Community-based Management of Tanguar Haor Wetland in Bangladesh

Part I: Project Information

GEF ID
10702

Project Type
FSP

Type of Trust Fund
GET

CBIT/NGI

- [ ] CBIT
- [ ] NGI

Project Title
Community-based Management of Tanguar Haor Wetland in Bangladesh

Countries
Bangladesh

Agency(ies)
UNDP

Other Executing Partner(s)
Department of Environment (DOE)

Executing Partner Type
Government

GEF Focal Area
Multi Focal Area

Taxonomy
Focal Areas, Influencing models, Indigenous Peoples, Stakeholders, Private Sector, Financial intermediaries and market facilitators, SMEs, Individuals/Entrepreneurs, Learning, Capacity, Knowledge and Research, Indicators to measure change, Adaptive management, Theory of change, Targeted Research, Innovation, Knowledge Exchange, Knowledge Generation, Demonstrate innovative approache, Strengthen institutional capacity and decision-making, Convene multi-stakeholder alliances, Deploy innovative financial instruments, Local Communities, Communications, Awareness Raising, Behavior change, Education, Civil Society, Non-Governmental Organization, Academia, Community Based Organization, Type of Engagement, Participation, Partnership, Beneficiaries, Gender Equality, Gender Mainstreaming, Women groups, Gender-sensitive indicators, Gender results areas, Knowledge Generation and Exchange, Access and control over natural resources, Participation and leadership, Access to benefits and services, Land Degradation, Sustainable Land Management, Sustainable Agriculture, Restoration and Rehabilitation of Degraded Lands, Sustainable Livelihoods, Ecosystem Approach, Income Generating Activities, Improved Soil and Water Management Techniques, Community-Based Natural Resource Management, Biodiversity, Mainstreaming, Agriculture and agrobiodiversity, Fisheries, Protected Areas and Landscapes, Productive Landscapes, Terrestrial Protected Areas, Community Based Natural Resource Mngt

Rio Markers
Climate Change Mitigation
Climate Change Mitigation 1

Climate Change Adaptation
Climate Change Adaptation 1

Duration
60 In Months

Agency Fee($)
384,837.00

Submission Date
9/27/2020

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount($)	Co-Fin Amount($)
BD-1-1	GET	1,500,000.00	6,600,000.00
BD-2-7	GET	1,231,050.00	5,000,000.00
LD-1-3	GET	1,319,863.00	5,600,000.00
	Total Project Cost ($)	**4,050,913.00**	**17,200,000.00**

B. Indicative Project description summary

Project Objective

Project Objective: promote sustainable use of wetland resources by local communities to conserve globally significant biodiversity, improve ecosystem services and secure local livelihoods in Tanguar Haor

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
Component 1 Integrated ecosystem co-management framework for management of Tanguar Haor.	Technical Assistance	**Outcome 1**: Integrated ecosystem co-management framework to promote sustainable wetland resource utilization, reduce degradation of the transitional aquatic-terrestrial interface and promotion of nature-friendly livelihoods in the management of Tanguar Haor. This is to be achieved through: *a) Implementation of collaborative framework as measured by at least 5 government agencies that include actions and resources aimed at ecosystem-based management in their 'rules of business'*	Output 1.1: An integrated ecosystem co-management framework for planning and management of Tanguar Haor designed and adopted Output 1.2: Strengthened multi-sector coordination mechanisms for planning, ecosystem-based management and compliance monitoring applied at national, district, upazila, union and community levels on the basis of Ecologically Critical Areas (ECA) management rules Output 1.3: Inclusive co-operative system for implementation of new framework (defined in Output 1.1) established and functional for Tanguar Haor Output 1.4: Sustainable financing strategy for Tanguar Haor developed, approved and implemented through private-public partnerships supported by a range of new and innovative financial mechanisms	GET	771,603.00	2,100,000.00

(b) Around 13,000 hectares[1] of wetland habitat and the aquatic-terrestrial interface managed for ensuring favorable ecological conditions in consonance with sustainable resource use and environmentally-friendly livelihoods.

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[1] This includes direct investment in 9,727 ha of Tanguar Haor and scaling up of policies, techniques, tools and community approaches, etc. developed at Tanguar Haor for improved management effectiveness in 2-3 freshwater ECAs in the country covering around 3,000 ha. The ECAs and extents will be verified at PPG stage.

(c) At least ten institutions with trained human resources and procedures in place for ecosystem and community-based management system;

		(d) 15-20 point average increase of institutional capacity in MoEFCC as measured by UNDP Capacity Development Scorecard from the baseline value *(e) Ecosystem Management Fund for Tanguar Haor functional with clear rules for soliciting financial resources and procedures for fund utilization and monitoring resulting in 20% increase in funding from baseline values* Targets and indicators to be confirmed during PPG phase.				
Component 2 Strengthened community management of wetland resources	Investment	Outcome 2: Improved ecological condition of Tanguar Haor through sustainable resource use and sustainable livelihoods for communities in its proximity as measured by: *a) At least 3,000 people whose livelihoods are dependent on the*	Output 2.1: Assessment of natural resource conditions in Tanguar Hoar, including status and trends in biodiversity, water quality, fisheries resources, resource use, livelihood dependencies, degradation of the aquatic-terrestrial interface, productivity of agricultural and productivity cropland, etc. to inform management Output 2.2: Based on results of Output 2.1, participatory consultation to develop a conservation management	GET	2,700,609.00	13,000,000.00

wetland in Tanguar Haor with 15% increase in improved and secured livelihoods through micro-enterprise development, marketing and branding (50% women beneficiaries)[1]. Priority to be given to targeted beneficiaries that are affected by Covid-19/ vulnerable populations	plan for Tanguar Haor, that defines targets and locations of habitat restoration efforts, weed eradication, restoration of degraded forests and wetland shoreline, productive land improvements, sustainable resource use and livelihood improvement (fisheries, agriculture, tourism, alternative income generation, micro-enterprises, alternative clean sources of energy for domestic use, etc.), monitoring plans and co-management arrangements
	Output 2.3: Improved conservation management through strengthening local co-management actions to conserve critical biodiversity and ecosystem services through strengthened conservation practices, eco-zoning, restoration of canals and beels to enhance water flows and restoration of degraded swamp forests, improved land and water management and monitoring of ecological conditions of the Tanguar Haor
	Output 2.4: Sustainable land management practices applied to surrounding degraded agricultural lands (wetland paddy, home gardens, etc.) through various technological packages and incentives for nutrient management, organic inputs, limited tillage, agricultural and tree crop diversification and agro-forestry
b) 20-30% improvement in water quality indices at selected monitoring stations in the Tanguar Haor from baseline values (water quality monitoring indicators will be defined at PPG stage)	Output 2.5: Range of activities piloted in Tanguar Haor to enhance ecologically-friendly community resource use and

[1] Since the greater Sylhet district in which the Tanguar Haor is located is a conservative region, the cultural and political situation guides women's participation, decision-making and control over natural resources. Hence, as a start it is considered more appropriate to aim at 30% women's participation

(c) Stable or increased population of flagship and keystone species from baseline such as migratory waterfowl, indigenous fish species, etc. (key species will be confirmed at PPG stage)	livelihood improvement (including most vulnerable populations affected by Covid-19 outbreak) through project-funded small grant investments, private-community partnerships for micro, small and medium enterprise and ecotourism, strengthening community organizations and skills and capacity building Output 2.6: Pollution control and prevention from rural agriculture, rural settlements and small-scale village enterprises
(d) At least 400 hectares of freshwater evergreen swamp forests restored in Tanguar Haor to enhance food and shelter for fish species	
(e) Number of hectares established as community managed areas (to be decided at PPG stage)	
(f) At least 1,911 hectares[1] of degraded lands (agriculture, homesteads, grazing lands, reed banks and river banks, etc.) restored	

[1] The 1,911 ha includes around 500 ha of direct investment in restoration of degraded

agricultural lands and indirect benefits from implementation of integrated co-management of the wetland that will help stabilize 349 ha of stream/river banks, 587 ha of pasture/grazing lands in wetland drawdown and 475 ha of reed banks. To be verified at PPG stage.

(g) At least 20 Village Conservation Groups (VCGs) established and functional with adequate representation of women members (at least 30% women representation).

(h) % of HH using alternative and clean sources of energy for cooking (e.g. LPG), & lighting (e.g. SHS, solar mini/nano grid. (to be financed from non-GEF sources)

		Targets and indicators to be confirmed during PPG phase. [1] Since the greater Sylhet district in which the Tanguar Haor is located is a conservative region, the cultural and political situation guides women's participation, decision-making and control over natural resources. Hence, as a start it is considered more appropriate to aim at 30% women's participation				
Component 3 Knowledge Management, M&E, Communication and Gender Mainstreaming	Technical Assistance	Outcome 3: Institutional capacity, knowledge management, gender mainstreaming and monitoring and evaluation contributes to identification of improved tools, approaches and best practices for replication and scaling up as indicated by: a) Level of awareness on wetland conservation including awareness of health risks that arise	Output 3.1: Knowledge Management, Communications, Gender Mainstreaming and Monitoring and Evaluation strategies developed and implemented through (i) KAP surveys to facilitate development of communication and KM plans; (ii) implementation of gender mainstreaming action plan; (iii) knowledge exchange through the wetland knowledge platform (iv) design advocacy/ communication materials and programs including potential future risks of new diseases emerging from damaged ecosystems; and (v) monitoring and evaluation plans to assess project impacts	GET	385,800.00	1,300,000.00

from over-exploitation of nature as indicated as indicated by KAP survey (at least 60% of sampled population aware of conservation threats and its impacts from the baseline to be determined in Y1 (with 50-50 gender balance) b) number of communication materials and knowledge products developed and disseminated through print, electronic and social media c) A wetlands conservation online portal developed (includes knowledge products, project monitoring status, priority areas, progress reports, etc.) and number of users of the portal d) Establishment of technical capacity for Management, Monitoring & Compliance for Tanguar Haor with staffing and	Output 3.2: Wetland Management, Monitoring and Compliance strengthened and supporting medium and long-term ecological monitoring in particular for Tanguar Haor Output 3.3: Knowledge Management and gender mainstreaming contribute to learning and advance replication and scaling up of gender sensitive wetland management approaches elsewhere in the country through (i) development of policy guidance based on project lessons; (ii) technical reports, publication and knowledge management products; (iii) national and local dissemination workshops; (iv) institutionalizing and upscaling best practices through capacity building and technical support; (v) public engagement pages; (vi) replication and scaling-up strategy.

	operational expenses and development of monitoring protocols and baseline values			
	Targets and indicators to be confirmed during PPG phase.			
		Sub Total ($)	**3,858,012.00**	**16,400,000.00**
Project Management Cost (PMC)				
		GET	192,901.00	800,000.00
		Sub Total($)	**192,901.00**	**800,000.00**
		Total Project Cost($)	**4,050,913.00**	**17,200,000.00**

C. Indicative sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Recipient Country Government	MoEFCC	Public Investment	Recurrent expenditures	12,000,000.00
Recipient Country Government	Ministries of Water Resources, Agriculture and Fisheries (to be formalized at PPG)	Grant	Recurrent expenditures	5,200,000.00
			Total Project Cost($)	**17,200,000.00**

Describe how any "Investment Mobilized" was identified

• MoEFCC expenditure includes Investment Mobilized through activities related to ECA conservation, swamp forest rehabilitation, re-excavation of canals and beels, agricultural diversification, agro-forestry, social protection, capacity building and conservation-related infrastructure. • MOEFCC in-kind contribution in terms of office space, vehicle and equipment uses, etc. • Ministries of Water Resources, Agriculture and Fisheries grant co-fiancing will cover water management and related infrastructure; agriculture extension, planting materials, technical support and fisheries related to provision of fishing gear, technical assistance, capacity development and processing and marketing.

D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNDP	GET	Bangladesh	Biodiversity	BD STAR Allocation	2,731,050	259,450	2,990,500.00
UNDP	GET	Bangladesh	Land Degradation	LD STAR Allocation	1,319,863	125,387	1,445,250.00
				Total GEF Resources($)	**4,050,913.00**	**384,837.00**	**4,435,750.00**

E. Project Preparation Grant (PPG)

PPG Required ☑

PPG Amount ($)

150,000

PPG Agency Fee ($)

14,250

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNDP	GET	Bangladesh	Biodiversity	BD STAR Allocation	100,000	9,500	**109,500.00**
UNDP	GET	Bangladesh	Land Degradation	LD STAR Allocation	50,000	4,750	**54,750.00**
				Total Project Costs($)	**150,000.00**	**14,250.00**	**164,250.00**

Core Indicators

Indicator 1 Terrestrial protected areas created or under improved management for conservation and sustainable use

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
13,000.00	0.00	0.00	0.00

Indicator 1.1 Terrestrial Protected Areas Newly created

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)

Indicator 1.2 Terrestrial Protected Areas Under improved Management effectiveness

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
13,000.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
2-3 other freshwater ECAs	To be determined at PPG stage		3,273.00						
Tanguar Haor ECA	220085		9,727.00						

Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
400.00	0.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.2 Area of Forest and Forest Land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.3 Area of natural grass and shrublands restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.4 Area of wetlands (incl. estuaries, mangroves) restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
400.00			

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
1911.00	0.00	0.00	0.00

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
1,911.00			

Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)	578391	0	0	0
Expected metric tons of CO_2e (indirect)	0	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)	578,391			
Expected metric tons of CO_2e (indirect)				
Anticipated start year of accounting	2022			
Duration of accounting	20			

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)				
Expected metric tons of CO_2e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	1,500			
Male	1,500			
Total	3000	0	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

The indicators proposed here is based on review of relevant literature, project report prepared by MoEFCC, DoE, FD, IUCN and other relevant organizations and through stakeholder consultations and expert opinions. The core indicators are targeting BD Aichi Biodiversity target 1,7. • Core Indicator 1: Improved management practices in Tanguar Haor Ecologically Critical Area to be assessed by completion of management plan, defined favorable ecological conditions, ECA coordination arrangements in place at the different administrative levels, sector agencies incorporate ecological principles in their plans, co-management arrangements in place, monitoring of ecology and water quality in progress and sustainable funding sources assessed. • Core Indicator 3: Direct restoration of 400 ha of degraded freshwater evergreen swamp forests. The value of the project from a BD perspective, would not just be measured by the restoration of 400 hectares of freshwater evergreen swamp forest alone (which is nevertheless critical for maintaining the biological value of the wetland), but by the establishment of favorable ecological conditions in the wetland through direct co-management by the communities that will also ensure restoration/preservation of the biological value of the entire Ramsar designated wetland area of 9,727 ha and its constituent parts (that includes 735 ha of existing evergreen swamp forests, 475 ha of reed vegetation, 3,943 ha of aquatic vegetation habitat and riparian areas and 260 ha of seed banks), which all together represents the total BD benefits generated through the project and contribute to maintenance of the biological and ecosystem value of the wetland. • Core Indicator 4: In addition to the direct restoration of 500 ha of degraded agricultural lands, the project through the establishment of a co-management regime through the participation of resource uses is intended to bring favorable ecological conditions within the wetland and its constituent parts and support efforts to reduce stream bank erosion and degradation, reduce grazing pressure, reduce sedimentation and promote protection of reed banks. Hence, the cumulative LDN benefits extend beyond the direct restoration of 500 ha of degraded agricultural land (and the protection benefits from the restoration of 400 ha of evergreen swamp forests). The integrated co-management approach will facilitate stabilization of stream/river banks (349 ha), reed banks (475 ha) and sustainable use of the drawdown pasture/grazing areas (587 ha) of the wetland that is all necessary to maintain the biological, ecological and economic value of the wetland. This makes a net additional benefits of 1,411 ha in addition to the 500 ha degraded agricultural land restored and 400 ha of degraded evergreen swamp forest restored, making a net benefit of 1,911 ha (excluding the BD benefits of 400 ha of evergreen swamp forest restoration) of LDN benefits. Additionally, during the PPG stage, the project will seek to identify options for enhancing the direct LDN targets through other co-

financing sources. Lastly, according to studies conducted by IUCN, the World Resources Institute as well as case studies curated by the CBD, the global average cost of land restoration ranges from $300 to $3,800 per ha based on the local labor and material cost, geographic location and types of ecosystems. The proposed project will invest a total of approximately USD 1.2 million and is expected to provide a cumulate LDN benefit of 1,911 ha as described above. Therefore, the cost of LDN benefit for the project is USD 628 per ha. This is well within the per ha cost range (actually it is on the lower end, which is found to be reasonable). • Core Indicator 11: 3,000 beneficiaries (1,500 men and 1,500 females) with improved livelihood opportunities, sustainable fisheries and agricultural practices, etc. At least 25% of the targeted beneficiaries would be from Covid19 affected/ vulnerable populations. • Core indicator 6: Core indicator 6: GHG emissions are made for a 20-year (5-year implementation plus 15 years of capitalization) period. A total of 10,627 ha of the project is planned for the various activities: degraded forest restoration (400 ha) and crop production improved practices (500 ha) through agroforestry systems and/or the improved management options, and protected areas (wetlands) degradation management (9,727 ha) [within PA breakdown is - swamp forest (735 ha), pasture land (587 ha), and aquatic vegetation cover (3,943 ha)]. A total of 578,391 tons of carbon dioxide equivalent will be mitigated over 20 years through the enhanced management of the protected area, sequestration resulting from the restoration activities, and improved practices in the agricultural activities. GHG mitigated from the project is estimated using FAO EX-ACT and includes the direct benefit only (indirect the benefit will be estimated during PPG as more detailed activities along with the potential for upscaling are known). The relative lower total GHG benefits per investment dollar is due to the land cover in the protected areas (total of 9,727 ha), which is mostly covered with low carbon sequestration potential aquatic vegetation and a water body. (please refer to Annex D for the FAO-EXACT result)

