters related to protecting and preserving the environment. MoEFCC is working with a vision to ensure sustainable environment and forest management in Bangladesh and setting forth rules, policies, guidelines, and strategies. In doing so, compared to peer groups of countries, Bangladesh has made good progress toward mainstreaming the environmental agenda at the policy level. Department of Environment (DoE) under the MoEFCC has been allocated business for ensuring Environmental Governance. DoE works to ensure tangible progress in implementing various environmental protection and safeguard rules, policies, standards, and guidelines in order to protect and conserve the environment and biodiversity of Bangladesh. In line with that, DoE has been performing its duty through the following activities to protect the Sundarbans:

- I. All the industries of the southwest region are being strongly monitored by the Department of Environment as per the Bangladesh Environment Conservation Act 1995 (lastly amended in 2010) and Environment Conservation Rules 1997. And legal steps are being taken promptly against the defaulters.
- II. The Maitree Super Thermal Power Project (STPP) in Rampal was established after a rigorous Environmental Impact Assessment (EIA) and obtaining all requisite/stutory clearances such as approval of EIA and Environmental Management Plans (EMPs) as per the Bangladesh Environment Conservation Act 1995 and Environment Conservation Rules 1997 (amended in 2010) in 2013.
- III. Maitree STPP is being developed with all measures to safeguard the Sundarbans from potential hazards as recommended in EIA and RMM report in 2016. All the mitigation measures as recommended in EIA have been adopted to control the pollution while implementing this power plant project.
- IV. The Divisional and District offices in Khulna and Bagerhat continuously monitor the Maitree STPP site in Rampal to ensure if the activities are being done in accordance with the Environmental Management Plan (EMP) obligations. A comprehensive checklist had been developed to monitor the environmental compliance of different components. As per the inspection of the Bagerhat district office, DoE (as of October 2021), the construction works of Maitree Super Thermal Power Project (MSTPP) is in line with preeminent prioritizing environmental and safety issues.
- V. It is noteworthy that the Environmental Clearance section at DoE Headquarter regularly monitors the Maitree STPP. As per the quarterly monitoring report submitted by the Project Authority, digital process and online system are not applicable right now since site-construction is still going on. Documenting and archiving the monitoring data are being maintained on quarterly basis. Sampling of biota to the susceptible zone is being done on quarterly basis. The Life Cycle Assessment (LCA) of bio indicators, Toxicity magnitude, Behavioral/attitude in all changes of fauna will be applicable during Operation Phase. Performance of the Ecosystem management plan is satisfactory. Continuation of training and capacity building and awareness, motivational program (Induction training, Rigging and lifting, Electrical safety) are going on properly. The Personal Protective Equipment (PPEs), ISO standards and International Labor Law (ILL) during operation of the projects will be ensured. Interviews of the stakeholders are being taken on quarterly basis.

As 'further measures' of safeguarding the Sundarbans a comprehensive Strategic Environmental Management Plan (SEMP) would be implemented [developed under the Strategic Environmental Assessment (SEA)]. The SEMP report has been finalized and shared to the related stakeholders by MoEFCC on 18 January 2022 for review and comments.

#### **2.4. Decision no. 5**

*Considers that the Strategic Environmental Assessment (SEA) for the South-West region of Bangladesh should provide an adequate planning instrument to ensure that all future large-scale industrial development in the vicinity of the property will not adversely impact the OUV;*

#### ***Response***

The Strategic Environmental Management Plan (SEMP) and SEA report for the South west region have provided adequate planning instrument for future industrial development in the vicinity of the property. These two documents have clearly recommended the types of industries to be developed in the vicinity of the property. For example, it has recommended to establish low polluting industries at Mongla EPZ area. Overall, the SEA concluded that the future threats to the Sundarbans can be managed provided that:

- The SEMP is fully and effectively implemented;
- There is full and effective implementation of existing environmental and socio-economic safeguards, laws, regulations and guidelines;
- Clean (green) and sustainable technologies is ensured, at least for future developments;
- The Sundarbans Management Plan is updated appropriately to reflect the findings of the SEA and recommendations in the SEMP;
- There is effective liaison and improved cooperation (perhaps through a national level committee) between the Forest Department and other agencies that have activities that impact on the Sundarbans – particularly from shipping, industry and tourism, to ensure that required coordination, management and mitigatory actions are taken.

#### **2.5. Decision no. 6**

*Welcomes the substantial efforts to enhance the protection of the property's OUV through the implementation of various conservation measures, including a new initiative to establish a long-term ecological monitoring system with a view to building climate resilience;*

#### ***Response***

The updated information on the substantial efforts to enhance the protection of the Outstanding Universal Value (OUV) of the property through the implementation of various conservation measures are mentioned below:

##### ***2.5.1. Moratorium on logging for conservation of floral species***

Although commercial logging was permitted in the Sundarbans previously, to protect and conserve the Sundarbans, the Government imposed moratorium on logging in the Sundarbans since 1989. The moratorium imposed is extended up to 2022. Moreover, the Government has imposed a ban on trade, transportation and use of two major timber species namely Sundri (*Heritiera fomes*) and Passur (*Xylocarpus mekongensis*) to completely stop the illegal trade of these species from the Sundarbans. It depicts that the Government does

not treat the Sundarbans as a source of revenue earning like earlier days but wants to conserve it.

### ***2.5.2. Expansion of Protected Areas:***

Three wildlife sanctuaries with an area of 1, 39,699.496 ha were declared in 1996 for biodiversity conservation and maintain undisturbed breeding ground for wildlife. They are Sundarbans East Wildlife Sanctuary, Sundarbans West Wildlife Sanctuary and Sundarbans South Wildlife Sanctuary, which are also the World Heritage Site (WHS). All types of extraction of forest products including fish, crabs and other non-wood forest produces are prohibited in the Protected Areas. The area of these 3(three) Protected Areas has been increased to 3,17,950.08 ha in 2017. Moreover, 5 (five) Wildlife Sanctuaries covering an area about 4093 ha. have been declared for Dolphin conservation in the Sundarbans and at present the total Protected Area covers 53.52% of the Sundarbans. Collection/extraction or harvesting of all kinds of resources is strictly prohibited from the Protected Areas.

### ***2.5.3. Spatial Monitoring and Reporting Tools (SMART) Patrolling in the Sundarbans:***

SMART (Spatial Monitoring & Reporting Tools) based monitoring system is being implemented in the Sundarbans since 2015. This monitoring system has become very effective to monitor and protect the resources (floral, faunal and aquatic) specially to protect wildlife and prohibit illegal fishing. Due to SMART patrolling wildlife poaching, smuggling and illegal fishing reduced appreciably.

SMART patrolling in the Sundarbans West Forest Division started in June, 2015 for the first time in Bangladesh. Before starting SMART implementation, only 1-2 persons were arrested per month because of traditional monitoring system. However, after the implementation of SMART nearly about 25 persons were arrested per month during the SMART patrolling.

To support the implementation of the SMART patrolling approach in the SRF- BFD and Wildlife Conservation Society (WCS) of Bangladesh with support from GIZ and inputs from Wild-Team (a local NGO) have jointly developed: 1) a SMART Operating Procedures (**SMART-OPs**) for Law Enforcement and Wildlife Monitoring in the Sundarbans, and 2) a Handbook for SMART Patrols in the Sundarbans Reserved Forest. The WCS of Bangladesh also helped BFD for developing a configurable data model for data collection via Cyber Tracker-equipped handheld devices.

During January, 2019 to October 2021, a total of 305 patrols were conducted in 211,038 km channels in 1724 days of patrol effort. During the patrolling, 37,246 sightings of 68 key wildlife species were recorded. In this time period total 1181 offenders were arrested. During the patrolling total 562 boats or transports and 755 fishing and crab harvesting gears, 174 cutting tools, 15 poison fishing were seized.

The yearly reports of SMART patrolling show that the forest offences, especially wildlife related offences have decreased from 2019 to 2021 dramatically.

#### **2.5.4. Drone based monitoring in the Sundarbans**

For better and updated monitoring, drone based monitoring system has been adopted in the Sundarbans since March, 2021. Several training sessions on drone operation and data collection have been provided to the staff of the Bangladesh Forest Department. The drone-based monitoring system is very useful to cover very remote and inaccessible areas within a short time.

#### **2.5.5. Initiatives for Dolphin Conservation**

Waterways of the Sundarbans mangrove forest supports the Vulnerable Ganges River dolphin (*Platanista gangetica*) (IUCN Red List, 2015) and Near Threatened Irrawaddy dolphin (*Orcaella brevirostris*) (IUCN Red List, 2015), the last two remaining species of freshwater dolphins in Asia. The density of Ganges River dolphin is particularly high in the low-salinity eastern portion of the mangrove forests with greater concentrations found at channel confluences. The density of Irrawaddy dolphins is high in the high-salinity western portion but the range of both species overlaps in the eastern side.

For effective conservation and management, based on scientific study and survey 3(three) dolphin sanctuaries (Dhangmari, Chandpai and Dudhmkhi) covering an area of 1070.0 hectares have been established in 2012 at eastern portion of the Sundarbans for conservation of Ganges River dolphin and Irrawaddy dolphins.

In 2020, 3 (three) dolphin sanctuaries in and around the Sundarbans a. Shibsha Wildlife (Dolphin) Sanctuary, b. Bhodra Wildlife (Dolphin) Sanctuary and c. Pankhali Wildlife (Dolphin)Sanctuary covering an area of 3,427.00 hectares have been declared by Government. 7 Dolphin Conservation Team (DCT) are working in the field along with Bangladesh Forest Department (BFD) staffs and Co-Management Committee to aware local people for Dolphin conservation, rescue the stuck dolphins and monitor the Dolphin.

Moreover, in October, 2021, Ministry of Environment, Forest and Climate Change has approved:

1. Fund Management Guideline for Dolphin Conservation Team.
2. Dolphin Conservation Action Plan.
3. Dolphin Atlas of Bangladesh.
4. Management Plan for the Ganges River Dolphin of Halda River.

#### **2.5.6. Activities for Dolphin conservation**

Various activities have been implemented for conservation of Dolphin in the Sundarbans. Some of the major activities are mentioned below-

##### **2.5.6.1. Introduce an effective management system in the existing PA established for dolphin conservation in the Sundarbans:**

The Forest camp staffs were provided training on GPS based patrolling in the camp area. One hundred and ten staffs of 8 (eight) sanctuaries associated forest camps have been imparted

training on dolphin biology and behaviour with an aim to capacitate for dolphin conservation. Apart from these they have also been provided with fuel and other logistic support such as patrol vest, rain coat, GPS, GPS Batteries, fuel container, hand mike, torchlight etc. These efforts have already proved to be effective in the management of the sanctuary and the management effectiveness score has been increased.

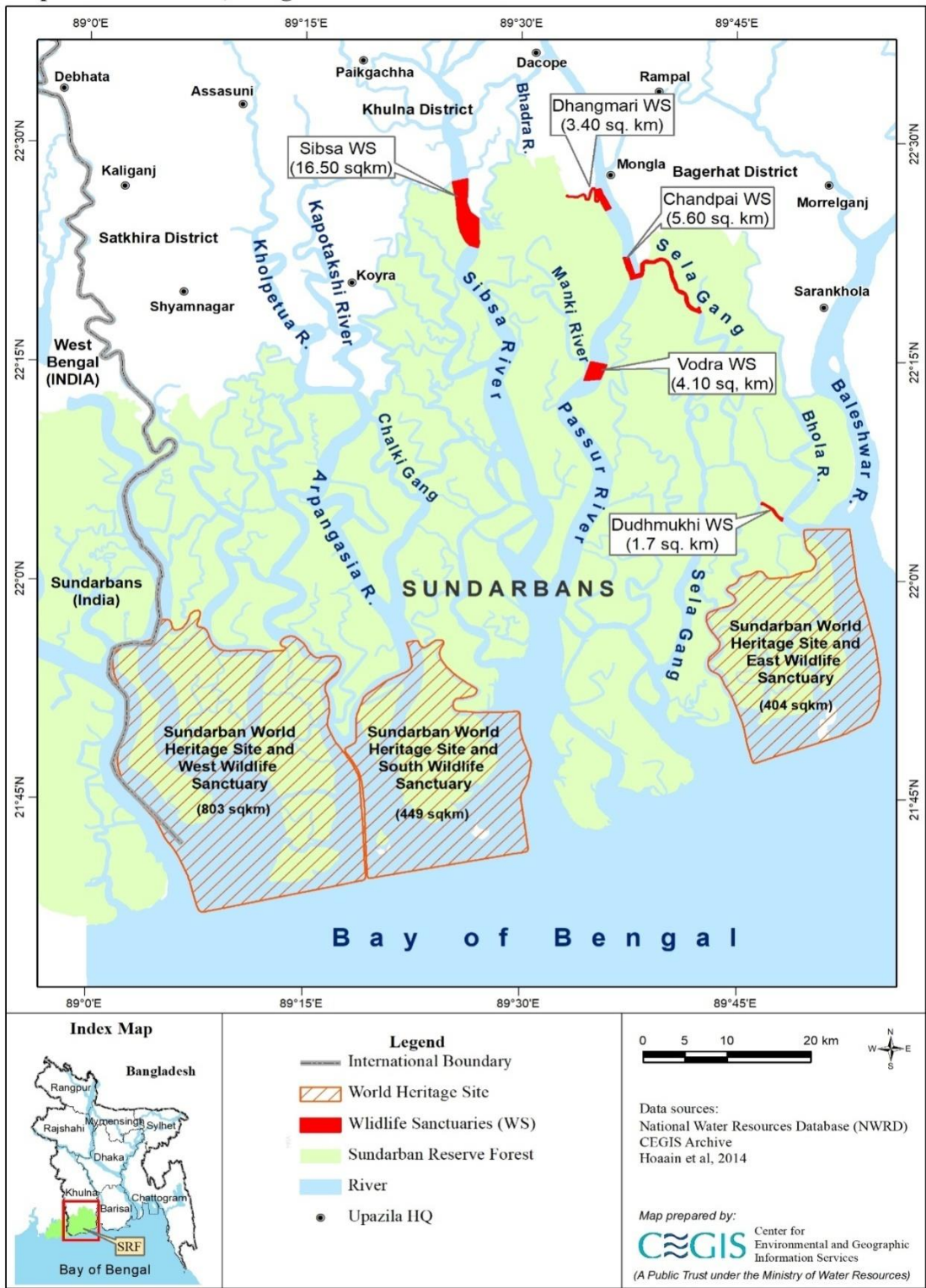
For reducing the excessive pressure on the aquatic resources livelihood support has provided (worth of BDT 40,000 for each) to 1, 000 (one thousand) households. They have been imparted training based on their choice, experience and willingness. After imparting training by the experts, they are given supports. Most of the common trades are crab farming, goat rearing, van, small business tea stall, cloth business, tailoring etc.

Seven Dolphin Conservation Team (DCT) with 70 community people have been formed under the project titled 'Expanding the Protected Areas System to Incorporate Important Aquatic Ecosystems (EPASIAE)' in the Sundarbans. Each DCT has 10 (ten) members for providing information on illegal activity (if there is any) in the dolphin sanctuary.



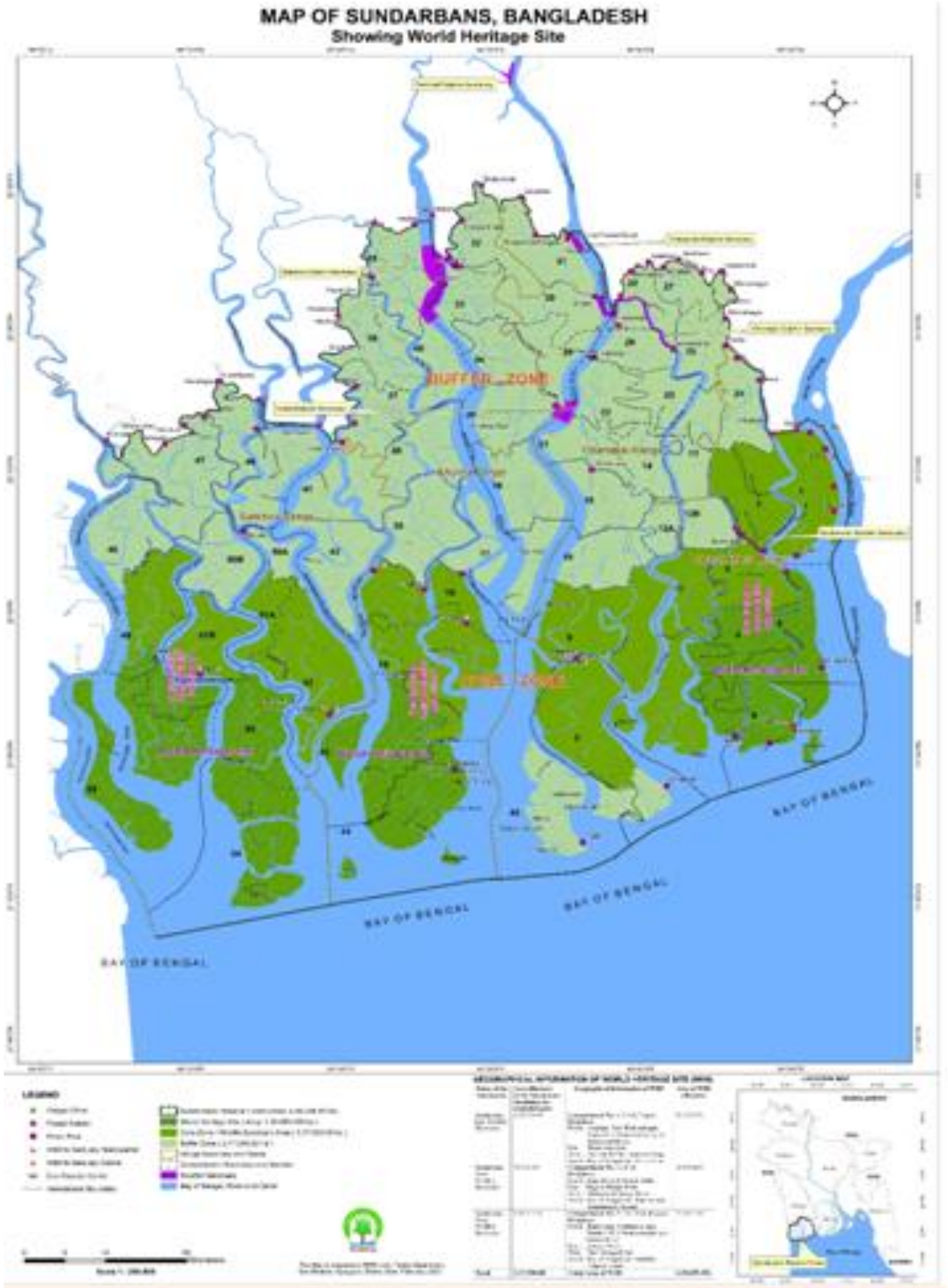


### Map of Sundarbans, Bangladesh



January 2022

Figure-1: Map of Sundarbans



**Figure-2: Map of Sundarbans WHS: Showing Dolphin Sanctuaries in and adjacent Sundarbans**

### ***2.5.7. Initiatives to mitigate Human-Wildlife Conflict through compensation***

To resolve the issue of Human-Wildlife Conflict, the Government enacted Wildlife Victims Compensation Rules in 2021. Under the rules if any person is injured or killed by tiger or crocodile in the Sundarbans, he/her family or he/she will get compensation from Government. In case of death casualty by wildlife, the family of the victim will get 3,00,000 BDT and in case of severe injury, the victim will get 1,00,000 BDT.