Part II. Project Justification

1a. Project Description

1) The global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)

Biogeographically, Bangladesh is located at the cross roads of the Indo-Himalayan and Indo-Chinese sub-regions under the Oriental region. Thus, the country acts as an important merging and sharing habitat, land bridge and biological corridor for the fauna and flora between these sub-regions. This strategic location makes Bangladesh as one of the most ecologically significant and biologically diverse landscapes in terms of migratory birds, stepping stones, staging grounds and flyways for wildlife movements of the region.[1] Bangladesh is a land of water bodies, with wetlands comprising over 50% of the territory, drained by the 700 tributaries of the Ganges, Brahmaputra and Megna rivers. Wetlands in Bangladesh encompass a wide variety of changing ecosystems including mangrove forests, natural lakes, freshwater marshes, reservoirs, oxbow lakes, haors (deep depressions in the north-east that coalesce to a vast inland sea in the monsoon), beels (permanent freshwater depressions), fish ponds and tanks, estuarine waters, and extensive seasonally inundated floodplains.[2] They include some 6,300 *beels* (permanent and seasonal shallow lakes), 47 major *haors* (deeply flooded depressios) in the north-east, *baors* (oxbow lakes) and vast areas of seasonally flooded plains.[3] These inland water bodies are rich is species, such as freshwater fish (260 species)[4] and hundreds of thousands of migratory birds[5]. Coastal wetlands are also extensive and include part of the largest single tract of natural mangrove in the world: the Sundarbans, a World Heritage site of which 60% (601,700 ha) is in Bangladesh and the rest in India.

The floodplains in Bangladesh provide a critical source of income and nutrition for millions of rural poor people through intensive use for agriculture, fishing and collection of other wetland resources that helps to support a population of over 800 people per km^2. Inland fishery is particularly important and supports a major capture fishery and source of livelihood for the rural people, and contributes around 46% of all fish consumed.[6]

Despite their great biological and socio-economic value, the wetlands of Bangladesh are in decline due to a number of reasons, especially , the past consideration of wetlands as “wastelands” that resulted in their and conversion to agriculture. The remaining wetlands are threatened by a number of factors, namely: (i) construction of flood embankments and water control structures; (ii) rice cultivation in wetlands; (iii) leasing out fishing rights in public water bodies under short-term leases that encourage maximum exploitation removing incentives to protect the resource’ (iv) industrial development and resultant pollution discharges into wetland habitats; (v) removal of riparian vegetation and poor land management causing siltation and reduction in wetland area; and (vii) destructive fishing and aquatic resource harvest methods. As a consequence, more than 40% of Bangladesh freshwater fish are now threatened[7]and inland fish capture has declined substantially in recent years.

In the north-east of the country, the area known as the haor basin is considered a unique ecosystem, with each of the haor basin wetlands representing key elements of a complex hydrological, biological and ecological system, supporting a significant assemblage of rare and vulnerable species of plants and animals, including endemic species[8]. The whole area supports large numbers of migratory water-birds arriving from northern Palearctic regions upon the onset of the winter season. Within this region, lies the Tanguar Haor - a unique freshwater wetland ecosystem covering 9,727 hectares. This complex ecosystem, known for its many species of fish and as a staging and over-wintering area for at least half a million migratory birds, supports the lives of the lives

of about 60,000 inhabitants in 88 villages around its periphery. It also supports the last vestiges of freshwater evergreen swamp forests[9]. The Government of Bangladesh declared the wetland an Ecologically Critical Area (ECA) in 1999, considering its critical condition as a result of the overexploitation of its natural resources. Given, the unique biological value of the Tanguar Haor, it was declared a Wetland of International Importance under the Ramsar Convention (Ramsar site) in 2000 on account of its rich biodiversity, supporting many nationally and globally threatened species. Tanguar Haor fulfills at least three of the criteria necessary for its declaration of a wetland of international importance under the Ramsar Convention, namely: (i) a wetland considered internationally important if it supports vulnerable, endangered or critically endangered species or threatened ecological communities; (ii) a wetland that is internationally important if it regularly supports 20,000 or more waterbirds; and (iii) a wetland is considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird. In 2001, a minimum of 2,500 Baer's Pochard (*Aythya baeri*) was counted, which represents 50% (estimated global population of 5,000) and 90,900 (2002) Ferruginos Poachard (*Aythya nyroca*) which represent 90% of the global population estimate (100,000) of this species. The principal wetland habitats in Tanguar Haor include open water vegetation (with submerged and floating aquatic plants), seasonally inundated mixed herbaceous vegetation, freshwater evergreen swamp forests, reed beds and rice fields. At least two plant species, *Duchesnea indica* and *Hydrocotyle sibthorpioides,* are considered very rare and about 25 species are considered rare[10]. There are about 54 small, medium and large *beels* within Tanguar Haor that are connected to rivers or inter-connected among each other, which contribute to its unique character and the range of ecosystems and habitats represented. Some of the *beels* are perennial while others are seasonal.

Freshwater evergreen swamp forest is a highly threatened habitat in Asia and those found in the Tanguar Haor represent the last vestiges of these forests in Bangladesh. These forests develop in waterlogged conditions due to flat low-lying land becoming inundated due to rainfall runoff and inflows from surrounding river systems. In swamp forests, the water table is typically very close to the surface and the continuous inundation gives rise to a habitat that is floristically distinct from the surrounding dryland forests, with adaptations including buttresses, stilt roots and different types of pneumatophores. This swamp forest is high in faunal diversity and extensively used by migratory birds for roosting and nesting. The swamp forest is a key element of the wetland in that it provides food and shelter for fish populations and hence it contributes economically to the livelihoods of local people who depend on these resources.

In terms of faunal diversity, it is estimated that there are 141 fish, 11 amphibian, 34 reptile, 206 bird and 31 mammal species.[11] On average, around 70-80 species of birds are resident in the Tanguar Haor, while around 60 species of migratory water birds visit the wetland. It also provides habitat for globally threatened wildlife species, including a single amphibian, three turtle, two lizard, four snake, ten bird and six mammal species.[12] Among the bird species, the Critical Endangered Baer's Pochard (*Aythya baeri)* and Endangered Pallas Fish Eagle (*Haliaeetus leucoryphus*) occur[13]. Some of the major *beels* are considered fish micro-sanctuaries and have been declared as important bird areas. In terms of fisheries resources, the Tanguar Haor is very rich and important for fish production and fish habitat, contributing to the national economy and providing livelihood support to local communities. In addition to its high fish diversity, the Haor supports rare and globally threatened species, including 10 IUCN Red Data Book and 22 CITES-listed species. These include *Bagarius bagarius, Clupisoma garua, Crossocheilus latius, Ctenops nobilis, Eutropiichthys vacha, Laboe boga, Mystus seenghala, Notopterus chitala, Pangasius pangasius, Rasbora elanga, Rita rita, Rohtee cotio, Silonia silondia* and *Tor tor**[14]***.

People living around Tanguar Haor are generally poor, of which around 95% are dependent on the wetland for their livelihoods, mostly through fishing, fish trading, boating and agriculture.[15] The provision of ecosystem services makes the wetland a major livelihood source for the people. Most economic activity includes commercial fishing, fuel wood sale, hunting of waterfowl, harvesting and sale of grass and reed and farming. Additionally, the wetland provides water storage, drinking and irrigation water, flood control, groundwater recharge, recreation and transport services. An estimate of the total annual benefits from Tanguar Haor based on different ecosystem values is USD 20.46 million, of which provisioning services account for an estimated 78% of the total[16]. Annual harvested wetland products are estimated at USD 1.6–4 million, with fish contributing around 64% of the net value.

Despite the high level of biodiversity and variety of ecosystems and the economic value of the Tanguar Hoar to the local population, ecological degradation is taking place. Increased silt deposits by rivers that flow from the hills threaten crops and water quality. Swamp forests, and reed beds are in decline and fish production has been severely reduced resulting in the need for restocking with exotic species to compensate for the loss of productivity. Given the cutting, clearing and other anthropogenic activities, the swamp forests have been severely reduced, leading to impacts on resource use and livelihoods of the local people, in particular through the reduction of fish production and limited natural regeneration of this forest. Furthermore - amphibian, reptilian and certain bird species have become rare on account of trapping and hunting. The growing human population and increasing vulnerabilities of rural communities to climate change impacts leads to increased pressures on natural resources, causing widespread degradation of ecosystems through changes in land use and hydrological regimes, over-exploitation and pollution of aquatic and terrestrial habitats, and invasion by alien species, all of which contribute towards the loss of native species diversity.

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[12]IUCN (2015). Tanguar Haor Management Plan Framework and Guidelines

[13] IUCN (2012). Biodiversity of Tanguar Haor: A Ramsar Site for Bangladesh. Volume 1: Wildlife

[14]IUCN (2015). Tanguar Haor Management Plan Framework and Guidelines

[15] IUCN (2015). Tanguar Haor Management Plan Framework and Guidelines

[16] Haque, A.K.E etal (2012). Ecosystem values and Ecosystem Services of Tanguar Haor. Community based sustainable management of Tanguar Lake project, IUCN

Key Threats to wetland biodiversity and ecosystem servcies

The threats to wetland biodiversity in Bangladesh, including Tanguar Haor are as follows:

· Habitat degradation and fragmentation caused by expanding human settlement and agriculture, shifting cultivation in the hills and other changes in patterns of land use that result in conversion of natural wetlands to other land uses.

· Changes in hydrological regime, also caused by changes in land use patterns and associated construction of flood management infrastructure.

· Pollution of terrestrial and aquatic ecosystems from discharge of effluents, dumping of waste, agro-chemicals, erosion of soil due to agricultural and construction activities, and vehicle emissions.

· Over-exploitation and other unsustainable uses of natural resources.

· Unplanned tourism, particularly badly conceived and implemented nature-based tourism that relies on responsible, sustainable approaches to developing and managing tourism destinations.

· Invasive alien species, particularly the introduction of exotic species of fishes since the 1950s, resulting in rivers and wetlands becoming colonized by highly invasive species that predate on, or outcompete indigenous species.

· Climate change impacts, including rising temperature, changing rainfall pattern, and increasing frequency of extreme weather events (e.g. flooding, cyclones, flash floods, etc.).

The most important threats to Tanguar Haor are discussed further in the section below:

Wetland habitat loss and degradation

Tanguar Haor is facing overwhelming threats due to natural resource degradation, soil erosion, swamp forest and aquatic habitat degradation, water imbalance and human interference. Small freshwater swamp forests that were common in the past have now been severely depleted due to clearing, cutting and burning. Reed beds have been severely reduced because of collecting for fuel and thatch, and the conversion of marginal lands for agriculture.[17] It is reported that around 40% of the total landscape of the study area in Tanguar Haor has been impacted within the period 1980-2010, with highland or forested vegetation decreased by 50%, deep water surface area decreased by 49% and shallow water surface area increased by 33%.[18] As a consequence of the increase in shallow water, this has favored increase in agricultural activities and semi-permanent and permanent settlements. Certain species of aquatic plants have now disappeared or become very rare, probably due to a combination of over-utilization and changes in water quality. The current leasing system of lands within the wetland is considered as one of the major threats to its sustainable management, as it has encouraged maximum exploitation and marginalization of the local community. Additionally, the area of the wetland is decreasing due to expanding human settlement, agriculture, siltation and encroachment for construction purposes. The rivers that support the wetland have also suffered loss of riparian wetlands due to the expansion of agriculture, increased extraction of water for irrigation and development processes. These habitats are critical for supporting the rivers' ecological health and providing resilience against flood, drought and climate change.

Over-exploitation and other unsustainable uses of natural resources, particularly in relation to fisheries

Over-exploitation of fishes and wetland resources, killing and trapping of birds are a serious threat to biodiversity in Tanguar Haor. In addition, reed beds have been significantly reduced by over-harvesting of reed for fuel and their conversion to agricultural use. The causes of decline of fish species populations is attributed to brood fish catch, increase in fishing pressure, use of insecticides in crop fields, fishing using destructive means and water quality degradation due to siltation and other factors. The reduction of wildlife is attributed to increased hunting and trapping, destruction of bird nesting sites and use of insecticides that kill the insect prey of birds. Dewatering of key areas and repeated fish harvesting are unsustainable fishing practices in the wetlands. Wetland plants are overharvested for fuel, cattle feed and other uses. The hunting, trapping and killing of water birds has resulted in a rapid decrease in the number of water birds visiting the Tanguar Haor wetland. It is reported that there has been between a 10 to 75% decrease in populations of 30 bird species visiting the Tanguar Haor between 2000 and 2012 as a result of hunting, deforestation and other anthropogenic factors.[19] A recent study showed that over 100 riverine fish species are currently under threat and 25 fish species have not been observed in the past 20 years, indicating the possibility of their extinction from water bodies in the country.[20]

Invasive alien species

The introduction of exotic species of food fish to compensate for decreasing fish yields, has resulted in colonization by highly invasive species that predate on, or outcompete indigenous species. Several of the introduced species are highly carnivorous and predatory and consume the smaller indigenous varieties. The ecological, economic and biological consequences of the introduction of exotic fish species have not been adequately assessed, although some of the known negative impacts of exotic species are the stunting and decrease in the population of the smaller indigenous species. Some exotic species destroy embankments and stir up bottom mud reducing the dissolved oxygen (DO) levels and destroying the habitat of small indigenous species. The carp species compete with the indigenous species for food and space, while other species are voracious predators on small and medium fishes. All of these exotic species are a big threat to the indigenous species.[21] Aquatic weeds such as Water Hyacinth are the most hazardous and cost-intensive problem in most of the wetlands. The main problem with this aquatic weed has been the reduction of water depth in the wetland due to accumulation of dead vegetation, reducing the fish production rate and the diversity of aquatic flora and fauna, in addition to local environmental impacts.

Climate change impacts

Bangladesh is one of the most vulnerable countries to climate change with rising temperature, changing rainfall pattern, sea level rise and increasing frequency of extreme weather events (e.g. tidal surges, flooding, cyclones). Many species of wildlife, fishes and invertebrates depend upon certain temperature ranges for flowering, pollination, seed formation, seed germination and plant growth. The Hoars are generally viewed as vulnerable to climate change impacts because of their unique geographical location, dominance of floodplains, high population density, elevated level of poverty and overwhelming dependency on nature and its natural resources. In terms of Bangladesh, the mean temperatures across the country are projected to increase between 1.4°C

and 2.4°C by 2050 and 2100, respectively. Average temperatures are expected to increase between 1°C and 2°C by 2100, and the frequency of tropical cyclones in the Bay of Bengal may increase and, according to the Intergovernmental Panel on Climate Change's Third Assessment Report, there is "evidence that the peak intensity may increase by 5% to 10% and precipitation rates may increase by 20% to 30%" (IPCC 2001). Cyclone-induced storm surges are likely to be exacerbated by a potential rise in sea level of over 27 cm by 2050, while runoff, a measure of water availability, is projected to increase, the time between rainy days is expected to increase and the peak 5-day rainfall intensity (a surrogate for an extreme storm event) is projected to increase.[1]

In terms of the Tanguar Haor, there are no specific future projections, but studies have demonstrated an annual average decrease in rainfall by 25mm between 1980-2008 and average annual maximum and minimum increases in temperature by 1.45^{o}C and 1.4^{o}C respectively[2]. The major negative impacts of climate change in Tanguar Haor are expected to decrease in crop production, impacts on fish productivity, loss of cultivated land, droughts, floods and impacts on biodiversity and swamp forests. Climate risks are anticipated from increase in floods and droughts, river erosion, changes in temperature and rainfall, etc. This is be further investigated at PPG stage

The changing pattern of temperature in the Tanguar Haor (1.45°C) is significantly higher compared to the IPCC assessment over the world in last 100 years (1910- 1940: 0.35°C, 1970-2007: 0.55°C) (IPCC, 2007:252)[3]. This creates considerable negative impacts on crop production as well as livelihoods of the local people. Therefore, location-wise and scientifically based sustainable adaption practices are essential to cope up with the changing climatic conditions. Otherwise, it would be very difficult to make communities more resilient towards adverse impacts of climate change and ensuring food security.