Previously the Compensation rate was 1,00,000 BDT (in case of death casualty) and 50,000 BDT (in case of severe injury). This compensation package for Wildlife Victims is helping to reduce the human-wildlife conflict in the Sundarbans Impact Zone (SIZ).

### ***2.5.8. Initiatives for rewarding the informer for proving information about the wildlife poachers/smugglers***

For wildlife conservation, Government of Bangladesh enacted “Reward for informer to detect offence Rules, 2020” declaring Reward package for the informers regarding the Wildlife crimes in October, 2020. Under the rules, if anyone provides any crime information related with poaching, hunting, trapping, smuggling or other related crime, the informer will be rewarded. For Tiger related crime information, the informer will be rewarded for 50,000 BDT; for crocodile related crime information, the informer will be rewarded for 30,000 BDT; deer related crime information, the informer will be rewarded for 20,000 BDT; and other wildlife related crime information, the informer will be rewarded for 10,000-15,000 BDT. Through this reward system, now Forest Department is getting more wildlife crime related information which help to arrest the poachers/ smugglers as well as to prevent the occurrences of wildlife crimes.

### ***2.5.9. Initiatives for Tiger Conservation***

Bangladesh Tiger Action Plan (2018-2027):

Second generation Tiger Action Plan (2018-27) has been approved by the Ministry of Environment Forest and Climate Change (MoEFCC). The Bangladesh Tiger Action Plan (BTAP) is a policy level document that offers a structured approach to achieve long-term conservation of tigers in Bangladesh. The first generation BTAP was for the period 2007-2017. It provides a vision, goals and objectives to guide an integrated and focused tiger conservation programme.

- The vision is to ensure ‘protected tiger landscapes in Bangladesh, here wild tigers thrive at optimum carrying capacities so as to perform their ecological role, and which continue to provide essential ecological services to mankind’.

The main goals to address threats are to increase the current tiger population, maintain sufficient prey and habitat, and to address challenges are to improve conservation capacity, improve law enforcement, build capacity and proper mechanism for awareness and education programmes as well as community involvement, build capacity to conduct tiger conservation research and monitoring, and encourage collaboration.

The implementation of this BTAP will ensure that the nation attempts to sustain the current tiger occupancy in over 6,017 sq. km. and increase the density in the Sundarbans from 2.17 to 4.50 tigers per 100 sq.km. within the next ten years. Systematic monitoring and evaluation of progress against the BTAP goals will be done to enable the adaptation of conservation activities.

***National Tiger Recovery Programme (NTRP):***

As a party to the Global Tiger Recovery Program (GTRP), Bangladesh had produced its first version of the National Tiger Recovery Program (NTRP) in 2010 and the revised version has been prepared for the period of July 2017 to June 2022.

In compliance with the NTRP the following steps are taken from Bangladesh Government:

- Bangladesh Government enacted Wildlife Victims Compensation Rules in 2021. Under the rules if any person is injured or killed by tiger or crocodile in Sundarbans, he/his family will get compensation from the Government. In case of death, family member of the victim will get 3, 00,000 BDT and in case of severe injury, the victim will get 1, 00,000 BDT. Previously the Compensation rates were 1, 00,000 BDT and 50,000 BDT respectively. This compensation for Wildlife Victims is helping to reduce the human-tiger conflict in the Sundarbans Impact Zone.
- To reduce the human-tiger conflict, 49 Village Tiger Response Team (VTRT) with 332 community people and a 3-member Forest Tiger Response Team (FTRT) has been formed and working at the Sundarbans Impact Zone (SIZ).
- Tiger Co-ordination Committee (TCC) has been formed in national and regional level to control wildlife poaching and illegal trafficking and working effectively.
- The GoB has become the member of CITES, GTI, GTF, CBD, CMS, Ramsar Convention, and SAWEN for the conservation of biodiversity in the country including the SRF.
- A Protocol and Memorandum of Understanding has been signed between the government of India and Bangladesh on 6th September 2011 to conserve tiger and the Sundarbans.
- Through Camera Trapping method the number of Royal Bengal Tigers in Sundarbans was found 106 in the year 2015, where as in 2018 it was found 114.
- In compliance with the Tiger Action Plan (2018-2027) a project for Tiger conservation titled “Tiger Conservation Project (TCP)” in the Sundarbans is on process and expecting to start very soon after approval from the Government. The principle objectives of the project are to survey of tiger population through camera trapping, survey of population of tiger prey animals, relocation of tigers to balance the ratio of male and female tigers and to relocate tiger to the areas of Sundarbans where tigers are not naturally found, installation of satellite collar in tigers to monitor the translocated tigers, to measure the relative density of tigers in the Sundarbans through Khal (Cannel) survey, reduction of Human tiger conflict, to monitor tiger habitat and tiger prey animals by Drones etc.
- In compliance with the principal Goal of Protocol on Tiger conservation, the last meeting regarding Trans-Boundary Tiger Conservation was held in Kolkata, India on 20<sup>th</sup> December 2019. The Committee has decided to work together for conservation of Tigers of the Sundarbans.

- Due to COVID-19, virtual bilateral coordination between Bangladesh and India is going on through different platform like GTI, SAWEN and online training program.

The number of Bengal tigers is being increased due to better habitat management and modern scientific monitoring technique. The 1<sup>st</sup> tiger population survey through camera Trapping method found 106 tigers. Whereas it was found 114 in the 2<sup>nd</sup> survey following the same method.

#### **2.5.10. Wildlife Rescue and Breeding Centre**

A Wildlife rescue and breeding centre has been established in 2000 at Karamjal mainly for deer, crocodile and turtle. After collecting eggs of crocodiles from the nest manually, the eggs are kept in an incubator in March-April. The hatchlings are collected and kept several pans which are later released in nature. In 2021, for celebration of 50 years of Independence of Bangladesh and on the occasion of Mujib Year for celebrating the centennial birth anniversary of the Father of the Nation Bangabandhu Sheikh Mujibur Rahman, 100 nos. of crocodiles have been released in the Sundarbans. So far, total 206 nos of crocodiles have been released in the Sundarbans. When the hatchlings reached at the length of 1 meter of (at the age of 5.0 years) those are released.

*Batagurbaska* is also kept in Karmajal Wildlife Breeding Center for the conservation of this reptile MoU has been signed among Forest Department, Vienna Zoo, Turtle Survival Alliance and Parkrity O Jibon Foundation. The brood individuals are collected from different parts of the Country. Artificial sand mound is being created for facilitating laying eggs there. The eggs are collected from the mound and kept in a naturalistic incubator. The hatchlings are kept in pans therefore determining the movement pattern and behaviour of male Batagur 12 males were tagged with satellite transmitter and released into the deep area of the Sundarbans. Now there are 435 no. of individuals (including the hatchlings) in the breeding center. In this year will have a plan to release 10 no. of Batagur in nature tagged with satellite transmitter.

#### **2.5.11. Fish Conservation Measures:**

At present fish is the main harvestable resource in the Sundarbans. The following measures have been taken for the management and conservation of the fisheries resources:

- Fishing is prohibited all the year round in the existing eight wildlife sanctuaries (including 5 Dolphin Sanctuaries) , 18 recognized canals in the buffer zone and the canals less than 25 feet wide within 3 km area of BFD permanent camp office/Petrol office located throughout the Sundarbans. These identified areas have been found suitable as a breeding ground for fishes and aquatic animals.
- Fishing is prohibited during Breeding Season in all canals during the months of July and August and all Beels/Chatals during the months of February and March.
- Bhendi/Bhasan (set bag net) jal, Khalpatajal and Net jal (current jal) are not allowed for fishing in the SRF.
- Fishing net with mesh size below 1 inch (knot to knot at stretch condition) is not allowed for fishing.

- No fishing is allowed by de-watering or using poison.
- To limit the resource users not more than 12000 Boat License Certificates (BLC) are issued annually.
- Pangas (*Pangasius pangasius*) and Sea bass (*Latesc alcarifer*) catching is banned on each alternating year and Ilish (*Hilsha hilsha*) fishing is banned in September and October. Catching of Ilish (*Hilsha hilsha*) and Pangas (*Pangasius pangasius*) below 23 cm is prohibited.
- Recently, Government has strictly prohibited fishing in Sundarbans during the months of June –August.