The perception among the local inhabitants around the Tanguar Haor is that climate change causes a decrease in crop production (25%), reduced fisheries (21%), loss of forest ecosystem (16%), loss of biodiversity (16%), loss of cultivable land (13%) and loss of personal belongings (9%), water borne diseases thus requiring adaptation strategies to cope up with these climatic events such as diversification of livelihoods, changes in crop calendar, rainwater harvesting, repair/reconstruction of houses, availability of timely information on weather forecast and purifying drinking water[4]. These perception are particularly relevant to the project in terms of ensuring improved crop production through restoration of degraded agricultural lands, promoting sustainable fisheries and wetland resource use, conservation and restoration of freshwater evergreen swamps, *beels* and associated ecosystems, enhancement of biodiversity and ecological services and improved awareness and information.

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[2] Rahaman, M.Z., Sajib, K.I and Alam, I (2015). A Study on Climate Change Impact on Livelihoods of the people of Tanguar Haor. Water World Congress XV. Scotland

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[4] Ibid

Barriers that need to be addressed to restore and maintain favorable ecological conditions in the Tanguar Hoar:

Barrier 1: Limited institutional coordination, funding and recognition of the benefits of community participation in the long-term sustainable management of the Tanguar Haor

Although institutional governance arrangements are mandated in the 2016 ECA Management Rules as the delivery mechanism for management of these areas, there is limited capacity to facilitate and coordinate among communities and multiple sectors of government and little or no private sector participation in the implementation and enforcement of management prescriptions, as well as to reach out to local communities (especially farmers and fisher folk) and other users of wetland resources (including the private industry). The limited coordination and mutual trust between the relevant public agencies and between community organizations and the government (at all levels) has limited the participation of the community (through the community leaders) in management and decision making and in the delegation of authority for promotion of effective co-management of wetland resources. Inadequate institutional support and limited avenues and access to external sources of funding for local community engagement due to limited capacity for local resource mobilization further constraints effective community co-management. There is also inadequate understanding and conviction on the benefits of co-management among the community and limited opportunities to train and nurture knowledge and practices on the benefits of co-management. Because of the lack of an organized platform for collective action, there is little or no enthusiasm for preservation and sustainable use of natural resources leading to their rapid deterioration. All of this has contributed to the absence of a long-term vision between the government and other key stakeholders, and amongst the community on resource management and institutional sustainability.

Barrier 2: Conflicts in resource management and limited recognition of ecosystem service values

While a significant percentage of the 60,000 inhabitants living in the 88 villages in and around the Tanguar Haor are dependent on its natural resources, many of whom belong to the poorest groups whose primary source of income is derived from fisheries or daily labor and farming and, this is compounded by an inherent competition and conflict in the mode of resource use. There are a number of underlying factors that exacerbate resource conflicts. The lack of clear policy guidance and operational support for local communities has resulted in their inability to play a major role in resource management and protection as well as in developing a collaborative shared vision for its management and use amongst the key stakeholders. Limited enforcement of regulations regarding resource use coupled with patronization by socio-political elites and vested interests has made it difficult for ensuring equitable access and benefits to members of the community. There is little social and cultural resistance against these harmful resource exploitation practices on account of the strong external influence and political dominance of the elite in this illicit resource exploitation and use practices. As a consequence, marginalized local communities that usually live in abject poverty tend to resort to desperate means of resource exploitation in pursuit of short-term gains in the absence of a collective long-term strategy for promotion of resource conservation and sustainable use that would benefit them. The lack of agreement amongst communities and local government about the priorities and goals of Tanguar Haor management, coupled with a poor understanding of wetland ecosystem service values and management requirements has resulted in conflicts between resource use, conservation and economic development.

Barrier 3: Limited opportunities for local institutions and communities to improve livelihoods

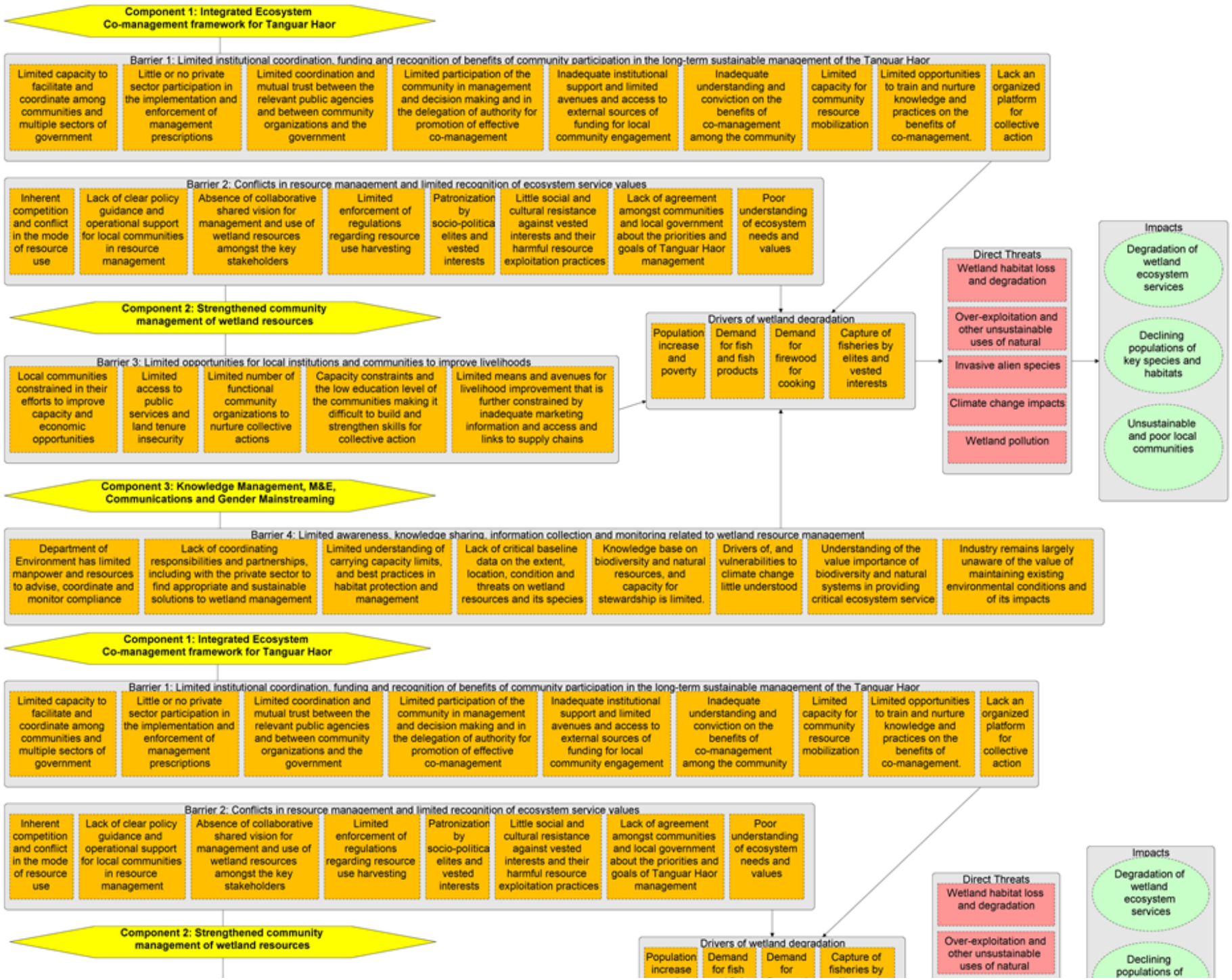
Local communities and their institutions in and around Tanguar Haor are constrained in their efforts to improve capacity and economic opportunities for a variety of reasons, including limited access to public services and land tenure insecurity (as lands around the wetland are under various tenure regimes, including government owned, leased out to private parties for 1 to 3 years, usually for fishing purposes, and privately owned agricultural lands and homesteads) leading to diverse conflicting priorities amongst the key stakeholders. There is also a very limited number of functional community organizations to nurture collective actions on account of capacity constraints and the low educational level of the communities. This makes it difficult to build and strengthen skills for collective action and corresponding sustainable development. As a consequence, there are limited options for livelihood improvement, further constrained by inadequate marketing information and access and links to supply chains. In an effort to eke out a living, communities have caused rapid degradation and destruction of their natural resources, especially common forests, medicinal and aromatic plants, watersheds and wetland resources, thereby reducing opportunities for more sustainable natural resource based forms of economic development.

Barrier 4: Limited awareness, knowledge sharing, information collection and monitoring related to wetland resource management

While the Department of Environment's (DoE's) role is to share knowledge and best management practice guidance, it has limited manpower and resources to advise, coordinate and monitor compliance. It has left the implementation of management plans to those owning or having tenure over the respective wetland areas. Underlying these difficulties is the lack of coordinating responsibilities and partnerships, including with the private sector, to find appropriate and sustainable solutions for effective management of the wetland and its productive resources. There is limited understanding regarding the condition of these wetland resources, their carrying capacity limits, and best practices in habitat protection and management, along with the application of equitable, transparent and accountability procedures and practices related to the management of the Tanguar Haor. Although there has been some documentation of experiences from the past, there is a lack of regular review processes that involve community organizations, non-governmental and environmental organizations and research agencies, thus limiting the opportunities for replication and scaling up of best practices.

While ECA rules articulate the need for ecosystem-based planning and management, there is usually a lack of critical baseline data on the extent, location, condition and threats on wetland resources and species. Consequently, there is an urgent need for a concerted and committed effort, with adequate manpower, skills and funding to monitor the condition of the resource, distribute data, and build the institutional, technical, human and infrastructural capacity needed to support on-going biodiversity monitoring and decision-making. Consequently, the country's knowledge base on biodiversity and natural resources, and capacity for stewardship is limited. Drivers of, and vulnerabilities to climate change in Tanguar Haor is also little understood. Among the local community, there is little understanding of the value of biodiversity and natural systems in providing critical ecosystem services (including mitigation of climate change impacts) to those dependent on these resources and the impacts that wetland degradation could have on provisioning of such services. Industry remains largely unaware of the value of maintaining optimal environmental conditions and of the impacts that environmental degradation can bring to the local, regional and national economy.

Figure 1: Situational Analysis


Component 1: Integrated Ecosystem Co-management framework for Tanguar Haor
Barrier 1: Limited institutional coordination, funding and recognition of benefits of community participation in the long-term sustainable management of the Tanguar Haor
Limited capacity to facilitate and coordinate among communities and multiple sectors of government
Little or no private sector participation in the implementation and enforcement of management prescriptions
Limited coordination and mutual trust between the relevant public agencies and between community organizations and the government
Limited participation of the community in management and decision making and in the delegation of authority for promotion of effective co-management
Inadequate institutional support and limited avenues and access to external sources of funding for local community engagement
Inadequate understanding and conviction on the benefits of co-management among the community
Limited capacity for community resource mobilization
Limited opportunities to train and nurture knowledge and practices on the benefits of co-management.
Lack an organized platform for collective action
Barrier 2: Conflicts in resource management and limited recognition of ecosystem service values
Inherent competition and conflict in the mode of resource use
Lack of clear policy guidance and operational support for local communities in resource management
Absence of collaborative shared vision for management and use of wetland resources amongst the key stakeholders
Limited enforcement of regulations regarding resource use harvesting
Patronization by socio-politica elites and vested interests
Little social and cultural resistance against vested interests and their harmful resource exploitation practices
Lack of agreement amongst communities and local government about the priorities and goals of Tanguar Haor management
Poor understanding of ecosystem needs and values
Component 2: Strengthened community management of wetland resources
Barrier 3: Limited opportunities for local institutions and communities to improve livelihoods
Local communities constrained in their efforts to improve capacity and economic opportunities
Limited access to public services and land tenure insecurity
Limited number of functional community organizations to nurture collective actions
Capacity constraints and the low education level of the communities making it difficult to build and strengthen skills for collective action
Limited means and avenues for livelihood improvement that is further constrained by inadequate marketing information and access and links to supply chains
Drivers of wetland degradation
Population increase and poverty
Demand for fish and fish products
Demand for firewood for cooking
Capture of fisheries by elites and vested interests
Direct Threats
Wetland habitat loss and degradation
Over-exploitation and other unsustainable uses of natural
Invasive alien species
Climate change impacts
Wetland pollution
Impacts
Degradation of wetland ecosystem services
Declining populations of key species and habitats
Unsustainable and poor local communities
Component 3: Knowledge Management, M&E, Communications and Gender Mainstreaming
Barrier 4: Limited awareness, knowledge sharing, information collection and monitoring related to wetland resource management
Department of Environment has limited manpower and resources to advise, coordinate and monitor compliance
Lack of coordinating responsibilities and partnerships, including with the private sector to find appropriate and sustainable solutions to wetland management
Limited understanding of carrying capacity limits, and best practices in habitat protection and management
Lack of critical baseline data on the extent, location, condition and threats on wetland resources and its species
Knowledge base on biodiversity and natural resources, and capacity for stewardship is limited.
Drivers of, and vulnerabilities to climate change little understood
Understanding of the value importance of biodiversity and natural systems in providing critical ecosystem service
Industry remains largely unaware of the value of maintaining existing environmental conditions and of its impacts
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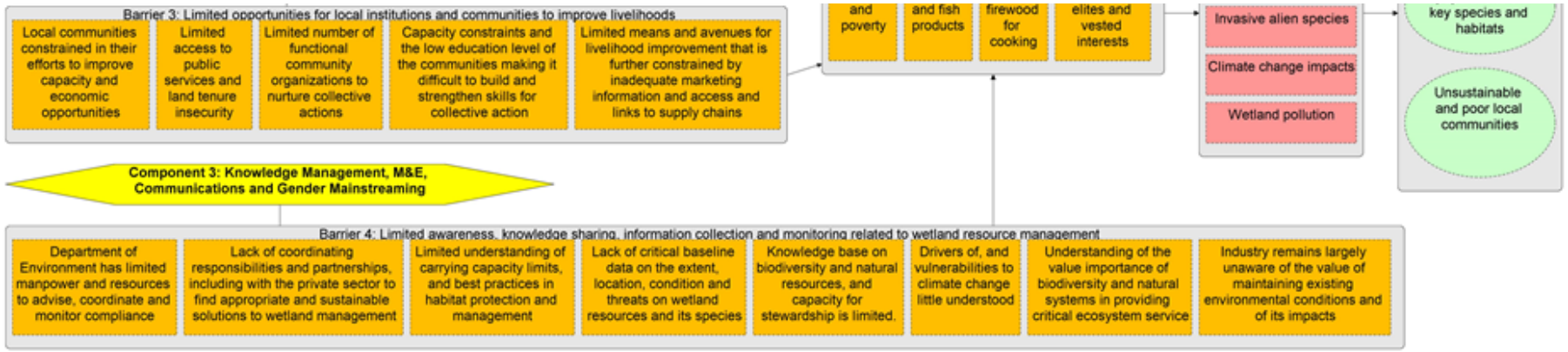
Drivers of wetland degradation
Population increase
Demand for fish
Demand for
Capture of fisheries by
Direct Threats
Wetland habitat loss and degradation
Over-exploitation and other unsustainable uses of natural
Impacts
Degradation of wetland ecosystem services
Declining populations of



2) Baseline scenario or any associated baseline projects

The Government of Bangladesh has formulated a considerable number of policies and regulations relevant to Protected Areas, Ecological Critical Areas and wetlands. Bangladesh is a signatory to a number of Multilateral Environmental Agreements (MEAs) including the Rio Conventions (RCs), i.e. United Nations Framework Convention on Climate Change (UNFCCC), Convention on Biological Diversity (CBD) and United Nations Convention to Combat Desertification (UNCCD) and has so far signed, ratified and or accessed 35 international Conventions, Treaties and Protocols (ICTPs). Among them, the following ICTP's are relevant to wetlands: (i) Convention on Wetland of International Importance Especially as Waterfowl Habitat (Ramsar Convention) which was ratified on 20 April 1992 and declaration of the Sundarbans and Tanguar Haor as Ramsar sites; (ii) Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITIES) ratified on 18 February 1982. The Bangladesh Wildlife (Preservation) (Amendment) Act 1974 provides a list of species protected against any form of trading; (iii) Convention Concerning the Protection of the World Cultural and Natural Heritage ratified on 3 November 1983. In 1999, Government of Bangladesh declared the Tanguar Haor Basin as an "Ecologically Critical Area" to highlight its ecological importance and to monitor its environmental quality. In 2000, the haor basin was declared as the country's second RAMSAR site – wetland of international importance. With the declaration of Tanguar Haor as a RAMSAR site, government has its commitment to preserve the ecosystem and floral and faunal diversity including its migratory birds from illegal hunters.