#### **2.5.12. Crab Conservation Measures:**

Crab harvesting is allowed only outside of Protected Areas. Inside of Protected Areas crab harvesting is strongly prohibited. Crab harvesting is banned in January and February as well as it is also banned in June, July and August months. After getting permission and paying govt. revenue, the crab harvesters are allowed to harvest crab outside the Protected Areas (PAs) only.

#### **2.5.13. Periodical banning of all types of Forest products and tourism**

June, July and August are considered as the breeding season for most of the wildlife of the Sundarbans. For better conservation of the Outstanding Universal Values (OUV) of the Sundarbans, and to maintain an undisturbed breeding ground for wildlife, the Government has prohibited collection of all sorts of forest products including fishes, crabs, honey etc. for the period of three months (from June to August) yearly. Eco-tourism in the Sundarbans is also prohibited for this period in the Sundarbans. This Government order was enacted from August, 2020 this shows that Government is very much aware to conserve the OUV of the Sundarbans.

#### **2.5.14. Reduce the pressure of Eco-tourism in Core Areas of the Sundarbans and development of Eco-tourism facilities in the Sundarbans**

A new project titled “Extension and Development of Eco-Tourism Facilities in the Sundarbans” has been started to develop Eco-tourism facilities in 4(four) new spots of buffer zone of the Sundarbans and extension of Eco-tourism facilities in the old Eco-tourism spots. As a result, pressure of the tourists from the core area or world heritage site will be reduced as well as eco- tourism activities will be enhanced in the buffer zone area and lessened in the core zone area. Another initiative to prohibit Eco- tourism during the breeding season of wild lives i,e during the months of June, July and August has been enacted. Hence gradually Eco-tourism would be prohibited throughout the year in the core zone i, e within the World Heritage Site and it will be completely shifted to the buffer zone from the core zone. Besides, by the said project, Eco -tourism will be facilitated and the forest dependent local people will be provided with trainings on Eco- tourism activities like tour operator, tour guide etc for their alternative livelihoods and they will get chance to sell their souvenir items in the souvenir shops which will be constructed under that project. Thus the forest dependent local people of the surrounding area of the Sundarbans will be engaged in alternative activities and the pressure of the resource collectors will be

lessened. In addition, to provide more security to the tourists and for better monitoring of the tourist vessels, VMS (Vessel Monitoring System) is being introduced in the Sundarbans under the said project to identify/recognize the location of the tourist's vessel.

#### ***2.5.15. Restriction on yearly festival Rashmela in the Sundarbans***

Every year in the month of November, a fair named "Rashmela" took place inside the Sundarbans at Dublar char island (Alorkol). Basically, "Rashmela" is a festival in connection with "Rashpuja" and "Punnosnan" of Hindu Religious people and it takes place for 3(three) days. But previously during "Rashmela" several thousands of people of all religion entered inside the Sundarbans to join the Fair. Some poachers also entered in the Sundarbans as disguise of pilgrimage and tried to hunt deer. Furthermore, this huge gathering caused environmental pollution and other negative impact on the Sundarbans. It was so much difficult to control the mass gathering and ensure vigilance throughout the Sundarbans during "Rasmela". Considering the whole scenario (the negative impacts) of "Rashmela" and for better conservation of the biodiversity of the Sundarbans, Government imposed some restrictions in November,2021 to perform the rituals. Now, only the Hindu Religious people are allowed to join the festival and "Rashmela" will not be held at all. But "Rashpuja" (Rash prayer) and "Punnosnan" (the holy bath) will be held.

#### ***2.5.16. Involvement of Local Community for Conservation and Monitoring through Co-Management approach:***

Co-management activities was initiated in the Sundarbans in 2009-10 to ensure equitable participation and distribution of rights and benefits received from the natural resources. For 3 (three) Protected Areas in the Sundarbans, (viz, Sundarbans East Wildlife Sanctuary, Sundarbans West Wildlife Sanctuary, Sundarbans South Wildlife Sanctuary), 4 (four) Co-Management General Committee (CMGC) as well as 4 (four) Co-Management Executive Committees (CMEC) were formed. Here 211 Village Conservation Forums (VCF) are working consisting of 32,774 community people (3140 in Sharonkhola range, 6140 in Chandpai range, 12094 in Khulna range and 11400 in Satkhira range), 4 (four) People's Forums (PF), 22 Community Patrolling Groups (CPG), 49 Village Tiger Response Teams (VTRT) and 7 Dolphin Conservation Team (DCT) are working. The Co- management activity is regulated by the Protected Area Co- Management Rules, 2017.

The details of the Co- management bodies and their roles and functions are described in **Appendix no. 1.**

#### ***2.5.17. Provisions of Alternative Income Generation (AIG) opportunities of the forest dependent local community***

The resource users of the Sundarbans are identified and provided with alternative income generation (AIG) opportunities to reduce pressure on the Sundarbans. Different GO and NGOs had been involved in providing AIG supports through projects in the Sundarbans. Improved cooking stoves, solar system, pond sand filter, rain water harvesting units have been set up in the periphery of SRF. Training on AIG activities, kinds and grant have also been provided to

the forest dependent people to reduce the pressure on the resources of Sundarbans. So far, 75,840 individuals got training on alternative livelihoods (like training on Fish, duck and chicken rearing, handicrafts, vegetable cultivation, crabs & shrimps processing, Golpata (Nipa leaf) collection related training and Sustainable resources use related training, honey cultivation, crab farming, goat rearing, small business tea stall, cloth business, tailoring etc.) from Forest Department.

The details of the trainings on alternative livelihoods under different projects is described in **Appendix-2**.

New projects titled “Extension and Development of Eco-Tourism Facilities in the Sundarbans” and ‘Protection of Sundarbans Mangrove Forest’ Project have been started to provide training to the forest dependent resource users on Alternative Income Generation Activities. Through these projects, Eco-tourism will be facilitated and the forest dependent local people will be provided with trainings on Eco- tourism activities like tour operator, tour guide, home stay, nature interpretation etc. for their alternative livelihoods and they will get chance to sell their handicrafts and souvenir items in the souvenir shops which will be constructed under the project. We are also in the process of formulating new integrated management plans for the Sundarbans for the period of 2021 to 2030 emphasizing the priority of involving local community people to participate in the management process as well as alternative income generation activities for the dependent community. Thus, the forest dependent local people of the surrounding area of the Sundarbans will be engaged in alternative activities and the pressure of the resource collectors will be lessened.

#### ***2.5.18. Pond Excavation and Re-excavation to supply fresh water for wildlife and forest resource collectors***

Recently some cyclones named Bulbul, Yash, Amphan along with heavy tidal surges struck the Sundarbans and submersed and destroyed most of the ponds which were the only source of fresh water for wildlife as well as for forest resource collectors and FD officials inside the Sundarbans. A project titled “Pond Excavation and Re-excavation for the supplying of fresh drinking water in order to sustainable forest management of the Sundarbans” project is being implemented in the Sundarbans. The main objective of the project is to supply fresh water to the Forest Department officials and to the Wildlife of the Sundarbans by excavation of 4 new ponds and re-excavation and renovation of 84 old ponds.

#### ***2.5.19. Introduction of engine free country boat for eco-tourism in the Sundarbans***

Sundarbans is a unique mangrove ecosystem and rich with huge biodiversity, it attracts tourists by its natural scenic beauty. Every year, thousands of tourists visit the Sundarbans and their number is increasing day by day. Tourists visits Sundarbans by engine-based launches and trawlers, in order to reduce sound and water pollution, in some portion of Sundarbans where water turbulences and wave action is less, engine free country boat for eco-tourism were adopted rather than mechanized engine boat. In the year of 2021, engine free country boat for eco-tourism adopted at Kalabogi Eco-tourism spot under Sundarbans West Forest Division,



Khulna District. Subsequently it may be replicated in the other parts of the Sundarbans for a better nature-based tourism in the Sundarbans.

#### **2.5.20. Ecological Monitoring**

Under the support of the project named "Support to the Management of Sundarbans Reserved Forests (SMP-II)", Bangladesh Forest Department has initiated to establish a long term ecological monitoring system in the Sundarbans Reserved Forests. Moreover the Government of Bangladesh has already approved a GoB funded development project named "Protection of Sundarban Mangrove Forest Project" for the period of January, 2021 to December, 2024. Under the project, there are provisions for ecological monitoring along with detail survey on flora, fauna, soil, water salinity, aquatic resources of the Sundarbans. To sustain this ecological monitoring activities in the Sundarbans, the Forest Departmental staffs will be provided with training to conduct Ecological Monitoring themselves so that they may conduct it after the completion of the project.

#### **2.5.21. Carbon Stock in Sundarbans:**

According to the results of National Forest Inventory 2016-2019, the carbon stock of the Sundarbans has increased from 106 million tons in 2009 to 139 million tons in 2019 that represents 31% increase of the total carbon stock in the Sundarbans.

#### **2.5.22. Ongoing Development Projects**

The details of ongoing development projects being carried out in the Sundarbans for its scientific management for the conservation of the Outstanding Universal Value of the property is described in **Appendix-3**.