Relevant wetland conservation and management policy in Bangladesh includes: the National Jalmahal [Water Body] Management Policy 2009; National Land Use Policy 2001; the National Agricultural Policy 1999; the National Water Policy 1999; the National Fisheries Policy 1998; the National Agricultural Extension Policy 1997; National Forest Policy 1994; the Environment Policy and Implementation Plan 1992; the Environment Conservation Rules 1997, the Protection and Conservation of Fish Rules 1985.

Considerable experience and information have accumulated over the last few years from a number of wetland projects supporting the establishment and management of Tanguar Haor to address pressures on natural resources. In 2002, a historic milestone was achieved in the management and conservation of Tanguar Haor and its rich biodiversity after the traditional leasing of Tanguar Haor was stopped and its management was brought under the Ministry of Environment, Forest and Climate Change (MoEFCC). As a result, the nodal MoEFCC took an initiative to establish a community-based management system in Tanguar Haor during a three-phased project (December 2006–August 2016). However, this effort needs substantial strengthening and commitment to strengthen the role of the community in planning and management of the wetland.

In particular the GEF 7 project would build on the existing baselines to further enhance the integrated management of the Tanguar Haor, as an approach to demonstrate an new and innovative approach to wetland conservation that can be replicated elsewhere. In particular, the GEF 7 project will further build on the baseline activities to demonstrate a financially viable ecosystem-based management framework for the Tanguar Haor (based on ECA rules and experiences available in the country), but more importantly empower local resource users to plan and manage the wetland resources through co-management arrangements. This mandates local communities (in particular fisher folk and wetland resource collectors) to take responsibility for decision-making in managing their respective parts of the wetland. It will also look at the different wetland elements within the wetland as an integrated, interdependent and complex ecosystems (rather than as individual parts) in designing and planning conservation, sustainable management and restoration practices. Also, to promote an alternative conservation-oriented natural resource-based economy within and around the wetland and test sustainable financing mechanisms, with emphasis on private sector partnerships with local communities. Refer Table 1 for further details relating to baseline activities and additional needs.

GEF Atlas 92054/PIMS 4620 Expanding the Protected Area System to incorporate important aquatic ecosystems: a medium-size project (signed in June 2015 and closed in June 2020) focused on safeguarding the Ganges and Irrawaddy dolphins from unsustainable fisheries in the Sundarbans by expanding and strengthening the protected area (PA) system, with support from local communities. Implementation commenced only in April 2017 and the project closed in May 2020. Lessons from this project would be useful for strengthening community co-management processes.

GEF Atlas 89619/PIMS 4884 National Capacity Development for Implementing Rio Conventions through Environmental Governance: a medium-size project (signed in May 2015 and closed in December 2019) to strengthen information management and other support systems that contribute to policy development and improve implementation of the three Rio Conventions. Potential synergies are identification of this project's tangible contribution to Bangladesh in meetings its international obligations and sharing of monitoring and other information on ECA status.

GEF Atlas 87558/PIMS 4878 Integrating Community-based Adaptation into Afforestation and Reforestation Programs in Bangladesh: a full-size project (signed in May 2015 and will close in March 2021) to reduce climate vulnerability of local coastal communities by stewardship of coastal greenbelts, climate resilient livelihoods, nature-based solution and disaster preparedness planning. Potential synergies are possible with regard to livelihood diversification and climate resilience.

GIZ Managing the Sundarbans mangrove forests to conserve biodiversity and adapt to climate change (2015-2019; closed): executed by the Forest Department and focused on management of PAs in collaboration with civil society and communities. Potential synergies on knowledge management and interactive platform for information sharing and application of a harmonized approach to monitoring and evaluation will benefit the proposed GEF project.

Forest Department is currently implementing US$ 175 million World Bank-funded Sustainable Forests and Livelihoods (SUFAL) Project (2019-2023) for the country. The SUFAL project aims to improve forest management and increase benefits for forest dependent communities in targeted sites by financing nearly 79,000 hectares of forests on public and private lands, including about 22,000 hectares of coastal green belt across 147 Upazilas (sub-districts). The project will directly benefit about 40,000 forest dependent households – with special emphasis on women and adolescent girls – by increasing their participation in forest management and access to diversified income generation options. In addition, about 180,000 people will benefit through involvement in collaborative forest management activities. The proposed project can draw on learning from forest restoration and gender related successes.

Implementing Ecosystem-based Management in Ecologically Critical Areas in Bangladesh (GEF6; approved by GEF in May 2020) The project objective is to apply an ecosystem-based framework for managing two ECAs (Morjad Baor and Halda river) in Bangladesh to enhance the conservation of globally significant biodiversity and support local livelihoods. It is aimed at addressing the increased degradation of wetland habitats from unsustainable development and local community practices that is leading to biodiversity loss. While, the proposed GEF 7 project will work closely with the GEF 6 project to ensure complementarity, lessons sharing and exchange of information, a particular difference is that the GEF 7 project will introduce a new approach to empower individual villages

and/or groups of resource uses to manage their respective parts of the wetland (in particular fisher folk and wetland resource collectors). This would necessitate development of appropriate community decision-making structures for management of the wetland, including in particular to take collective agreements and actions for setting up seasonal sanctuaries or no-take zones to protect fish breeding and spawning, defining sustainable harvest limits and species to be harvested, regulation of fishing gear and harvest times, and other measures that the community deem necessary to maintain the favorable ecological conditions in the Tanguar Haor.

The three-phased '*Community Based Sustainable Management of Tanguar Haor*' project implemented by MoEFCC and completed in 2016, had extensively focused on co-management governance of Tanguar Haor bringing 76 villages with 7,081 members under the umbrella of a community organization. The most significant progress has been the establishment of poor fisher's fishing access to fish resources through a sustainable fish harvesting (commercial and non-commercial) system. In particular, the introduction of fishing modality following the fish harvesting guidelines has led to a positive impact among the community organization, particularly the poor fishermen.

In particular, the termination of allocation of fishing rights to the highest leaseholder and suspension of all fishing except for small-scale fishing in the immediate vicinity of some of the haor villages in recognition of the traditional rights for use of the wetland resources has created opportunities for the wise and sustainable use of its resource. However, this approach has not been fully institutionalized, which is necessary for scaling up to the entire Tanguar Haor.

There is a need for designing and initiating implementing a "whole of wetland" approach based on the ECA management rules of 2016 through the project that integrates conservation, resource use, livelihood support and monitoring into a planning framework that is aimed at achieving favorable ecological conditions in the wetland. This would facilitate the change from a 'business as usual' scenario that continues to promote unsustainable resource dependency; inconsistent governance structures for planning, management and resourcing (especially staff) across the network; and a lack of scientific protocols to clearly articulate the biodiversity features and values of wetlands with a new approach. This would define 'favorable ecological conditions' to be achieved and prescribe measures necessary to achieve this status and establish a monitoring system to track wetlands status with regard to progress to achieving the desired 'favorable ecological condition'. To achieve this new paradigm requires a strategy to secure and institutionalize sustainable financial resourcing of DoE to fulfil its mandate with respect to Tanguar Haor.

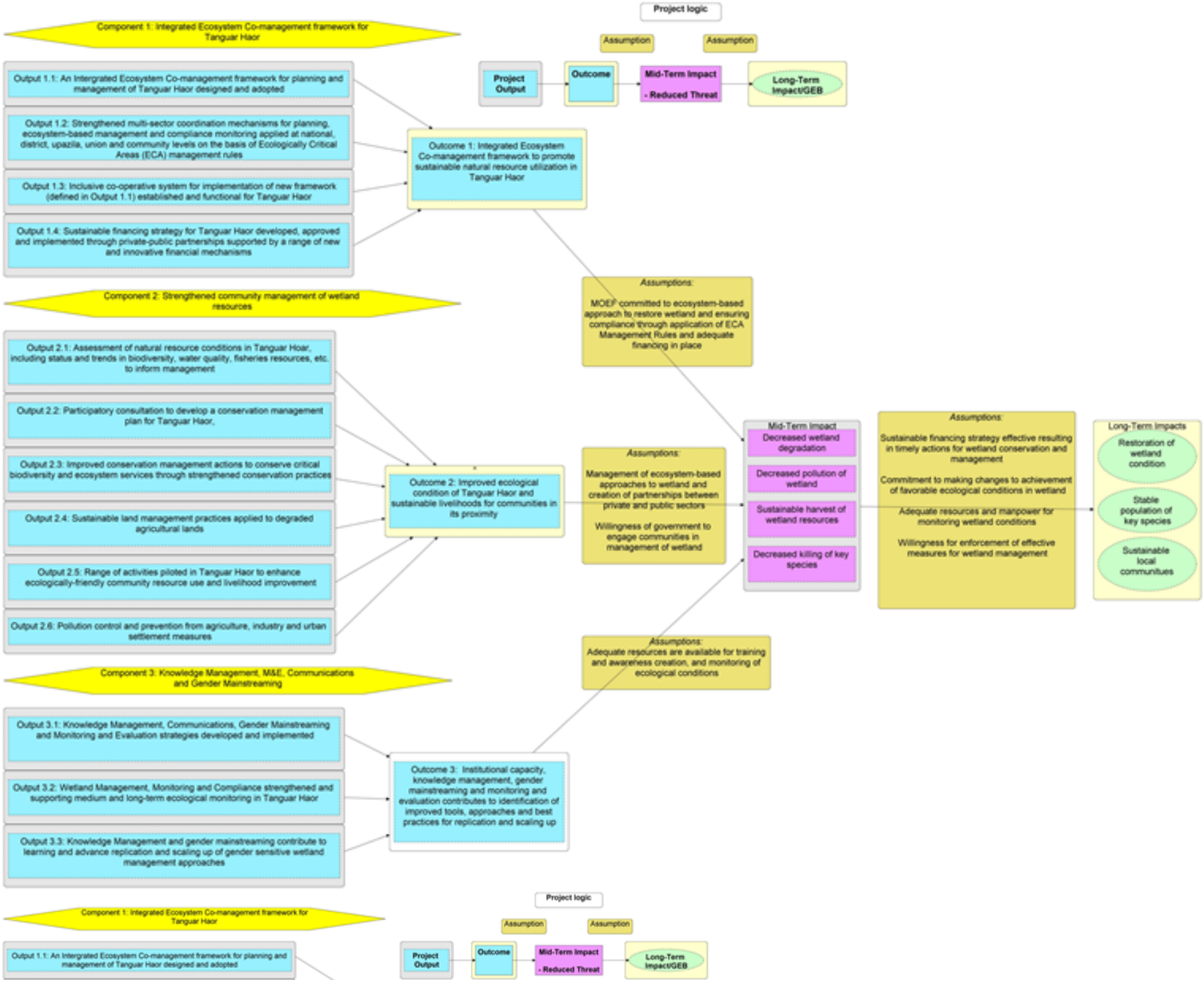
3) The proposed alternative scenario with a brief description of expected outcomes and components of the project

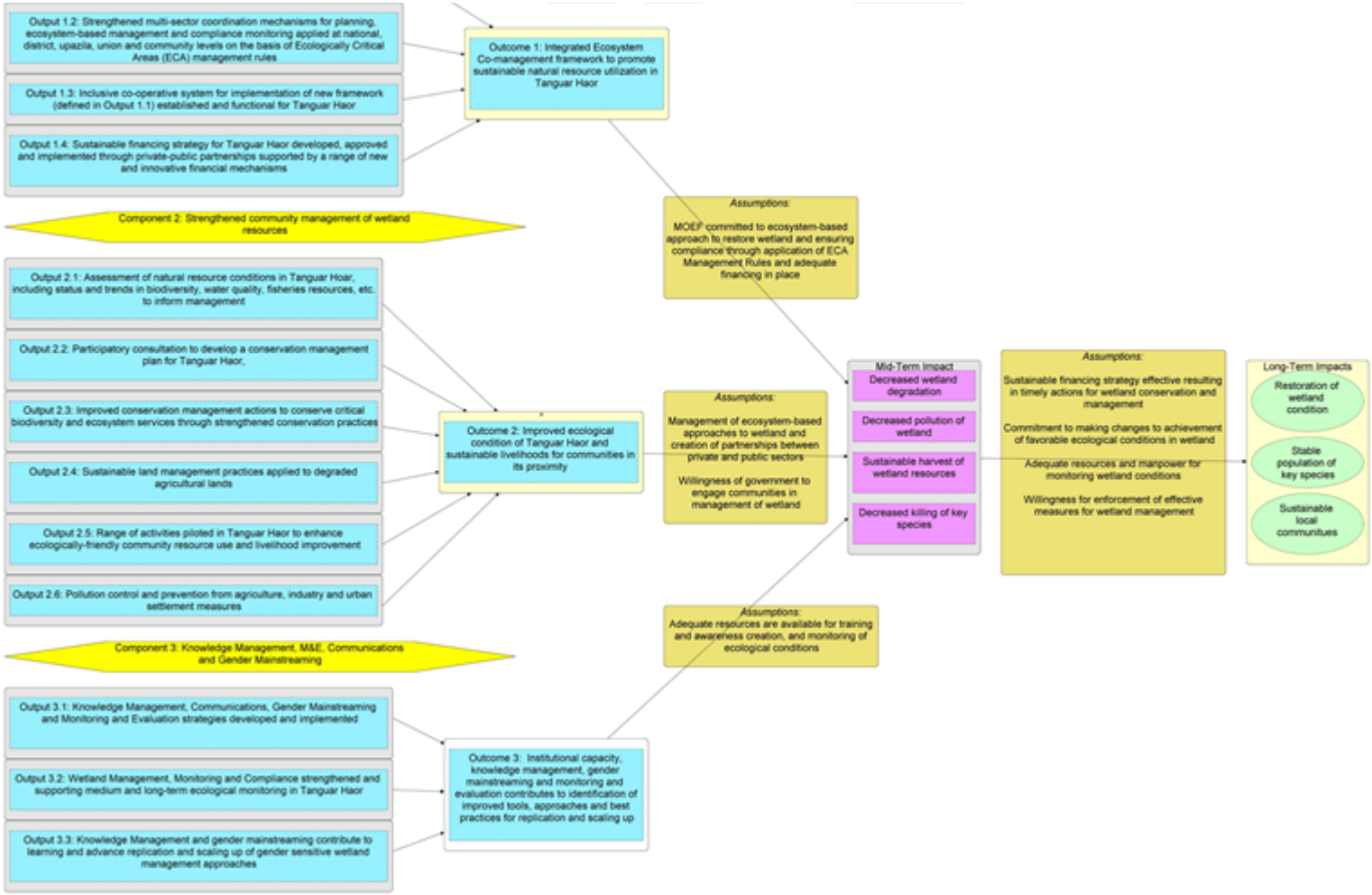
The above baseline established for Tanguar Haor and other wetlands is impressive with respect to the governance structure, rooted in ecosystem-based management at the community level and managed by a Union Coordination Committee at the lowest level of government that is now approved under the 2016 ECA Management Rules. With the ECA Management Rules in place, there is a timely opportunity to: develop and institutionalize a sustainable financing strategy that will address the current acute shortage of staff resources and technical capacity across the wetland; establish a sound scientific framework for managing and monitoring the condition of wetland resources; and reach out to the private sector to promote social and environmental responsibility as good practice to conserve ecosystems and species. The GEF increment will be fundamental to financing the interventions necessary to effect the above changes to the current baseline and promote a long-term approach to sustain favorable ecological conditions in Tanguar Haor.

The long-term solution that the project seeks to address is to further strengthen an integrated ecosystem co-management approach for the Tanguar Haor, through appropriate institutional and financial resource arrangements. The intent is to empower local resource users to manage the wetland resources through co-management arrangements, where local communities (in particular, fisher folk and wetland resource collectors) take responsibility for managing their respective parts of the wetland. This would entail innovative community management decision-making structures for management of the wetland, including in particular collective agreements for setting up seasonal sanctuaries or no-take zones to protect fish breeding and spawning, defining sustainable harvest limits and species to be harvested, regulation of fishing gear and harvest times, and other measures that the community deem necessary to maintain the favorable ecological conditions in the Tanguar Haor. Importantly, the ecological conditions determined as being necessary to maintain (or first restore and then maintain) the salient biodiversity features of the wetland will be defined in the framework and provide a basis for monitoring compliance towards achieving such conditions. It is further meant to strengthen collaborative community-based ecosytem management using ecological criteria as a basis for monitoring the status of wetland and its resource condition and, ensuring compliance towards favourable condition is progressively achieved. This approach should enable DoE to overcome previous difficulties associated with the multiple ownership of land that tends to prevail in the Haor.

Thus, the proposed project will contribute directly to the delivery of Aichi Biodiversity Targets 11, 12, 14, 15 and 18. The project's objective is: to promote sustainable use of wetland resources by local communities to conserve globally significant biodiversity, improve ecosystem services and secure local livelihoods in Tanguar Haor

Figure 2: Theory of Change


Project logic
Assumption
Assumption
Project Output
Outcome
Mid-Term Impact
- Reduced Threat
Long-Term Impact/GEB
Component 1: Integrated Ecosystem Co-management framework for Tanguar Haor
Output 1.1: An Intergrated Ecosystem Co-management framework for planning and management of Tanguar Haor designed and adopted
Output 1.2: Strengthened multi-sector coordination mechanisms for planning, ecosystem-based management and compliance monitoring applied at national, district, upazila, union and community levels on the basis of Ecologically Critical Areas (ECA) management rules
Output 1.3: Inclusive co-operative system for implementation of new framework (defined in Output 1.1) established and functional for Tanguar Haor
Output 1.4: Sustainable financing strategy for Tanguar Haor developed, approved and implemented through private-public partnerships supported by a range of new and innovative financial mechanisms
Outcome 1: Integrated Ecosystem Co-management framework to promote sustainable natural resource utilization in Tanguar Haor
Assumptions:
MOEF committed to ecosystem-based approach to restore wetland and ensuring compliance through application of ECA Management Rules and adequate financing in place
Component 2: Strengthened community management of wetland resources
Output 2.1: Assessment of natural resource conditions in Tanguar Hoar, including status and trends in biodiversity, water quality, fisheries resources, etc. to inform management
Output 2.2: Participatory consultation to develop a conservation management plan for Tanguar Haor,
Output 2.3: Improved conservation management actions to conserve critical biodiversity and ecosystem services through strengthened conservation practices
Output 2.4: Sustainable land management practices applied to degraded agricultural lands
Output 2.5: Range of activities piloted in Tanguar Haor to enhance ecologically-friendly community resource use and livelihood improvement
Output 2.6: Pollution control and prevention from agriculture, industry and urban settlement measures
Outcome 2: Improved ecological condition of Tanguar Haor and sustainable livelihoods for communities in its proximity
Assumptions:
Management of ecosystem-based approaches to wetland and creation of partnerships between private and public sectors
Willingness of government to engage communities in management of wetland
Mid-Term Impact
Decreased wetland degradation
Decreased pollution of wetland
Sustainable harvest of wetland resources
Decreased killing of key species
Assumptions:
Sustainable financing strategy effective resulting in timely actions for wetland conservation and management
Commitment to making changes to achievement of favorable ecological conditions in wetland
Adequate resources and manpower for monitoring wetland conditions
Willingness for enforcement of effective measures for wetland management
Long-Term Impacts
Restoration of wetland condition
Stable population of key species
Sustainable local communitues
Component 3: Knowledge Management, M&E, Communications and Gender Mainstreaming
Output 3.1: Knowledge Management, Communications, Gender Mainstreaming and Monitoring and Evaluation strategies developed and implemented
Output 3.2: Wetland Management, Monitoring and Compliance strengthened and supporting medium and long-term ecological monitoring in Tanguar Haor
Output 3.3: Knowledge Management and gender mainstreaming contribute to learning and advance replication and scaling up of gender sensitive wetland management approaches
Outcome 3: Institutional capacity, knowledge management, gender mainstreaming and monitoring and evaluation contributes to identification of improved tools, approaches and best practices for replication and scaling up
Assumptions:
Adequate resources are available for training and awareness creation, and monitoring of ecological conditions
Project logic
Assumption
Assumption
Project Output
Outcome
Mid-Term Impact
- Reduced Threat
Long-Term Impact/GEB
Component 1: Integrated Ecosystem Co-management framework for Tanguar Haor
Output 1.1: An Intergrated Ecosystem Co-management framework for planning and management of Tanguar Haor designed and adopted



The project objective will be realized through three complementary components that will focus on:

Component 1: Integrated ecosystem co-management framework for Tanguar Haor

This component will strengthen the enabling technical and institutional capacity for enhancing the development of an inclusive and integrated ecosystem co-management framework that represents a multi-sector and multi-stakeholder integrated management approach to achieve integrated ecosystem management[23]. This approach intends to work across sectors and interests to manage species and habitats, economic activities, conflicting uses, and the sustainability of resources within the Tanguar Haor (that would be of replication value in other wetlands across the country) and allows for consideration of resource tradeoffs that help protect and sustain diverse and productive ecosystems and the services they provide. An integrated ecosystem co-management

framework for Tanguar Haor will be developed and established along with a system to ensure monitoring and compliance through a wetland-specific information system. Community-based approaches will be designed, using incentive and disincentive measures as necessary to ensure that wetland resoures are not overexploited.

The ecological conditions needed to restore and maintain the salient biodiversity features of the Tanguar Haor will be specified in the framework and provide a basis for monitoring compliance. The project will support this shift towards community-based ecosystem management, using ecological criteria as a basis for monitoring the status of wetland and progressively ensuring compliance. This approach should enable DoE to overcome previous difficulties associated with the multiple ownership of land in the Haor and monitor compliance by the landholders in meeting the agreed prescribed conditions for safeguarding the Haor. This component lays the foundation for piloting public–community–private partnerships within the Tanguar Haor (Component 2) and for applying a strategy for scaling up in other wetlands in the country (Component 3).

Output 1.1. An integrated ecosystem co-management framework for planning and management of the Tanguar Haor designed and adopted with clear rules to guide the management of the wetland and a set of indicators for monitoring the effectiveness of the management measures (e.g. water quality, species diversity and population size and other environmental parameters). This will also include protocols for tracking wetland health, criteria for assessing the ecological conditions in the wetland, defining sustainable harvest rates for fish and other wetland resources, defining standards for discharge into the wetland and enforcement rules, and other ecological measures for restoration and management of the wetland. The development of the ecosystem-based framework and monitoring protocols will be defined using the provisions of the 2016 ECA Management Rules. The framework will also elaborate on potential partnership arrangements with different types of stakeholders (e.g. public and private sector, local communities and NGOs) to monitor compliance with the prescribed management interventions necessary to achieve favorable ecological condition. The development and implementation of the collaborative framework will require the strengthening and institutionalization of a multi-sector coordination mechanism for the Tanguar Haor at various levels (district, upazila, union council and community levels) to address critical resource use and conflict management issues, strengthen ownership at the district and next levels of local governance and develop opportunities for co-management.

Output 1.2 Strengthened multi-sector coordination mechanisms for planning, ecosystem-based management and compliance monitoring applied at national, district, upazila, union and community levels on the basis of Ecologically Critical Areas (ECA). This will enable the development of modalities for working with various sectors and institutions that have influence on the wetland, working modalities for ECA Committees at the different administrative levels and their individual roles and responsibilities, arrangements for community organization and collaboration, measures for engagement of the private sector and monitoring, accounting and accountability rules.

Output 1.3. Inclusive co-operative system for implementation of new framework (defined in Output 1.1) established and functional for Tanguar Haor to test restoration and maintenance of the Tanguar Haor to the desired ecological condition resourced through government financing mechanisms, private sector partnerships, and use of penalties for non-compliance. The intent is to integrate biodiversity and ecosystem service values defined in the framework into

district, upazila, union and sector actions and to work with the private sector through a variety of measures including increased awareness, development of ecological standards and management plans to improve management and protection of the wetland, its immediate catchment and the riparian areas, and the reduction and management of pollution.

Output 1.4. Sustainable financing strategy for Tanguar Haor developed, approved and implemented through private-public partnerships supported by a range of new and innovative financial mechanisms. The intent is that through a assessment of current and future financial needs to define a suite of financial incentives and disincentives for third parties (private enterprises, land owners, farmers, fishers and others making use of ECA resources) and potential financing mechanisms for the sustenance of ecological benefits in the Tanguar Haor.

Component 2: Strengthened community management of wetland resources

This Component will support the implementation of a community-based decision-making process to effectively plan, manage, finance and monitor compliance in Tanguar Haor. While around 9,727 hectares of Tanguar Haor (including its surrounding lands) have been declared as ECAs under the Bangladesh Environmental Conservation Act of 1995, these will likely continue to be managed with little recognition of their value as repositories of biodiversity and the contribution that they make to local livelihoods as well as the ecosystem services that they provide. Under this Component, a number of ecosystem-based interventions will be employed to improve conservation outcomes, improve water quality and enhance livelihood diversification and/or provide alternative sustainable practices for local communities that are dependent on the wetland resources.

Under Output 2.1. Developing and populating a wetland natural resource platform for Tanguar Hoar that includes information on status and trends in biodiversity, water quality, fisheries resources, and land degradation to inform its management. This will entail undertaking an assessment to determining the condition of the natural resources within the Tanguar Haor and its surroundings, including the status of biodiversity, water quality, fisheries productivity and fish species distribution and diversity, and other wetland resource condition, status of wetland evergreen swamp forests, extent of land and agricultural areas under degradation, erosion and soil fertility and indicators to assess the extent to which these resources are depleted or degraded and to elaborate on specific threats leading to this situation. The intent is to obtain adequate information on key parameters to inform management decision making.

Based on above results, Output 2.2 will focus on establishing a participatory consultation process to develop a conservation management plan for Tanguar Haor, that defines targets and locations of forest and habitat restoration efforts, weed eradication, restoration of degraded agricultural and other productive lands, sustainable resource use and livelihood improvement (fisheries, agriculture, tourism, alternative income generation, micro-enterprises, alternative clean sources of energy for domestic use, etc.), monitoring plans and co-management arrangement. Based on the assessment undertaken in Output 2.1 and the subsequent participatory consultation process, interventions for management of the wetland would be defined in particular to improve biodiversity outcomes, the productivity of wetland resources, improving crop, soil and land productivity and contribute to Bangladesh's biodiversity and LDN targets by embedding the LDN tools into the planning framework. Individual villages and/or groups of resource uses will be empowered through technical support, capacity development and institutional agreements to manage the wetland resources through co-management arrangements, where local communities (in particular fisher folk and wetland resource collectors) take responsibility for managing their respective parts of the wetland. This would entail innovative community management decision-making structures for management of the wetland, including in particular collective agreements for setting up seasonal sanctuaries or

no-take zones to protect fish breeding and spawning, defining sustainable harvest limits and species to be harvested, regulation of fishing gear and harvest times, and other measures that the community deem necessary to maintain the favorable ecological conditions in the Tanguar Haor. The intent is to promote an alternative conservation-oriented natural resource-based economy within and around the wetland that is based on a truly locally co-managed wetland approach and testing sustainable financing mechanisms, with emphasis on private sector partnerships with local communities.

This would be supported a small grant mechanism for improving fisheries operations (harvest rates, fish catches, net sizes, capture methods and pollution control measures, etc.); sustainable agricultural activities (applicable farming practices, floating vegetable gardens, pest and pesticide management, pollution effluent discharge controls, choice of crops, marketing etc.); ecotourism practices; agroforestry and home garden practices; livestock and poultry rearing, vermiculture, natural resource-based small-scale enterprises, nursery raising, aquaponics/hydroponics, fish processing and preservation, composting plants, etc. Non-Government Organizations (NGOs), Civil Society Organizations (CSOs), private sector and citizen forums will be engaged to build capacity among communities in co-management to conserve biodiversity, participatory monitoring and sustainable resource use practices. It would also assess the impact of Covid19 on vulnerable communities and design appropriate interventions to facilitate their economic recovery and enhance their longer-term resilience to the disease.

The provision of alternative sources of energy is particularly relevant to the conservation of the ecology of the Tanguar Haor as it is directly linked to the overuse of wetland resources (e.g. fuelwood from freshwater swamp forests, reeds, grasses and drywood). The project will assess the feasibility of alternatives in terms of energy for cooking (LPG) and lighting (e.g. solar mini/nano grid, solar home systems, etc). Options of funding of alternative energy sources will be sought through existing government or private sector programs (INDOL) recognizing that such sources of alternative energy are critical to improve the Tanguar Haor ecosystem.

Output 2.3. Improved conservation management actions to conserve critical biodiversity and ecosystem services through strengthened conservation practices, eco-zoning, restoration of canals and beels to enhance water flows and restoration of degraded freshwater swamp forests (400 hectares), improved water management and monitoring of ecological conditions of the Tanguar Haor. This output will focus on specific community-based conservation actions that are complementary to the sustainable economic activities envisaged under Output 2.2. In this Output, efforts will focus on active community engagement in supporting reciprocal conservation commitments to conserve critical species, habitats and ecosystems that are necessary to maintain the ecological health of the wetland. This would include specific measures, to be agreed with communities for eco-zoning, establishing "no-take" areas to conserve important spawning and breeding areas for key fish species, restoration of canals and beels to enhance water flows and restoration of degraded habitats through 'social fencing" and direct rehabilitation, weed eradication, restoration of freshwater evergreen swamp forest, waste management and recycling, irrigation and water management for agriculture to prevent overuse and siltation, etc. The other related biodiversity benefits from this effort would be the preservation of the biological value of the entire Ramsar wetland area of 9,727 ha and its constituent parts (that includes 735 ha of existing evergreen swamp forests, 475 ha of reed vegetation, 3,943 ha of aquatic vegetation habitat and riparian areas and 260 ha of seed banks), all of which are the direct BD benefits generated through the project and contribute to maintenance of the biological and ecosystem value of the wetland.

Output 2.4: Sustainable land management practices applied to degraded agricultural lands (wetland paddy, home gardens, etc.) through various technological packages and incentives for nutrient management, organic inputs, limited tillage, agricultural and tree crop diversification and agro-forestry. Under this Output, sustainable land management practices will be applied to 500 hectares of degraded agricultural lands (wetland paddy, home gardens, etc.) through various technological packages and incentives for nutrient management, organic inputs, limited tillage, soil enrichment, agricultural and tree crop diversification and agro-forestry, linkage to markets, etc. These efforts will be primarily aimed at increasing productivity of the smallholder farmers and small-scale agriculture practices, saving costs in chemical fertilizers, improving productivity and thus increasing profit margins. These interventions are expected to directly benefit biodiversity, while improved profits are likely to increase farmers' and motivation to contribute to biodiversity conservation. However, the cumulative LDN benefits extend beyond the direct restoration of 500 ha of degraded agricultural land (and the protection benefits from the restoration of 400 ha of evergreen swamp forests). The integrated co-management approach will also facilitate stabilization of stream/river banks (349 ha), reed banks (475 ha) and sustainable use of the drawdown pasture/grazing areas (587 ha) of the wetland that are all necessary to maintain the biological, ecological and economic value of the wetland. This makes a net additional benefit of 1,411 ha in addition to the 500 ha degraded agricultural land restored and 400 ha of degraded evergreen swamp forest restored, making a net benefit of 1,911 ha (excluding the BD benefits of 400 ha. Additionally, improvements in water quality and soil fertility will have direct benefits to community health and livelihoods.

Output 2.5. Range of activities piloted in Tanguar Haor to enhance ecologically-friendly community resource use and livelihood improvement (including most vulnerable populations affected by Covid-19 outbreak) through project-funded small grant investments, private-community partnerships for micro, small and medium enterprise and ecotourism, strengthening community organizations and skills and capacity building. In particular, this Output will focus on support for community-private partnerships for development of micro and small environmentally-friendly enterprises based on locally available resources through assessment of business opportunities, strengthening of community organizations, skills improvement and training, improving market access and linkages, etc.

A number of small to medium sized grants will be available to support this activity. In relation to the COVID-19 situation, given the relative remoteness of the project site and its rural nature, the number of Covid cases have been relatively lower than other parts of the country. Neverthless, as part of the effort to address impacts of Covid-19 and other future risks, an analysis will be undertaken to understand the extent and risk posed by the disease as well as emerging infectious diseases in the future, to map most vulnerable groups, to assess the social and economic impacts on these vulnerable populations and to identify specific investments and means to engage with, respond to, build resilience and ensure income recovery for these populations as well as improving awareness of risks of zoonotic diseases. Additionally, options for promoting national tourism and other income generation activities would be investigated with financial options that might be available through a number of government and co-financing for biodiversity conservation and local livelihood improvement available for supporting the poor and economically disadvantaged, who are likely to be most affected by zoonotic disease outbreaks. Campaigns on public awareness and education on behavior change can be instituted, along with better dissemination of risks posed by the Covid-19 and information on ecological and local economic consequences of the disease. Efforts would be made to directly target the most vulnerable populations, and in particular ensuring that at least 25% of beneficiaries for economic activities would represent populations that are most affected by the disease. Additional measures will be out in place in particular, for project staff and other essential personnel, could include more active use of remote communication, and where interaction with local community is needed extra precautionary measures will be taken following health advice and guidance to prevent transmission of the disease.