### **2.6. Decision no. 7**

*Appreciates the close cooperation between the State Party, UNESCO and the Advisory Bodies in strengthening proactive planning for the management of the property in the framework of the UNESCO/ Netherlands Funds-in-Trust, and encourages the State Party to continue active dialogue and engagement with UNESCO, the Advisory Bodies and other relevant stakeholders to complement its efforts to strengthen management of the property;*

#### **Response**

The state party is thankful to UNESCO World Heritage Centre and Advisory body for arranging a Programme Titled "Masterclass on sustainable Development & World heritage Conservation in Bangladesh" in 2-3 June, 2021. The programme enhanced our officers' knowledge in conservation of the World Heritage Sites in Bangladesh. The state party is glad to continue active dialogue and engagement with UNESCO.

### **2.7. Decision no. 8**

*Also welcomes the State Party's progress in implementing action points agreed at the first meeting of the India – Bangladesh Joint Working Group in 2016, and requests the States parties of Bangladesh and India to undertake a coordinated effort, notably to strengthen integration of the consideration of the hydrology of the property and that of the Sundarbans National Park in India in bilateral cooperation;*

### **Response**

To improve the trans-boundary cooperation between Bangladesh and India on conservation of the Sundarbans, the first meeting of India-Bangladesh Joint Working Group (JWG) was held in India on 21 July 2016. Bangladesh side took part in various internal meetings regarding implementation of the Agreed Action Points of the 1<sup>st</sup> meeting of JWG.

Initiatives have already been taken by the Ministry of Environment, Forest and Climate Change (MoEFCC) for arranging 2nd bilateral meeting with India. The Second meeting was proposed to be held in Bangladesh on 17-18 February, 2020 but the Indian Government requested to arrange the meeting another time (providing them enough time for preparation). Bangladesh is eager to arrange the meeting as early as possible and the Ministry of Environment, Forest and Climate Change of Bangladesh has already proposed to hold the 2<sup>nd</sup> India-Bangladesh JWG meeting in Dhaka in the month of February/March, 2022.

### **2.8. Decision no. 9**

*Also notes with satisfaction that the State Party has not given environment al clearance or permission for any large-scale industrial development adjacent to the property since the adoption of Decision 41 com 7B.25;*

### **Response**

Bangladesh, as a committed State Party, remains grateful for the acknowledgement. MoEFCC is sincerely working in compliance with Decision 41COM 7B.25.

### **2.9. Decision no. 10**

*Further notes with satisfaction that 20 large scale (Red Category) enterprises within the Sundarbans Ecologically Critical Area are under rigorous compliance monitoring and that approved dredging activities on the Pashur River are operating in accordance with the Environmental Management Plans, further welcomes the finalization of the National oil and Chemical Spill Contingency Plan (NOSCOP), which includes the provision of funding and human resources for its finalization of the National Oil and Chemical Spill Contingency Plan ( NOSCOP), which includes the provision of funding and human resources for its implementation in order to prevent and mitigate negative impacts from shipping operations, and also requests the State Party to further develop an effective localized contingency plan covering the property to ensure immediate and coordinated actions to mitigate impacts in case of emergency.*

### **Response**

The Government has already declared the National Oil and Chemical Spill Contingency Plan (NOSCOP) which was published in February, 2020. Under the NOSCOP, Bangladesh Forest Department has taken steps to prepare an effective Localized Contingency Plan under the support of the project named "Support to the Management of Sundarbans Reserved Forests

(SMP-II) ". Since it is an integrated work concerned with many cross-cutting sectors it may take approximately one year time to finalize the Localized Contingency Plan.

For proper implementation of NOSCOP Mongla Port Authority (MPA), Bangladesh Coast Guard (BCG) and Bangladesh Navy (BN) are being assigned for continuous surveillance of any incident of spillage. They are integral parts of the NOSCOP. They remain vigilant and have adequate preparedness for addressing urgent situation of spillage. If any incident of spillage occurs, the MPA, BCG, BN take urgent necessary action to fulfill their duty towards NOSCOP instantaneously. Mongla Port Authority has already prepared a comprehensive "ACTION PLAN" to prevent marine accidents and mitigate impacts in case of emergency. It may further be noted that to protect and preserve UNESCO world Heritage Site, Sundarban's ecological process and biodiversity, Mongla Port Authority is establishing a modern waste and spilled oil management system under MARPOL Convention I, IV, & V.

### 2.13. Decision no. 11

*Noting that the 2019 Reactive Monitoring mission report was made available only on 16 June 2021, further requests the State Party to fully implement all the recommendations made by the 2019 Reactive Monitoring mission and previous Committee decision;*

#### **Response**

All the recommendations made by the 2019 Reactive Monitoring mission and previous Committee decisions regarding the conservation of the Outstanding Universal Value (OUV) of the Sundarbans, are being implemented by the Government and the measures taken by the Government is stated in the relevant paragraphs in this report.

The Response/Comments and actions taken against the recommendations made by 2019 Reactive Monitoring Mission (RMM) are stated in the table below:

SL no.	Comments of the RMM/ report (page number/Line number)	Response/Comments and action taken
1.	Page: 31 Monitor underwater noise pollution (vessel noise) in or near dolphin habitats/sanctuaries created by increased river traffic from coal shipments in the Passur River and ensure that the issue of increasing noise pollution and its impacts on aquatic fauna is considered by the SEA. (R1)	Vessel Noise Pollution is considered in this ongoing SEA. The strategic environmental management plan (SEMP) has recommended to measure and monitor underwater noise pollution and its impacts on aquatic fauna in the important rivers of South West region of Bangladesh.
2.	Ensure greater use of the Independent Monitoring Panel,	For the Rampal power project, developer is following and implementing all the Environmental Clearance

SL no.	Comments of the RMM/report (page number/Line number)	Response/Comments and action taken
	<p>which was established to provide the State Party with advice on the construction and operation of the Rampal power plant, to address concerns from third parties over the construction of Rampal power plant. (R2)</p>	<p>conditions stipulated in the Environmental Impact Assessment (EIA) approved by DoE, GoB in line with rules, regulations and guidelines.</p> <p>An independent monitoring agency, CEGIS is monitoring the project construction work and implementation of Environment Management Plan in line with Environment Clearance condition and DOE guidelines of the project. CEGIS is also monitoring environmental parameters in and around the project area during construction stage on a continual basis and the monitoring shall also be continued during Operation phase of Plant.</p> <p>The monitoring is being done on quarterly basis and till date 29 Quarterly Monitoring programs are completed. The reports are being submitted to all stakeholders including DOE and is also available on public domain.</p> <p>The authority solicits the advice of the Independent Monitoring Panel as and when required. In addition advice from any third party will be highly appreciated and welcomed.</p>
3.	<p>Consider other functionally independent advisory panel processes, such as IUCN's Independent Scientific and Technical Advisory Panel (ISTAP) 7, as possible models to ensure greater transparency and public trust in the process, and to expand the scope of communication and engagement with third parties to include the state of conservation of the property in relation to other industrial and power plant developments, and the SEA. (R3)</p>	<p>State Party is committed to maintain the guidelines of DoE, Bangladesh and also ensuring global environmental guidelines for the development of power sector and other industrial development.</p> <p>State party always welcome the independent advisory panel suggestions including IUCN's Independent Scientific and Technical Advisory Panel (ISTAP) to improve conservation of the property in relation to Power Plant and other industrial developments and the SEA.</p>
4.	<p>Page: 36</p> <p>Submit the study on the river dolphins in the Buriswar-Payra (Is it Buriswar or Boleswar?) River with respect to the Taltoli (Barisal) power plant development and its associated</p>	<p>Bangladesh Forest Department has conducted a dolphin survey 3 years back at Baleshwar-Payra River estuary. But the mentioned Taltoli (Barisal) power plant is about 20 kilometers away from the estuary. Bangladesh Forest Department (BFD) is planning to conduct a study on dolphin in that area. After completion of the study, BFD will submit it for review.</p>

SL no.	Comments of the RMM/ report (page number/Line number)	Response/Comments and action taken
	increased shipping activities, to the World Heritage Centre for review by IUCN when available, and ensure any findings of negative impacts are immediately addressed through the implementation of mitigation measures.(R4)	
5.	Page: 38 Before proceeding any further with the development of the Payra Thermal power plant (also known as Kolapara power plant), develop a Dolphin Conservation Plan to prevent any adverse effects on the river dolphins that are present within the project area, and submit the Plan to the World Heritage Centre for review by IUCN as soon as it is available. (R5)	Bangladesh Forest Department will conduct survey on dolphin population, adjacent river of Payra Thermal Power Plant (known as kalapara power plant). Depending on survey report, if significant number of dolphins is recorded, a Dolphin Conservation Plan will be developed involving the Power Plant Authority and other stakeholders. The dolphin conservation plan will also be submitted for review.
6.	Page: 39 Ensure that shipping and dredging are included as priority sectors in the scope of the SEA, including long-term and least-impact options regarding the continued use of the Pashur estuary as anchor and transfer area, proposed measures to minimize the river traffic and its impact, and options regarding disposal of major and minor dredged materials. (R6)	SEA has addressed the impacts of shipping and dredging in the South-West region of Bangladesh. Government has already included Mongla Port Authority (MPA) as a priority sector in the SEA study of SW region. Expansion of Mongla Port, increase in the number of ship movement, capital and maintenance dredging, including its master plan and all the existing & future activities are being considered in the SEA and Strategic Environmental Management Plan (SEMP).
7.	Until the SEA is completed, ensure that no further decision is made for any new large-scale industrial and/or infrastructure developments in the vicinity of the property, including further development of the Mongla Port and any other development	The state party affirms that no further decision will be made for any large-scale industrial and/or infrastructure developments in the vicinity of the property, including further development of the Mongla Port and any other development that might further increase traffic on the Pashur River until the SEA is completed. For better management of the conservation of the World Heritage Property, river traffic through the shela river has been reduced and alternative route