Output 2.6. Since the improved and integrated management of the wetland requires that all detremental activities are addressed, Output 2.6 will work towards pollution control and prevention from agriculture, industry and urban settlement to specifically focus on management of pollution from agriculture, small industry and settlements through provision of technical support, training, extension and adoption of best practices. In terms of management of industrial pollution, which can be a significant contributor to wetland degradation and to the loss of wetland productivity, the project will provide access to information and best practices that demonstrates the cost benefits of pollution control, but any investments in industrial pollution control will be funded by the private sector.

Component 3: Knowledge Management, M&E, Communications and Gender Mainstreaming

Component 3 will focus on improving knowledge and information collection and management systems to enhance awareness and sharing of best practices on conservation and community-based resource use through communication, documentation and dissemination; ensure gender considerations are mainstreamed into resource planning and utilization practices and promotion of gender equitable access; and monitoring and evaluating project investments to ensure that these are meeting project outcomes and contributing to Bangladesh's conservation and ongoing development agendas.

Output 3.1. Knowledge Management, Communications, Gender Mainstreaming and Monitoring and Evaluation strategies developed and implemented. This will entail the development and implementation of a project-specific communication strategy, gender mainstreaming action plan, and a monitoring plan to assess indicator status in relation to planned targets for the project's Results Framework. A Knowledge, Attitudes and Practices (KAP) survey will be undertaken early in the project period to provide a baseline as to the extent of awareness among stakeholders on environmental aspects related to the Tanguar Haor and a repeat survey at the end of the project to assess changes in awareness and learning. Knowledge and information exchange will be supported through a wetland knowledge management platform that could provide the basis for learning and replication in other wetlands in the country.

Output 3.2. Wetland Management, Monitoring and Compliance strengthened and supporting medium and long-term ecological monitoring in Tanguar Haor. This Output will focus on providing equipment, technical support and limited financing to establish monitoring protocols and initiate monitoring of the Tanguar Haor. This Output will build on, and complement the work done under Output 2.1.

Output 3.3. Knowledge Management and gender mainstreaming contribute to learning and advance replication and scaling up of gender sensitive wetland management approaches will support knowledge management and gender mainstreaming through documentation and dissemination of best practices and contribute to learning and to advance replication and scaling up of gender sensitive wetland management approaches elsewhere in the country. This will be promoted through: (i) development of policy guidance based on project lessons; (ii) technical reports, publication and knowledge management products; (iii) national and local workshops for information dissemination; (iv) institutionalizing and upscaling of best practices through capacity building and technical support; (vi) replication and scaling-up strategy. The project will make special effort during the life of the project (in addition to the preparation of a replication and scaling up strategy) to promote scaling up of learning from the Tanguar Haor to other ECAs in the country (covering around 380,000 hectares in 13

ECAs). The project will focus special efforts at expanding training opportunities to staff of other ECAs in the country, as well as support study visits and provide technical support to these ECAs as part of the effort to encourage uptake in particular, of the innovative community co-management and integrated and holistic approach to wetland management that will be piloted in Tanguar Hoar. In particular, as part of the effort at scaling up (as discussed in Section 7 under "Scaling up"), the project will target promotion of application of policies, techniques, tools and community approaches, etc. developed at Tanguar Haor to improve management effectiveness in 2-3 other freshwater ECAs in the country covering around 3,000 ha through technical support, training, study visits and extension support. The targeted ECAs will be selected and extent verified at PPG stage. The project team will work with the MOE and local governments to identify sources of government and private sector funding to promote replication in these sites.

The project will help to develop public outreach, information campaigns, and awareness-raising activities on zoonotic diseases, and highlight the potential future risks of new diseases emerging from damaged ecosystems and increased proximity to wildlife that is transported, kept or bred under conditions that are conducive to zoonotic transmission. It will enlist public support for maintaining healthy natural ecosystems and protecting natural assets by clearly communicating how biodiversity decline leads to public health and safety risks and presents immense risks to economic prosperity, as demonstrated by the COVID-19 pandemic.

4) Alignment with GEF focal area

The project aligns to GEF-7 biodiversity programming directions, specifically BD-1-1 to 'Mainstream biodiversity across sectors as well as landscapes and seascapes' through biodiversity mainstreaming in priority sectors (fisheries, tourism, industry and agriculture) and into local level economic planning. As part of this effort, the project will focus on improving and changing production practices to be more biodiversity-friendly through capacity building, training and incentives to change current unsustainable resource use practices that degrade biodiversity. Without the GEF project, it is likely that there will be continued loss of biodiversity and ecosystem services in the wetland. The project will also establish public-private and community partnerships, thus, unlocking community institutional sources for supporting biodiversity conservation. The outcomes of the project would be to: (i) improve management of wetland resources through improved incentive mechanisms that encourage community support for their conservation; and (ii) reduce direct loss of critical biodiversity through more sustainable nature-friendly resource use and livelihood practices. In terms of BD 2-7, the project will address the drivers of habitat and species loss through resource use conflict resolution, awareness generation and introduction of improved financial sustainability mechanisms and ecosystem-based management approaches to improve the ecological condition of the Ramsar Site and possible expansion of protected area coverage such as sanctuary, community conserved area.

In terms of the GEF-7 Land Degradation programming directions, the project aligns to LD-1-3 to "Maintain or improve flows of ecosystem services', including sustaining livelihoods of wetland resource-dependent people. The project will focus on enhancing best practices in fisheries, agriculture and other economic activities and livelihoods for surrounding communities to reduce harmful impacts on the aquatic system. The intent of the project is to promote nature-friendly practices to reduce chemical usage, promote soil fertility improvements in agricultural lands, reduce erosion in the immediate catchment areas and invasive alien species, promote the efficient use of water in irrigated agriculture lands, and promote mixed cropping models to conserve soil and improve habitat for species in cultivable areas within and outside the wetland water body. The overall goal is to promote the achievement of land degradation neutrality and no net

loss of wetland natural capital through halting the degradation of freshwater evergreen swamp forest, restoring reed beds, reducing soil degradation, improving land productivity and soil organic content through soil fertility improvements, and other soil and water conservation measures. The project aims to address the current practice of granting leases to the elite rather than to the communities that live around the wetland and depend on its resources for their survival.

On the basis of UNCCD's Land Degradation Neutrality (LDN) framework, the Government of Bangladesh has defined the following actions that are relevant to the project, namely to: (i) improve soil fertility and Carbon stock in 2,000 km^2 of cropland area by 2030; (ii) reduce land use/cover conversion in 600 km^2 of forest area by 2030; halt the conversion of forests and wetlands to other land use cover types; (iii) reduce waterlogging in 600 km^2 area by 2030; and (iv) to reduce soil erosion in hilly areas in 600km^2 area by 2030; (v) to protect non-saline land areas from salinity intrusion in 1200 km^2 in coastal zone area by 2030; (vi) to reduce river bank erosion @100ha/year covering 100 km^2 areas by 2030. This would entail specific efforts that address drivers of the loss of freshwater evergreen swamp forest, improve cropland productivity within and adjacent to the wetland, and improve primary productivity and soil organic carbon.

The cumulative LDN benefits of the project extend beyond the direct restoration of 500 ha of degraded agricultural land (and the protection benefits from the restoration of 400 ha of evergreen swamp forests). The integrated co-management approach promoted through the project will facilitate stabilization of stream/river banks (349 ha), reed banks (475 ha) and sustainable use of the drawdown pasture/grazing areas (587 ha) of the wetland that is all necessary to maintain the biological, ecological and economic value of the wetland. This makes a net additional benefits of 1,411 ha in addition to the 500 ha degraded agricultural land restored and 400 ha of degraded evergreen swamp forest restored, making a net benefit of 1,911 ha (excluding the BD benefits of 400 ha of evergreen swamp forest restoration) of LDN benefits. Additionally, during the PPG stage, the project will seek to identify options for enhancing the direct LDN targets through other co-financing sources. Lastly, according to studies conducted by IUCN, the World Resources Institute as well as case studies curated by the CBD, the global average cost of land restoration ranges from $300 to $3,800 per ha based on the local labor and material cost, geographic location and types of ecosystems. The proposed project will invest a total of approximately USD 1.2 million and is expected to provide a cumulate LDN benefit of 1,911 ha as described above. Therefore, the cost of LDN benefit for the project is USD 628 per ha. This is well within the per ha cost range (actually it is on the lower end, which is reasonable.

5) **Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, and co-financing**

The incremental GEF financing will further enhance the baseline investments described in Section 2 and contribute to the conservation of biodiversity and habitats within the Tanguar Haor wetland ecosystem through the promotion of improved conservation practices, restoration of degraded freshwater evergreen swamp forests and reed beds, improve conservation outcomes in small-scale agriculture and fisheries, and enhance nature-friendly wetland resource use practices and associated livelihood activities, agroforestry and improved multi-cropping vegetation in the small home gardens. Financing provided by the GEF will also help to integrate conservation outcomes within resource use in the wetland and strengthen the governance framework for achieving favorable ecological conditions. The GEF's financing will support technical assistance, training and best practices to enable specific actions towards effective freshwater evergreen swamp forest conservation and ecological and species restoration, effective conservation and monitoring of threatened species and

wetland resource harvest, and the implementation of biodiversity-friendly wetland resource use and livelihood practices as part of a strategy for the conversion and substitution of existing resource use and polluting activities that threaten the biodiversity and ecology of the Tanguar Haor. The GEF increment will build on the existing baseline activities.

The incremental reasoning for this project is outlined in the table below:

Table 2: Incremental Reasoning and Impacts

Baseline practices	Alternative to be put in place	Project impact
· The unsustainable use of wetland resources will likely continue without continuing GEF project investments; nor will there be any robust, transparent mechanism for monitoring status quo to effectively reach desired ecologically favorable conditions · ECA responsibility is vested in DoE but land tenure often lies with third parties (e.g. Forest Department). · ECA Management Rules finally approved in 2016, underpinning the institutionalization of the governance system that has yet to be mainstreamed across activities in Tanguar Haor · Limited financial resources and capacity continue to hinder sustaining of activities within the Haor. · Limited capacity to coordinate among communities and multiple sectors of government as well as to reach out to local communities (especially farmers and fisherfolk) and other users of wetland resources	· Financially viable ecosystem-based management framework designed, mainstreamed across Tanguar Haor ECA and institutionalized (based on ECA rules and experiences available in the country) · The ecosystem-based management framework will require empowering local resource users to manage the wetland resources through co-management arrangements, where local communities (in particular fisher folk and wetland resource collectors) take responsibility for managing their respective parts of the wetland. · Considering freshwater evergreen swamp forests, reed areas, *beels* and connecting riverine ecosystems as a complex ecosystem. · Promoting an alternative conservation-oriented natural resource-based economy within and around the wetland and testing sustainable financing mechanisms, with emphasis on private sector partnerships with local communities · Private sector engaged to address pollution of water from industrial effluents and agricultural run-off from pesticides and chemical fertilizers. · Institutional and technical capacity of DoE strengthened to put in place measures to address threats to Tanguar Haor and responsibilities	· Ecosystem-based framework developed and applied to Tanguar Haor resulting in up to 9,727 ha of wetlands being managed in compliance with criteria that will result in 'favorable ecological condition' being achieved. Scaling up of management effectiveness to 2-3 other ECAs (covering around 3,000 ha) in the country based on learning from Tanguar Haor. · 400 hectares of freshwater evergreen swamp forest restored (additionally improved co-management regimes will ensure preservation of the biological value of the entire wetland area of 9,727 ha and its constituent parts that includes 735 ha of existing evergreen swamp forests, 475 ha of reed vegetation, 3,943 ha of aquatic vegetation habitat and riparian areas and 260 ha of seed banks, all of which are the direct BD benefits generated through the project and con

· Inadequate institutional support for co-management with local communities · Limited community access to public services and land tenure insecurity) leading to diverse conflict and priorities amongst the key stakeholders. · Continued degradation of the wetland ecosystem in the baseline situation.	of different stakeholders to restore and maintain the ecological integrity of the wetland · Transparent monitoring system established for Tanguar Haor to track progress towards achieving favorable condition in the wetland · Improved capacity and extension promoting best practices in agricultural lands; · Improvement of soil and water quality of the small-holder farmers; · Agro-forestry and sustainable agricultural and home garden models and stewardship contracts will be promoted to secure broad community support for conservation solutions;	tribute to maintenance of the biological and ecosystem value of the wetland). · Stable or increased populations of key species (to be defined at PPG stage) · Local livelihoods benefit substantially from a range of ecosystem goods and services (to be quantified during project preparation stage) at Tanguar Haor. At least 25% of the targeted beneficiaries would be from Covid-19 affected/ vulnerable populations. · C benefits of 578,391 tCO_2/20 years · Information management system established for Tanguar Haor for monitoring 'favorable ecological condition' · Improved water quality in Tanguar Haor (by 20-30%) resulting from engagement with private sector specifically to address pollution of water by industrial effluents, agricultural run-off, oil from diesel boats and household wastes resulting in improved water quality for small farmers and wetland residents · 500 ha of production areas (agriculture lands, home gardens and agroforestry) under improved sustainable man

		agement regimes. Additionally, 349 ha of rivers/streams and associated riverine banks that crisscross the wetland, another 475 ha of reed banks, and extensive drawdown of fallow lands of which 587 ha represents pasture/grazing areas that is exposed and grazed in the dry season will be maintained against degradation through bank and gully erosion, wave action, overgrazing and land and vegetation clearing. DoE enabled to resource Tanguar Haor in terms of adequate staffing with relevant competencies as result of developing and implementing a Sustainable Financing Strategy.

The GEF investment will support implementation of the above three components to introduce an integrated ecosystem management and inclusive community-based management system in the Tanguar Haor to effectively plan, manage, finance and monitor compliance towards the achievement of ecologically favorable conditions in line with international standards[24] and will apply these practices and systems in Tanguar Haor. During the PPG phase, the scope of these components will be further assessed and defined. GEF resources will mainly be used in designing and piloting an integrated ecosystem management and community-based management system along with transformational capacity building of the relevant stakeholders on sustainable management of the Tanguar Haor. The Government has committed to provide substantial co-financing for implementing and scaling up good practices promoted through the GEF increment.

6) Global environmental benefits (GEFTF)

The long-term global environmental benefit of the project will be the improved management of 9,727 ha of inland freshwater and wetland habitats, contributing directly towards GEF's replenishment target of 300 million hectares of improved management of landscapes and seascapes. The project's global environmental benefit of GEF engagement in Tanguar Haor (an ECA and Ramsar site) is the introduction of an integrate ecosystem management and community-based management system that is based on identifying and complying with criteria (indicators) that denote achievement of 'favorable ecological

conditions' within the wetland. Achieving favorable ecological conditions will result in the sustainable management the 9,727 ha of wetland area, restoration of important freshwater evergreen swamp forest and reed beds and reduced degradation of other natural habitats within the wetland. The intent is to ensure the maintenance of the floral and faunal diversity of Tanguar Haor and improved conservation status of migratory bird species, as well as threatened and rare amphibians, fish, reptile and bird species. The protection of the Tanguar Haor ecosystem is of global importance because this wetland meets a number of the Ramsar Criteria for Wetlands of International Importance[25] namely: (i) it supports vulnerable, endangered, or critically endangered species; (ii) supports 20,000 or more water birds, and (iii) supports 1% of the individual population of one species or subspecies of water bird. The Tanguar Hoar supports 98 water[26]bird species and 98 migratory bird species, including 10 IUCN Red Book and 22 CITES listed species. About 30 – 40,000 migratory waterfowl converge in the area every year.