SL no.	Comments of the RMM/ report (page number/Line number)	Response/Comments and action taken
	that might further increase traffic on the Pashur River.(R7)	Mongla-Ghosiakhali channel has been opened. The navigability of the Mongla-Ghosiakhali channel has been increased by maintenance dredging and thus the channel is being used instead of the river routes of the Sundarbans. The dredging has also increased freshwater flow in the shela, harintana, bhola and pashur rivers. These steps have improved the forest health of the property.
8.	Clearly address the responsibility of the government to protect the OUV of the property in the National Oil and Chemical Spill Contingency Plan (NOSCOP), and develop an effective localized contingency plan covering the property in accordance with the national plan outlining measures to prevent any future oil and chemical spill incidents within and in proximity to the property and to ensure immediate and coordinate actions for mitigating impacts on the property in case of emergencies. (R8)	The Government has already declared the National Oil and Chemical Spill Contingency Plan (NOSCOP) which was published in February, 2020. Bangladesh Forest Department has taken steps to prepare an effective Localized Contingency Plan covering the property in accordance with the national plan outlining measures to prevent any future oil and chemical spill incidents within and in proximity to the property. Initiatives also taken to ensure immediate and coordinate actions for mitigating impacts on the property in case of emergencies under the support of the project named ‘Support to the Management of Sundarbans Reserved Forest (SMP-II)’ of BFD. Developing a localized NOSCOP need to integrate local stakeholder’s and address the crosscutting issues. Therefore, it may take considerable time (Approximately one year) to develop it.
9.	Page: 41 Prioritize the completion of the Strategic Environmental Assessment (SEA) for the southwest region of Bangladesh, in line with international best practice and with the support of the Netherlands Commission for Environmental Assessment (NCEA) as appropriate, and in consultation with the World Heritage Centre and IUCN. (R9)	SEA for the southwest region of Bangladesh, confirms international best practice, in line with the basic steps and methodology described in the OECD SEA Guidelines (2006). This SEA project’s international consultant and team leader Professor Barry Dalal Clayton himself is the main author of OECD guidelines. NCEA is involved with this SEA since its very beginning. All SEA related reports were shared with NCEA and their feedbacks have been addressed, similarly inputs/comments from the World Heritage Centre and IUCN are already taken into consideration.
10.	Page: 42 Once the SEA is completed, ensure that the findings of the	The SEMP has proposed a mechanism for its implementation. Government has prepared the SEMP with all relevant sectoral representatives in the view of

SL no.	Comments of the RMM/ report (page number/Line number)	Response/Comments and action taken
	SEA become the basis for future decision making on developments in the vicinity of the property. (R10)	proper future implementation of the SEMP. The SEA and SEMP will be the basis of future decision-making document on the sectoral development of South West region for conserving the outstanding universal value of the Sundarbans.
11.	Page: 42 Ensure that key information related to the SEA (including ToRs, outline of the scope, stakeholder consultation timelines and approach, and methodology) is made publicly available, ideally through an online platform, and that the necessary public consultations are undertaken throughout the key steps of the process in an open and transparent manner. (R11)	The SEA website fulfils this obligation from the SEA team's responsibility. A series of virtual and physical presence of stakeholder's consultations workshops and meetings (total 42) were undertaken at national, regional, district, sub district and union level despite of Covid-19 pandemic. Consultations with all relevant ministries and departments, environmentalists, University faculty members, national and international NGO officials, forest resource users living in the Sundarbans periphery, public representatives of union, sub district, district levels and member of parliament etc. were completed so far. A national level stakeholder consultation meeting was held in October, 2021 and their feedback has been addressed in the final report.
12.	Page: 43 Ensure that the SEA not only covers the identified nine economic sectors, but also how they are interrelated and how plans and policies developed for one sector would potentially influence others, particularly what concerns shipping and associated infrastructure and maintenance, and includes a specific assessment of cumulative impacts on the property's OUV. (R12)	The SEA has considered 89 Policies, Plans and Programmes (PPPs) that has covered not only the identified nine sectors but also all relevant key sectors of the south west region. It has also fully addressed cumulative impacts.
13.	Page: 43 Ensure that the SEA, while aimed at developing a planning instrument for the South-West region of Bangladesh, also considers in its analysis, other relevant policies and proposed development plans in other areas, including outside the Bangladesh borders. (R13)	The SEA has considered developments in other regions (in country) and countries (outside Bangladesh) to take account of trans-boundary impacts on the SW region.

SL no.	Comments of the RMM/ report (page number/Line number)	Response/Comments and action taken
14.	<p>Page: 14</p> <p>Ensure that a coordination mechanism, involving all relevant Ministries and agencies, is established to ensure the findings and recommendations of the SEA are implemented across all relevant national and regional plans and policies. (R14)</p>	<p>The Ministry of Environment, Forests &amp; Climate Change (MoEFCC) has already formed a Project Management Committee (PMC) that includes nine priority sectoral representatives as focal points for necessary recommendations, coordination and also implementation of PPPs of the SW region. The SEMP has proposed a sectoral implementation/coordination mechanism. The government will take measures to implement it, once SEMP is operationalized.</p>
15.	<p>Page: 44</p> <p>Further strengthen and harmonize monitoring and conservation efforts between the States Parties of Bangladesh and India to improve trans-boundary management of the two World Heritage properties of “The Sundarbans” and “Sundarbans National Park” through the India-Bangladesh Joint Working Group (JWG). (R15)</p>	<p>Initiatives have already been taken by the Ministry of Environment, Forest and Climate Change (MoEFCC) of Bangladesh to arrange the 2nd bilateral meeting with India. The second meeting was proposed to be held in Bangladesh on 17-18 February, 2020. But the Indian Government requested to arrange the meeting another time (providing them enough time for preparation). Bangladesh is eager to arrange the meeting as earlier as possible and the Ministry of Environment, Forest and Climate Change of Bangladesh has already proposed to hold the 2<sup>nd</sup> India-Bangladesh JWG meeting in Dhaka in the month of February/March, 2022.</p>
16.	<p>Page: 47</p> <p>Convene a scientific advisory group/panel consisting of globally recognized experts in the Irrawaddy Dolphin and the Ganges River Dolphin to provide advice on establishing a baseline and long-term monitoring plan that includes a review of sampling sites and best available methodology including the use of the SMART system (R16)</p>	<p>The Government has taken some important initiatives for the conservation of the Irrawaddy Dolphins and Ganges River Dolphins.</p> <p>Moreover, in October, 2021, Ministry of Environment, Forest and Climate Change has approved:</p> <ol style="list-style-type: none"> <li>1. Fund Management Guideline for Dolphin Conservation Team.</li> <li>2. Dolphin Conservation Action Plan.</li> <li>3. Dolphin Atlas of Bangladesh.</li> <li>4. Management Plan for the Ganges river Dolphin of Halda river.</li> </ol> <p>Bangladesh is eager to conserve Dolphin following the approved Plan and guidelines and intended to regular monitoring of sample sites, using SMART system involving IUCN and other expertise scientists.</p>
17.	<p>Page: 52</p> <p>Ensure that the SEA includes the water sector as a priority sector in its scope, and</p>	<p>Water is included as a key priority sector. Freshwater flows, especially in the dry season, are addressed. For the SEA we have developed low, medium and high economic growth scenarios and as well as considering High Income Country (GIC) status by 2041 (which is</p>



SL no.	Comments of the RMM/ report (page number/Line number)	Response/Comments and action taken
	determines a range of scenarios for freshwater inflow in function of projected trends and water management interventions; against the corresponding impacts for the integrity of the property. (R 17)	appropriate to the type of SEA we are dealing with) which take account of freshwater availability.
18.	<p>Page: 52</p> <p>Undertake a coordinated effort between the States Parties of Bangladesh and India to strengthen integration of the hydrology of the property in bilateral cooperation, through:</p> <p>a) Inclusion of eco-hydrological cooperation for the delta under the Bangladesh-India MoU on conservation of the Sundarbans; b) Incorporation of the long-term integrity of the property as a priority in the review of the Ganga Treaty between the States Parties, which expires in 2026, based on scientific models including the findings of the SEA. (R18)</p>	<p>There is a Joint River Commission (JRC) established by India and Bangladesh, a bilateral working group in the Indo-Bangla Treaty of friendship, cooperation and Peace that was signed on March 19, 1972. As per the treaty, the two nations established the commission to work for the common interests and sharing of water resources, irrigation, floods and cyclones control.</p> <p>The issue of freshwater flow from the upstream rivers is being negotiated through Joint River Commission.</p>
19.	<p>Page: 53</p> <p>Continue efforts to actively involve local communities in co-management of the SRF, and to provide sustainable alternative income generating (AIG) opportunities beyond the timeframe of the Integrated Resources Management Plans for the Sundarbans (2010-2020). (R19)</p>	<p><b>Involvement of Local Community for Conservation and Monitoring (Co- Management)</b></p> <p>The details of the Co- management bodies working in the Sundarbans and their role is discussed in <b>Appendix no. 1.</b></p> <p>Provisions of Alternative Income Generation (AIG) opportunities of the forest dependent local community</p> <p>The details of the trainings on Alternative Livelihoods under different projects is mentioned in <b>Appendix-2.</b></p> <p>New projects like “Extension and Development of Eco-Tourism Facilities in the Sundarbans” and ‘Protection of Sundarbans Mangrove Forest’ Project have been started to provide training to the forest dependent resource users on Alternative Income Generation Activities. Through these projects, Eco-tourism will be facilitated and the forest dependent</p>

SL no.	Comments of the RMM/ report (page number/Line number)	Response/Comments and action taken
		local people will be provided with trainings on Eco-tourism activities and they will get chance to sell their handicrafts and souvenir items in the souvenir shops.