7) Innovation, sustainability and potential for scaling up:

Innovation

Innovation will focus on strengthening the governance and financial viability of the ECA management rules in Tanguar Haor to demonstrate their application towards enhancing the ecological condition of the wetland. Innovation will be promoted through: (i) empowering local resource users to manage the wetland resources through co-management arrangements, where local communities (in particular fisher folk and wetland resource collectors) take responsibility for managing their respective parts of the wetland. This would entail innovative community management decisions in relation to setting up seasonal sanctuaries or no-take zones to protect fish breeding and spawning, define harvest limits and species to be harvested, regulate fishing gear and harvest times, etc.; (ii) viewing remaining freshwater evergreen swamp forests, reed areas, *beels* and connecting riverine ecosystems as an integrated, inter-linked and complex ecosystem that needs to be managed for their various interactions; (iii) promote a community-based approach towards the protection and management of the wetland ecosystems through establishing links with maintenance of wetland conditions ; (iv) bringing actors from the districts, upazilas and unions together to support local communities to achieve and implement mutually agreeable plans for conserving favorable ecological conditions within the wetland; (v) promoting an alternative conservation-oriented natural resource-based economy within and around the wetland and testing sustainable financing mechanisms, with emphasis on private sector partnerships with local communities; and (vi) establishment of a participatory monitoring framework for the wetland that will cover both its management and ecological status (health). The intent of this approach is to promote a community-decision making and management process that protects unsustainable harvesting of fish and wetland resources to enhance the production of recruits and restock fishing grounds; provide a refuge from fishing for depleting and vulnerable species; maintain biodiversity and ecological functions of natural biological communities; and facilitate ecosystem recovery with active community engagement and protection. The promotion of locally co-managed wetland areas will be innovative in that it will enhance the ability of the community to undertake adaptive management of wetland resources under their responsibility by preparing a plan for its management, checking and monitoring the outcomes of its plan implementation and modifying management in light of outcomes or monitoring results. This approach will likely ensure that there is increased equity and self-determination, likelihood of sustainability, appropriateness of conservation and management initiatives, sense of local ownership and likelihood of success. The project will provide technical support, best practices, extension support and facilitate partnerships between community institutions and government and private sector partners.

Financial sustainability will be approached through the following measures: (i) development of a financing strategy, key elements of which will include: securing adequate funds within the 5-Year Plan framework to strengthen DoE's environmental governance and, in particular, its enforcement role as advocated in the Environment, Forestry and Biodiversity Conservation Background Paper for the 7th Five-Year Plan (Section 5.1) and relevant section of the upcoming 8th Five-Year Plan; and establishing a platform with the private sector to address industrial and agricultural pollution of wetlands through market based instruments (e.g. incentives, pollution charges, etc.); (ii) development and promotion of micro and small business partnerships with local communities and

facilitating market linkages for community products; (iii) improving favorable ecological conditions in the wetland through co-management approaches with the intent to improve and sustain community-based lifestyles dependent on fisheries, agriculture and related livelihoods based on community needs and thus promote local ownership; and (iv) helping industry develop more sustainable and less polluting practices.

Institutional sustainability will be achieved through systematic and transformational capacity development of existing public institutions (DoE and others) and institutions at different administrative levels (district, upazila and union entities), networks of civil society organizations, local fishers, farmers and community groups. By engaging these stakeholders in gender responsive conservation and ecosystem management, and investment planning, the project will help to establish alliances for conservation and sustainable use of biological resources that is expected to continue beyond the project period.

Social sustainability will be achieved through development/strengthening of stakeholder participation mechanisms for the Tanguar Haor, including community groups, small-scale industry, fishers and farmers. A Knowledge Management and Communication strategy will be developed during the PPG stage to facilitate awareness and enhance stakeholder participation. Extensive consultation will be undertaken at PPG stage to ensure collective decision making regarding project design and that key decisions on forest conservation and restoration and sustainable resource uses will be undertaken prior to delineation of areas to be set asides for conservation, restoration and protection so as to ensure that there is buy-in from all stakeholders. A detailed grievance redress mechanism will be included in the project document to ensure social sustainability

Environmental sustainability will be achieved through a coordinated ecosystem-based approach involving improved wetland management, sustainable fisheries and agriculture and other wetland resource use practices, water quality management, freshwater evergreen swamp forest restoration and riparian area management, improving incentives for conservation and community participation. It would also reduce threats to the wetland through targeted ecosystem-based partnerships, with the intent to manage and control the pollution of water bodies and improve inter-institutional collaboration.

Scaling Up

The governance, capacity building, monitoring and financial strengthening of the Tanguar Haor system achieved and demonstrated during the lifetime of this proposed project, including the adoption of standards, protocols and tools will benefit other wetlands in the country. All of the knowledge and experience gained, lessons learned, training modules, templates for management planning and monitoring, management plans and associated monitoring data, legal and regulatory provisions will be readily accessible on a web-based information system with GIS capabilities. A framework for scaling up the project will be developed during the PPG phase.

The potential for scaling up is high in view of the enhanced national capacity to be established within DoE, supported by the new multi-sector Technical Advisory Panel. It is also noteworthy that a precedent has been established with the previous GEF-funded ECA project, *Coastal and Wetland Biodiversity Management Project 2003-2011* (CWBMP), which DoE scaled up with its Community-based Adaptation in the ECAs through Biodiversity Conservation and Social Protection Project (CBA-ECA) from 2010 to 2015. The Project's investment component will seek to develop synergies among rural development and private sector actors and programs with an objective of raising additional investments that will fund and expand models of wetland conservation and resource use and alternative livelihood activities within and outside of the targeted wetlands.

The most important aspect related to scaling up is the demonstration of the benefits of locally managed wetland co-management that promotes equity and self-determination, ensures the appropriateness of conservation and management initiatives based on community needs and aspirations, develops a sense of local ownership and enhances the community's ability to effectively manage wetland resources that they are dependent on.

The project will make special efforts during the life of the project to promote scaling up of learning from the Tanguar Haor to other ECAs in the country (covering around 380,000 hectares in 13 ECAs). The GEF project will promote an innovative community ecosystem-based co-management approach to wetland management that is premised on establishing and demonstrating a conservation-oriented natural resource-based economy within and around the

wetland and testing sustainable financing mechanisms, with emphasis on private sector partnerships with local communities. This will be a new approach in Bangladesh that will have potential for replication. To facilitate uptake to other ECAs in the country, the project will open some of the training opportunities to the staff of other ECAs in the country, as well as support study visits and provide technical support to these ECAs as part of the effort to build interest and support for replication. Additionally, the PMU will work with the MOE and local governments to identify sources of government and private sector funding, micro-capital grants and self-help groups to initiate and promote replication in other ECAs. In particular, initial scaling-up efforts will be focused on 2-3 other ECAs (covering around 3,000 ha) in the country through technical support, training, study visits and extension support.

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[1] Fifth national Report to the Convention on Biological Diversity (2015)

[2] Thompson, Paul, M. Conserving and Restoring the Benefits from Bangladesh Wetlands

[3] Ibid

[4] Rahman, A.K.A (2005). Freshwater Fish of Bangladesh, Dhaka University

[5] Birdlife International (2004). Important Bird Area in Asia. Birdlife International, Cambridge, UK

[6] Department of Fisheries (2000). Fish catch Statistics of Bangladesh 1998-1999. Department of Fisheries, Dhaka.

[7] IUCN, Bangladesh (2000). Red Book of Threatened Fish Species of Bangladesh. IUCN-The World Conservation Union

[8] IUCN (2015). Tanguar Haor Management Plan Framework and Guidelines

[9] IUCN (2012). Biodiversity of Tanguar Haor: A Ramsar Site for Bangladesh. Volume 2: Flora

[10]IUCN (2012). Biodiversity of Tanguar Haor: A Ramsar Site for Bangladesh. Volume 2: Flora

[11] Gieson, W. and Rashid, S.M.A. (1997) Management Plan for Tanguar Haor. Ministry of Environment and Forests, Bangladesh

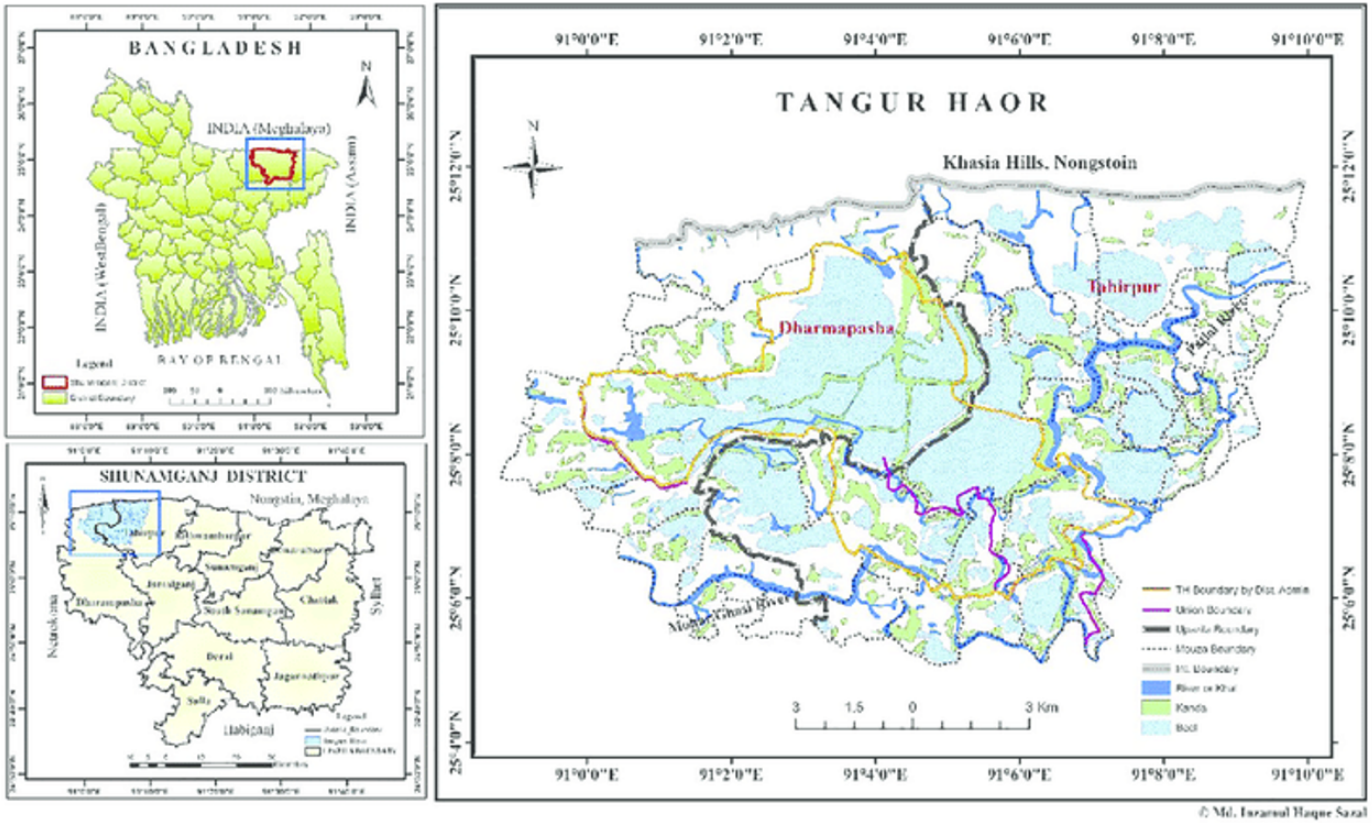
[12]IUCN (2015). Ta1a. *Project Description.* Briefly describe:

1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.

(Located in the northeastern part of Bangladesh, between 25°12’10.572” and 25°5’47.989” north latitude and 90°58’49.426” and 91°10’0.018” east longitude)

*(**Map disclaimer:** The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations or UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries)*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Habiganj
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Khasia Hills, Nongstoin
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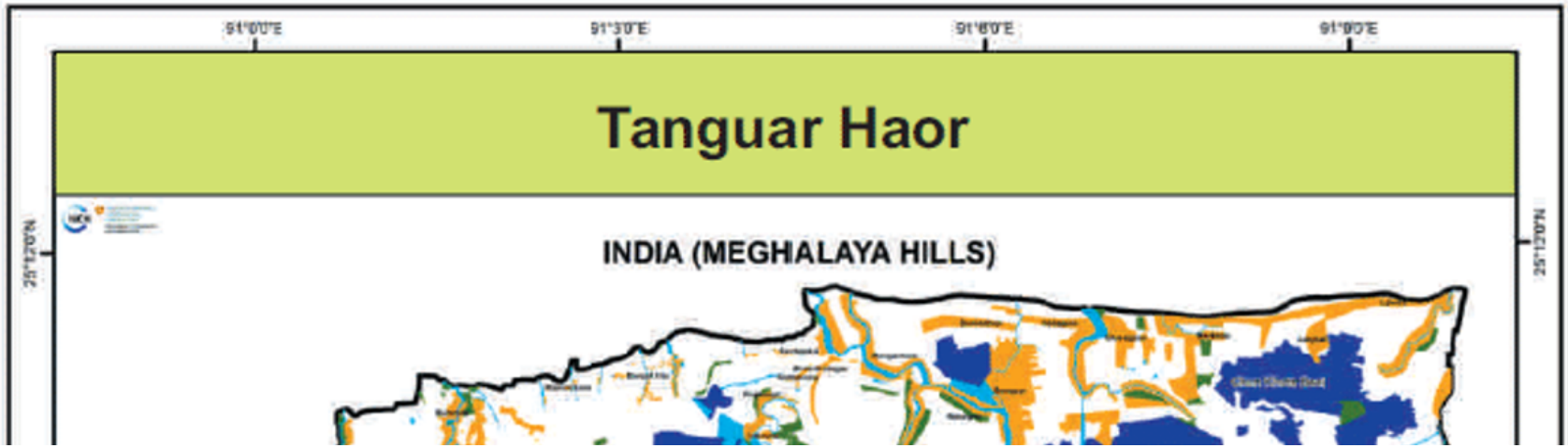
© Md. Inzamul Haque Sazal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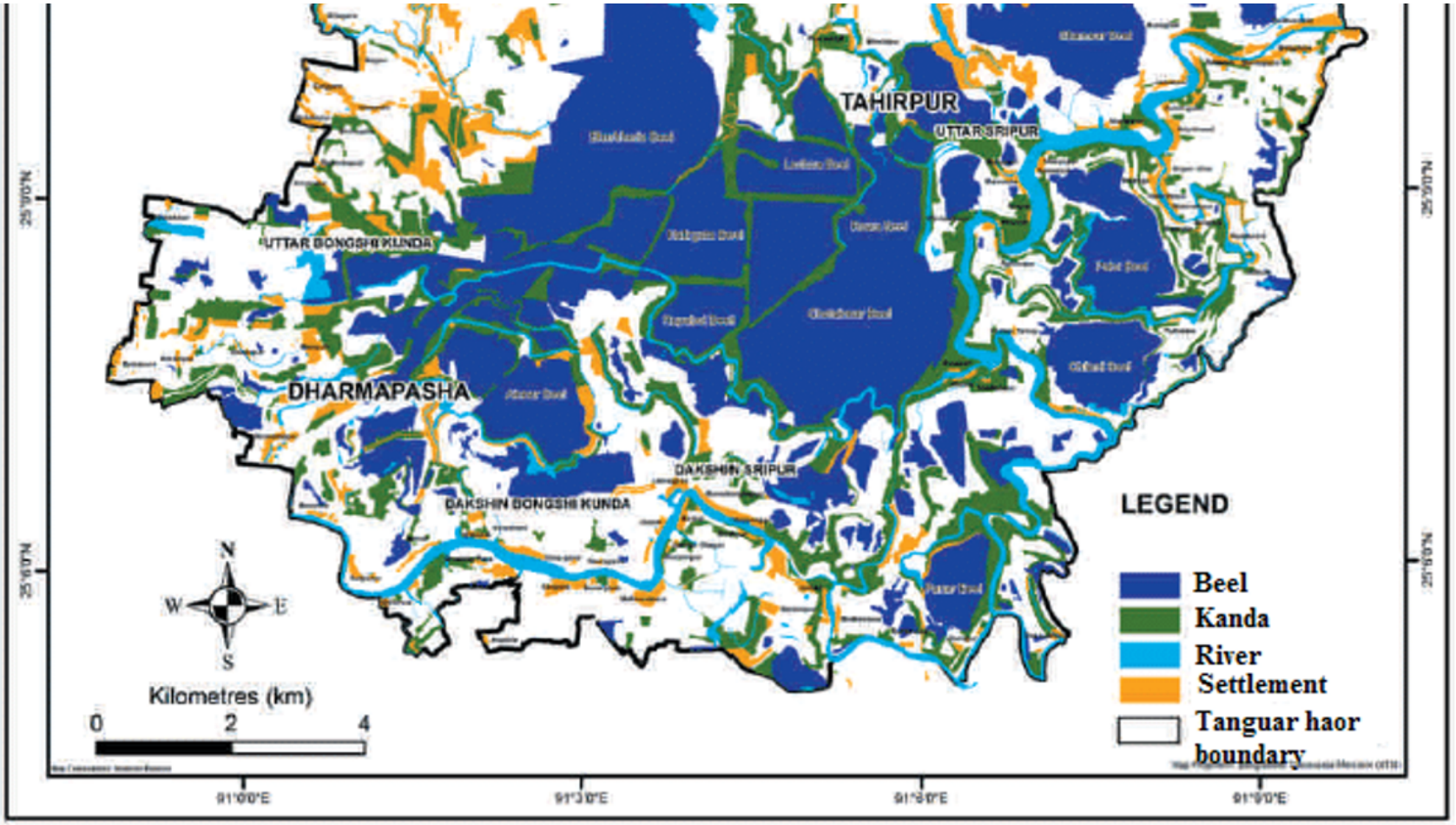
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Settlement
Tanguar haor boundary
25°15'0"N
25°10'0"N
91°0'0"E
91°5'0"E

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities No

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above,please explain why:

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.