It is to be noted that the state party's response about progress report on the Sundarbans (43COM7B.3) was sent through the Embassy of Bangladesh in Paris through memo no-64 on 25 May, 2021. The state party sent a report on the decisions of 43COM7B.3 to the Embassy of Bangladesh in Paris through memo no-28 on 30 January, 2020. The state party sent a report on the decisions of 41COM7B.25 through the Embassy of Bangladesh in Paris vide through e-mail on 29 November, 2018.

#### **2.14. Decision no. 12**

*Welcomes furthermore the efforts made by the State Party to advance the SEA for the South – West region, now scheduled for completion in August 2021, urges the State Party to ensure that the findings of the SEA form the basis for future decision making on development that may impact the OUV of the property, and requests moreover the State Party to submit the final SEA, including the strategic and subsequent examination by the Committee at its 45th session*

#### **Response**

National level stakeholder's meeting on draft Strategic Environmental Assessment (SEA) Report and Strategic Environmental Management Plan (SEMP) was held on 21 October 2021. Honourable Minister and Deputy Minister of the Ministry of Environment, Forest & Climate Change were present on that consultation meeting. Representatives from different ministries, government departments, development partners, university faculty members, non-government organizations, environmental activists, civil societies members and representatives of print & electronics media were present in the national consultation meeting. Stakeholder comments were collected on that meeting. Moreover, these two reports were available on the website and for comments from all until 31 October 2021. Because of Covid-19 situation the total process had been delayed by 3-4 months.

Stakeholder's comments, suggestions and remarks received through email, stakeholders meeting and postal communication have been sent to consulting firm. The consulting firm has submitted final SEA and SEMP after addressing suggestions and recommendations from stakeholders. The final SEA along with the SEMP will be submitted to the World Heritage Centre after approval from the competent authority.

#### **2.12. Decision no. 13**

*Also notes the ongoing expansion and dredging operations near Mongla Port would require additional maintenance dredging and are likely to increase traffic on the PashurRiver, and also urges the State Party to ensure that no further decision is made for any new large scale industrial and or infrastructural development, which may influence the OUV of the property, until the SEA for the South-West region of Bangladesh is completed;*

**Response**

Dredging is necessary to maintain navigability of port channel and being conducted by complying EIA to prevent adverse impacts from such activity. Moreover, industrial growth is discouraged until the SEA for the South-west region of Bangladesh is completed.

**2.15. Decision no. 14**

*Expresses satisfaction on the progress made by the State Party in addressing issues raised by the 2016 Reactive Monitoring mission over the construction of the Rampal power plant, but notes with concern that the development of the large scale industrial projects could potentially impact the property's OUV and should not proceed before the completion of the SEA in line with Paragraph 118bis of the Operational Guidelines;*

**Response**

The state party highly appreciates the commendation of the Committee over the construction of Rampal power plant and reiterates that it has not given environmental clearance or permission for any large-scale industrial/infrastructural development adjacent to the property since the adoption of Decision 41 COM 78.25;

State party is committed to implement the recommendation of SEA and take necessary action on any identified environmental issues.

**3. Public access to the state of conversation report:**

The state party requests that the full report should be uploaded for public access.

**4. Signature of the Authority:**



Md. Mostafa Kamal  
Secretary

Ministry of Environment, Forest and Climate Change



## **Appendix-1:**

### **Co-management bodies working in the Sundarbans**

#### **Community Patrolling Group (CPG):**

This group patrol along with forest departmental staffs and give messages about any illegal forest offence and offender. At present, 22 CPG groups (196 members) working on 4 ranges in the Sundarbans. So far, the CPGs covered about 4500 nos. of patrolling along with forest departmental staffs and rescued more than 250 nos. wildlife from adjacent locality to the Sundarbans and released them to the nature (Sundarbans Reserved Forests). 'Protection of Sundarban Mangrove Forests' Project aims to provide daily allowances to the VCF members for patrolling along with Forest Departmental officials. This may inspire the VCF members for patrol to prevent forest offences and encourage them for the conservation of the OUV of the Property.

#### **Village Conservation Forum (VCF):**

The VCF members provide important messages regarding poaching and illegal forest offence as like Poison fishing, hunting and any type of illegal entrance to the Sundarbans Reserved Forest. So far, they aware about 7700 people for the conservation of the Sundarbans.

#### **Dolphin Conservation Team (DCT):**

This team works on awareness building for the conservation of Dolphins in the Sundarbans. They do patrol in the Dolphin sanctuary areas and aware the fishermen not to fishing in the Dolphin sanctuary areas. Besides, they inspire the fishermen to engage in alternative livelihoods and release stuck Dolphins to its nature. DCT has a FDR (Fixed deposit) amounting BDT 2.180927 million BDT. The interest comes from this amount is used for awareness programs for Dolphin conservation. So far, they released 08 nos. of stuck Dolphins to the nature, conducted 54 nos. of meetings and 32 nos. of short training programs and aware more than 2500 people for the conservation of Dolphins.

#### **Village Tiger Response Team (VTRT):**

This team rescue stray Tigers from the villages adjacent to the Sundarbans, rescue wild lives like python, wild boar, monkey, deer, crocodile, fishing cat etc. from the adjacent villages and release them to the nature (Sundarbans Reserved Forest). So far, they released 431 nos. of wildlife to the nature in association with Forest Departmental officials.

#### **Sundarbans Resource User Groups (SRUG):**

Under the project, "Management of the Sundarbans Mangrove Forests for Bio-diversity Conservation and increased Adaptation to Climate Change (SMP)", Sundarbans Resource User Groups (SRUG) were formed. SMP identified natural resource dependent households in Chandpai Range with varied dependency on the Sundarbans resources for livelihoods. Households whose 50% or more yearly income come from the resource collection in the Sundarbans were categorized as Sundarbans Resource User (SRU) and given choice to participate in lower co-management tier i.e., Village Conservation Forums (VCFs) if they are interested since good numbers of them were not part of VCF till then. A sub-group within VCF titled Resource Users Group (RUG) has been created with the participation of SRUs. Bi-

monthly meeting for them has been provisioned to discuss resource collection, conservation best practices, problems faced during resource collection in Sundarbans, solutions they deserve etc. and bringing those into the attention of co-management through VCF to upper tiers. Good number of RUG members and leaderships also received training on 'Natural Resource Management' (focus on importance and ecosystem services of Sundarbans, resource collection best practices, associated rules and regulations, penalties associated to illegal harvesting etc.) and 'Organizational and Leadership Development' and executives of RUGs are regularly mentored. With these initiatives, effective participation of resource users in the VCFs increased, they are gradually being chosen for VCF's executive positions as well as representatives to the Peoples Forum (PF), their prioritized issues are more discussed than before. **To date, 39 RUGs are operating in Chandpai Range more than 2000 members, while replication of the same approach is in the process in Sarankhola Range.** Most of the VCF leaders also received training on 'Organizational and Leadership Development', 'Sundarbans and Gender Role in Conservation', mentored regularly with qualified staffs, supported to organize their bi-monthly meetings, organize participatory elections once tenure of executives and PF representatives completed, enhancing communications within and beyond co-management tiers, building good rapport with external service providers to help accessing benefits and services by the members. VCFs are also learning from peer-to-peer learning visits organized among them and enhancing connectivity and solidarity as horizontal spheres. **Till date, nearly 6200 members enrolled in 37 VCFs in Chandpai Range while similar approach to upscale in 20 VCFs of Sarankhola Range.**

### **Role of Co-management bodies**

Now-a-days, the Co- management bodies are more functional for conservation of the Outstanding Universal Value (OUV) and ecosystem of the Sundarbans than the previous time.

At present, the 4 CMCs have a total financial resource of 5.039833 million BDT (2.858906 million BDT of CMGC and 2.180927 million BDT of DCT). Besides, the CMC members have been provided with short term loan of 2.807580 million BDT to purchase Water tanks, Gas stoves etc. for their better living and to promote alternative livelihoods like purchasing of Easy bikes, Auto Vans, honey cultivation, handicrafts etc. from the fund of CMCs.

Members CPG, VCF, PF, VTRT, DCT do the patrol work along the borderline of the Sundarbans with the Forest Departmental Staff. Besides, VTRT and DCT members are dedicatedly working with Forest Departmental officials for Tiger and Dolphin conservation respectively. Besides patrolling, the Co-management bodies give information regarding the forest offences to the concerned forest office and the SMART patrolling team as well. After initiation of Co-management approach, the level of forest offences reduced significantly. These teams play a vital role at the time of rescue of wild lives from the adjacent villages and releasing them in the nature. Thus, the Co-management approach playing very important role for the conservation of the Outstanding Universal Value of the Property.

## Appendix-2:

**Training on Alternative Income Generation (AIG) activities of Sundarbans dependent communities under previously implemented projects by Forest Department are as follows:**

<b>Project Name</b>	<b>AIG supports/ training recipient number</b>	<b>Comments</b>
SEALS project	45000 persons (On Fisheries, Poultry, handicraft and Honey cultivation)	At present, most of trained persons have shifted from resource harvesting from the Sundarbans to alternative livelihoods like Fisheries, Poultry, handicrafts, honey cultivation/bee keeping, vegetable cultivation, grocery shop etc.
CREL project	25400 persons (23000 persons on Fisheries, Poultry & vegetable cultivation, 1600 men for income increment program and 800 women for handicraft training)	
SDBC project	1940 persons (On Honey cultivation, crabs & shrimps processing, Golpata collection related training)	
BAGH project	500 persons (On Handicraft and honey cultivation)	
SMP project	2000 persons (On Sustainable resources use related training)	
Expanding the Protected Areas System to Incorporate Important Aquatic Ecosystems (EPASIAE) project – project for dolphin conservation.	1000 persons trained for AIG program (based on their needs, efficiency and previous experiences e.g., crab farming, goat rearing, van, small business tea stall, cloth business, tailoring etc.) and BDT 40,000/- was given to each trainee.	

## Appendix3:

### Ongoing projects for the management, protection and conservation of the Sundarbans

#### *1. 'Protection of Sundarbans Mangrove Forests' Project*

The project with estimated cost 1570.00 million BDT was approved by the Government on 05<sup>th</sup> January, 2021. This project aims to adopt modern scientific management for the conservation of the Sundarbans as well as to provide climate resilient working environment to the Forest Departmental officials (including logistic supports) for better monitoring and management. The project is being implemented with the activities like –

- Detailed survey of flora and fauna of the Sundarbans, study on population status of major wild life species and characteristics of their habitat, study on salinity (of soil and water) and Ecological Monitoring. The project aims to establish a long-term ecological monitoring system for the Sundarbans. Through Ecological Monitoring, a complete

data base and information system on parameters like soil, water, air, vegetation, animals etc. regarding the ecosystem and environment of the Sundarbans will be established which may provide accurate guidelines for present and future management to achieve the SDGs. Through training under this project, the capacity of Bangladesh Forest Department will be enhanced to continue the ecological monitoring activities by its own capacity after the end of the project. Research studies on forest bio-diversity, climate change, study on density and population of different types of wildlife, wildlife habitat, diseases of wildlife etc., study on population of six important aquatic species of the Sundarbans and the characteristics of their habitat, probable threats to the aquatic animals etc. will be conducted.

- Training to Forest Departmental officials for their capacity building (training on implementation of the Wildlife (conservation and security), Act, 2012 for controlling of wildlife related offences, for management of the Wildlife Sanctuary areas (as well as the World Heritage Sites), training on First Aid, SMART patrolling, Wildlife Habitat observation, Wildlife Sanctuary Management, Rescue of Wildlife, Using of GPS and Cyber Tracker for SMART patrolling, for computer data entry and networking, Co-management and Protected Area Management Rules, 2017, may be helpful for capacity building of Bangladesh Forest Department (BFD). Training on Detective Activities/Intelligence for the Community Patrolling Groups (CPGs) may be helpful for controlling of forest offences. The project will arrange round table Consultation Meetings with the community political leaders and other stakeholders for the Conservation of the OUV of the Sundarbans.
- Besides, under the project, there are provisions for training on Managing of Eco-tourism, Tour Guiding, Nature Interpretation etc. for the tour operators, tour guides, members of Co-management bodies which may play vital role for Alternative Livelihoods for the forest dependent resource user groups.
- Afforestation (homestead plantation, block plantation, assisted natural regeneration and enrichment plantation) in and around the surrounding areas of the Sundarbans to supply fuel wood for the local people.
- Establishment of GIS lab for GPS based tracking, Vegetation Mapping, Change detection analysis, Land use Mapping etc.
- Establishment of Mangrove Adaptation and Knowledge Centre (MAKC) and Establishment of Sundarbans Archaeological Museum.
- Re-excavation of rivers and canals in periphery of north-eastern part to supply fresh water flow and to improve the navigability for fishers.
- Establishment of Desalinization plant and re- excavation of ponds to supply fresh drinking water for Forest Departmental officials and for wildlife.
- Updating of Integrated Resources Management Plan (IRMP)
- Permit system automation for the Resource Users and providing the resource users digital identification number
- Establishment of climate resilient field offices and Range offices
- Repairing works of offices, residential buildings, monitoring and inspection vessels, roads, gangway & pontoon for increase of management efficiency.
- Supplying of fiber body monitoring vessels, cyber trackers, GPS, computers etc.

## ***2. Extension and Development of Eco-Tourism Facilities in the Sundarbans project***

The project with estimated cost 249.5 million BDT is being implemented with the objectives of improvement of Eco-tourism attractions in the Sundarbans (especially in the buffer zone areas), improvement of Eco-tourism facilities for the tourists, to decrease the dependency of the forest dependent people on the Sundarbans resources and improvement of their socio-economic conditions by engaging them in eco-tourism based alternative livelihoods and awareness raising of local people on environment friendly eco-tourism activities management.

- The project is being implemented with the activities like development of eco-tourism facilities in the existing eco-tourism spots, out of which, development of souvenir shops may provide Alternative livelihoods to the forest dependent resource user groups of the Village Community Forum (VCF). This project may also provide Alternative Income Generation Activities to the VCF members by facilitating boat cruising organized by the Co-management bodies. Interpretation and information Centre may be helpful for better scientific eco-tourism management since it helps the tourists to become enriched with information regarding the ecosystem, bio-diversity and OUV of the Sundarbans and the tourists become aware about what to do or not to do at different spots of the forest.
- Introduction of the Automated Identification System (AIS)/ Vessel Monitoring System (VMS) may make eco-tourism more secured to the tourists. It may also help to monitor the tourist vessels whether they are moving on the right track (approved routes) in the forest.
- The project aims to develop four new eco- tourism spots in the buffer area of the Sundarbans so that the Eco-tourism activities may be gradually shifted from the core zone area to the buffer zone area.
- The project is providing training to the Forest Departmental Officials, tour operators, tour guides, members of the Village Conservation Forum, local village leaders, students of schools and colleges adjacent to the Sundarbans for awareness raising for the conservation of the Outstanding Universal Value (OUV) of the Sundarbans as well as the World Heritage Site. At present, the training activities are going on under the project.

## ***3. Pond excavation and Re-excavation project for the supplying of fresh drinking water in order to sustainable Forest Management of the Sundarbans***

The project is being implemented in the Sundarbans to supply fresh drinking water to the Forest Departmental officials and to the forest resource users as well as to the wildlife of the Sundarbans. The project aims to Excavate 4 new ponds and re-excavate 84 existing ponds in the Sundarbans. At present, Pond excavation and re-excavation works are going on under the project.

## ***4. Re-establishment of Telecom system in Sundarbans project***

This project is being implemented in the Sundarbans to re-establish the destroyed telecom system in the Sundarbans to control the forest offences and wildlife related offences, for better monitoring and enforcement, to gear up the administrative performs, for better vigilance over the Forest Departmental official engaged in monitoring, to modernize the



telecommunication system to conserve the natural forest. This project aims to supply and establish the telecom system with sufficient numbers of VHF sets, Repeater sets, required numbers of towers, walkie talkie handsets with solar power back up system for all telecom facilities.

**5. *Support to the Management of Sundarbans Reserved Forests (SMP II) project***

This project with estimated cost 648.8 million BDT is being implemented with the partnership of GIZ with the objectives of –

- Continuation of SMART patrolling in the Sundarbans.
- to make the Co-management bodies more functional,
- Initiation of Ecological Monitoring and
- Updating of Integrated Resources Management Plan (IRMP).
- Under this project, Drone supported monitoring system (for the purpose of SMART patrolling as well as Ecological Monitoring) will be started very soon. For this reason, the Forest Departmental officials are getting training to operate drones. The training program was started on 19<sup>th</sup> March, 2021.

**6. *Mobile Apps based Development and post-development support of Eco-tourism in Sundarban for Bangladesh Forest Department (BFD)***

This project is only to facilitate the Eco-tourism activities in the Sundarbans by providing online support to the intended tourists, tour operators and Bangladesh Forest Department (BFD) through mobile apps. The mobile app may be very much helpful for the intended tourists, tour operator's business and management functions as well as the monitoring and management functions of BFD. At present, the app development work is going on.

Considering the breeding season for most of the wildlife species, to ensure an undisturbed breeding ground for the wildlife, recently, Government prohibited the entrance of the tourists in the core zone (wildlife sanctuary) Sundarbans for the months of June, July and August.