During the PIF stage, on account of the countrywide lockdown and travel ban due to COVID19 situation extensive consultations were not possible in the Tanguar Hoar areas. In this regard the PIF preparation process was based on secondary information and previously conducted research on community perceptions and opportunities. Additionally, consultations were held with the Department of Environment, GEF Focal Point and local Provincial agencies. One visit was undertaken to Tanguar Haor, but due to the rainy season, consultation with the local communities was limited. However, the Country Office reviewed a number of research studies[1] that assessed community perception regarding the status and resource availability at Tanguar Haor as well as their perception of options for reversing negative trends. In particular, these studies provide the basis for the PIF. Communities at Tanguar Haor recognize that the wetland, directly or indirectly accounts for 81% of their income, with agriculture and fisheries accounting for 68% and 47% respectively for their collective primary and secondary sources of income. The communities further understand their actions have affected the wetlands, in particular the catching of mother fish, cutting of freshwater swamp trees, dewatering of *beels*, hunting and introduction of alien fish cultures. To reverse these negative trends, communities feel that collective action is required to create community-managed fish sanctuaries, develop fish culture, improve alternative livelihoods, increase awareness, enhance forest restoration and improve opportunities for ecotourism, all of which will be integrated into the design of the project. Now that the lockdown is being gradually eased, the Country Office is planning a visit to Tanguar Haor for validation of the situation to further develop at the PPG stage.

The DoE will work multi-sectorally with other government agencies (Forest Department, Department of Fisheries, Department of Agriculture Extension, etc.) at national, distict and other local levels (upazilas and union parishads) and in close collaboration with local communities, indigenous groups and the private sector at site levels in order to generate a common framework for the governance of the wetland through an integrated, ecosystem-based approach to its management.

A wide range of other stakeholders will be consulted during the preparation of the project document, including: academia from research institutions, such as the Centre for Environmental and Geographical Information Services (CEGIS) and Institute of Water Modelling (IWM), and universities (Dhaka University, Bangladesh Agricultural University, Khulna University, Chittagong University, Bangladesh University of Engineering and Technology); Civil Society Organizations (CSOs), including national and international non-governmment organisations (NGOs/INGOs), such as Bangladesh Centre for Advanced Studies (BCAS), BRAC, Centre for Natural Resource Studies (CNRS), Nature Conservation Management (NACOM), Efforts for Rural Advancement (ERA-local NGO at Sunamgonj District) and the International Union for Conservation of Nature (IUCN), Wildlife Conservation Society (WCS) and World Wide Fund for Nature (WWF), Conservation International, Birdlife International, etc. Some of these stakeholders groups will be involved in project implementation, particularly capacity building, data sharing and knowledge management. Summary details of key stakeholders are given in **Table 3**. A Stakeholder Engagement Plan will be prepared during project development including use of virtual and other decentralized measures as needed given COVID-19 context.

A participatory process for engaging stakeholders in the project sites will be designed and facilitated by the PPG team, using an approach similar to that used very successfully for the earlier CWBMP (2003-2011) support by GEF[2]. This process will help to ensure that the private sector, as well as other sectors more familiar with ECAs, is fully engaged, responsible and understood from the outset of the project.

[1] Rahaman, M.Z., Sajib, K.I and Alam, I (2015). A Study on Climate Change Impact on Livelihoods of the people of Tanguar Haor. Water World Congress XV. Scotland AND Haque, E and Kazal, H. Rich Resources, Poor People. The Paradox of Living in Tanguar Haor.

[2] Refer to Annex 4 of the *Coastal and Wetland Biodiversity Management Project Document* for full details of this process and the results of the stakeholder workshops.

Table 3: List of stakeholders and their potential roles/relevance to the project

Stakeholder	Role and Potential Involvement in Project
National level	
Department of Environment (DoE), Ministry of Environment, Forest and Climate Change (MoEFCC)	DoE's mission is to secure a clean and healthy environment for present and future generations. Tanguar Haor Wetland ECA and Ramsar Site fall within DoE's mandate and it is responsible for determining which activities may prevail or not in such areas. DoE is the Responsible National Executing Agency under the MoEFCC, for implementing this project.
Bangladesh Forest Department (BFD)	BFD is responsible for protection, management and development of the nation's forest estate under its remit, some of which lies within wetland, as well as the protection of wildlife throughout the country. They are responsible for management of Protected Areas (PA). FD will be an Implementing Partner particularly afforestation, reforestation, swamp forest restoration, agroforestry and nursery components of the project.
Department of Agricultural Extension (DAE), Ministry of Agriculture	DAE will be an implementing partner and will support in promotion of sustainable and environment friendly agriculture practices in wetland; and provision of guidance/manuals etc. on best Agri-environment practices, policies etc. if not already in existence.
Department of Fisheries (DoF) and Department of Livestock Service (DLS) under Ministry of Fisheries & Livestock	DoF and DLS will be the implementing partners for promoting sustainable fisheries and livestock-based livelihood support (e.g. aquaculture, duck farming, poultry, livestock, crab fattening, etc.) and manure management; DoF is responsible for fisheries, focusing mostly on enhancing production, largely

	DoF is responsible for fisheries, focusing mostly on enhancing production, largely through aquaculture extension. DoF will support in nature-based livelihood solutions, aquaculture, small-scale fisheries management, re-excavation of canals, etc.
Bangladesh Parjaton Corporation (BPC- National Tourism Board), Ministry of Civil Aviation & Tourism	BPC will support in promotion of ecotourism in wetlands and guide in formulation of best practice guidelines. They will also support guide tour operator for responsible tourism in the Haor areas.
Finance Division, Ministry of Finance	Financial Management Reform Program. Needed here is the agency with whom to engage about sustainable financing of wetland system in the 5-year plan.
Ministry of Law, Justice & Parliamentary Affairs	Need here the relevant agency with whom to work after project has reviewed ECA law, regulations, rules etc. and wishes to recommend changes that will strengthen governance and sustainable financing of ECA system.
Ministry of Land	Involvement of Land Reform Board, Land Record & Survey Department, etc. may be required as deals with land tenure issues, especially in recognition of the fact that DoE is not a landowner and so has to work with those who own the land.
Local Government Division (LGD), Ministry of Local Government, Rural Development & Co-operatives (MoLGRDC)	Ultimately, the 'sustainable solution' may be to delegate management responsibility to the District Officer as he/she engages with all sectors of local government and ownership at district level is potentially strong – thus DoE needs districts on board, which presumably come under this Ministry.
Ministry of Social Welfare (MoSW)	Department of Social Welfare will be engaged to provide social protection support to ultra-poor, women and adolescent girls and other vulnerable groups.
Department of Women Affairs (DWA), Ministry of Women and Children Affairs (M0WCA)	Gender mainstreaming is a key ingredient of the project. This ministry will guide in providing required policy support in improving women participation in conservation action, socio-economic development and ensuring social safety net for women.
Ministry of Water Resources (MoWR)	The Ministry is responsible for regulating and developing rivers and their valleys, governing matters relating to irrigation and flood forecasting and control. Institute of Water Modeling, Bangladesh Haor and Wetland Development Board, Bangladesh Water Development Board, Centre for Environmental & Geographic Information Services will be engaged for IWRM of Tanguar Haor.
International agencies and NGOs	IUCN Bangladesh, Government of the Netherlands, Swiss Agency for Development & Cooperation (SDS) and USAID have all supported ECA projects in the past. WCS and some other local NGOs (e.g. BCAS, CNRS, NACOM, ERA, etc.) has provided support through capacity building, research and monitoring, educational outreach, a

	nd the development of management plans for wetland resource management.
Local level	
Local Government Authorities	District authorities (District or Deputy Commissioner) in which Tanguar Haor is loc ated will play a vital multi-sector coordinating role within their respective districts; and operate at the interface between national government and those safeguardin g and sustainably managing the resources and ecosystem services provided by th e wetland (i.e. local communities and private sector interests). Coordination mech anisms will also be operational at upazila and union parishad levels.
Local communities, indigenous peoples and women's associatio ns	Communities will be closely involved in project implementation through the establ ishment of Village Conservation Groups (VCGs) and building on over a decade of experience. Final selection of investment sites for project implementation at Tanguar Haor will take into consideration any opportunities and interests of local communities. Exte nsive consultations will be undertaken through community workshops during proj ect preparation. Community level women's associations have been promoted in Bangladesh by the government and many NGOs as a means of empowering them economically and politically. Such associations will be involved to create opportunities for women a nd to ensure gender specific roles are built into ecosystem-based approaches to wetland management. The Garo and Hajong tribe live in 11 villages in the northern part of the Tanguar H oar and are dependent on the wetland their income, employment and livelihood an d will be directly associated through their local community institutions for the proj ect
NGOs, CBOs, CSOs	Local NGOs (CNRS, NACOM, ERA, IUCN, etc.) will be involved, as appropriate, to fa cilitate community mobilization, group formation, awareness raising, livelihood su pport, training of local communities and providing them with ready access to infor mation on wetland conservation, sustainable agriculture and fisheries manageme nt, watershed management, waste management and pollution control, along with strategies to cope with climate change and declining freshwater flows.
Private sector	Private sector will be engaged on account of mitigating industrial pollutants, as w ell as others such as agro-chemicals from farmed land. They will also be engaged in promoting ecotourism, conservation of ecosystem and biodiversity, livelihood a nd alternative income generating activities, develop marketing network, etc. in Tan

	nd alternative income generating activities, develop marketing network, etc. in Tan guar Haor. This will provide an innovative opportunity to engage with the private s ector and exercise DoE's enforcement powers using appropriate market-based ins truments to precipitate conservation and restorative measures to reverse such tre nds.

[1] Refer to Annex 4 of the *Coastal and Wetland Biodiversity Management Project Document* for full details of this process and the results of the stakeholder workshops.

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

Considerable knowledge and experience has been gained from previous projects about the different roles of men and woman living in rural wetlands with respect to energy, water and food production to secure their livelihoods through more sustainable management of agriculture, fisheries, forestry and water resources management. The project recognizes that while, women and men possess different knowledge(s) and transmit it in various ways due to their respective roles and responsibilities in the private and public spheres, women both historically and currently are primarily responsible for food preparation and distribution and for ensuring the short and long-term health of the family and community. However, it has frequently been considered a sector dominated by men, making it difficult for women's participation to have full access to wetland resources and benefits arising from these resources. Men have better access to and control of wetland products and agricultural machinery including access to and control of training and, extension services.

In general, women and elderly women, do not have a solid understanding of ways and means of managing wetland resources more sustainably, they do, however, have a sense that business patterns are changing, affecting their wetland resource collection/harvesting yields and resulting in more difficult living conditions for their families. Almost all of women in Bangladesh as well as in each community may not a conceptual understanding of how to deal with fair or equity benefit sharing, particularly with respects to their livelihoods and development and an understanding of sustainable harvesting techniques and its use. This is further aggravated by the lack of proper capacity development programs. Consequently, this has resulted in inappropriate use of wetland resources and the gradual depletion of wetland biodiversity. This is acknowledged and further documented in the current National Biodiversity Strategy and Action Plan (2016-2021).

The project will address gender inequalities in the agriculture, fisheries, forestry and water resources sectors and help identify opportunities to support gender mainstreaming through the direct involvement of women. During the PPG phase, a gender specialist will be recruited to undertake a full gender analysis to identify the different roles of men and women in the plantation, smallholder and agriculture sector. At the site level, the project will carefully examine local conditions pertaining to local livelihoods, resource access and use and management systems, and factors affecting the livelihoods of women and men who are dependent on the Tanguar Haor. The assessment will focus on ensuring an inclusive approach through which women and men are able to participate actively and benefit equitably, have equitable access to the project resources and receive fair social and economic benefits. The gender analysis will particularly focus on the following key aspects that will help develop an approach to ensure that women are equally involved in decision making and sharing of wetland benefits, such as (i) having access to information relating to current status of wetland resources, threats and process for participation in decision-making; (ii) ensuring access to alternative livelihood and learning skills; (iii) active participation and benefit sharing from conservation actions and (iv) access to training and skills in leadership development.

Consultation sessions will be held to obtain views and inputs of a wide range of local stakeholders, including women, to develop project activities and to inform a robust stakeholder involvement plan with full gender considerations. A corresponding gender mainstreaming plan for the project will be completed and submitted with the project document at the time of CEO Endorsement. This will include project approaches and actions to mitigate any negative impacts on rural women and girls (e.g. in terms of benefit sharing, labor division, access to resources, access to technology and skills development.), along with the

gender mainstreaming will be integrated across project activities. Additionally, project design will include special investments based on women's requirements to ensure that they adequately benefit from project investments as well as capacity building and training activities and alternative livelihood options. In addition, the project will include specific approaches for improving women's access to information, empowerment, representation in decision-making bodies and facilitating availability of technologies that can reduce the workload and burden on women. These will be appropriately incorporated into the design of the project to enhance capacity of women and vulnerable members to take an active part in the planning and decision-making process. This attention on gender mainstreaming is recognized in project Component 3. Gender-disaggregated targets and indicators will be included within the project results framework. The project is aiming for at least 50% of direct beneficiaries to be female[1]. During the PPG stage, efforts will be made to identify opportunities to enhance women's participation in decision-making, promote their particularly in tasks that they are more directly engaged in, such as homestead development, agroforestry, aquaculture, poultry and duck rearing, fish processing specific livelihood investments directly at women. Through, these targeted efforts, the expectation is to achieve a higher target around 50%. The project will also seek to create women sub-committees, as part of the village institutions so as to focus more direct interventions on women specific needs.

In terms of indigenous women, special efforts will be made during the gender assessment study to identify current constraints and difficulties that they encounter, their access to services and opportunities and design specific interventions to ensure that they participate effectively in decision-making, have access to project benefits and opportunities for training, skills development and livelihood.

[1] Since the Tanguar Haor is situated in greater Sylhet district where people are more conservative and religious than other parts of the country, and women's participation in control and management of tangible and intangible natural resources is generally unfavorable. Hence, as a start the project would be to aim at 30% participation of women,

[1] Since the Tanguar Haor is situated in greater Sylhet district where people are more conservative and religious than other parts of the country, and women's participation in control and management of tangible and intangible natural resources is generally unfavorable. Hence, as a start the project would be to aim at 30% participation of women,

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes

closing gender gaps in access to and control over natural resources; Yes

improving women's participation and decision-making; and/or Yes

generating socio-economic benefits or services for women. Yes

Will the project's results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

The project will engage closely with the private sector: beginning with establishing the Tanguar Haor Impact Group, an initiative to engage the private sector in the project to provide a positive impact while also raising awareness within its own constituency. It is expected that this initiative will be closely aligned with Tanguar Hoar ECA Committee to be established under the provisions of the ECA Management Rules 2016. Private sector engagement will aim to diversify finance beyond the government and strengthen sustainable community resource use and livelihood improvements to enhance local incomes. Private sector engagement will also address industrial and agricultural pollution. Besides these, private sector engagement will be useful for establishing private-public partnerships on pollution management, marketing of agricultural and fisheries products and promotion of community and nature based eco-tourism. Consultations will be undertaken with the Sylhet Chambers of commerce and Industry and Sylhet Metropolitan Chamber of Commerce and Industry to identify private sector sources of financing, in particular for combatting industrial pollution.

During the PPG, as part of UNDP's procedures to engage with private sector, due diligence would be undertaken for all identified private partners before conforming engagement with them.

5. Risks to Achieving Project Objectives

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

The initial risk assessment has identified the main risks and suitable management strategies to mitigate said risk factors, which are set out in the table below. These will be validated during Project Preparation Phase. If required, the risk management strategies will be elaborated upon. Furthermore, additional assessments will be undertaken to identify additional sources of risk.

Table 4: Risk Matrix

Risks	Rating	Risk Assessment and Management Measures
Risk 1: Government's limited finances and capacity to effectively support activities at Tanguar Haor may constrain its ability to ensure long-term sustainability of project interventions.	Moderate	Consolidating and expanding the government's capacity to address environmental outcomes in the Tanguar Haor will be supported by the development and implementation of a sustainable Financing Strategy that will identify potential opportunities through public and private sectors. This will be targeted at the national five-year planning process, effective enforcement of the polluter-pays principle, using policies (existing and new) and mechanisms to incentivize pollution reduction and mitigation measures. The strategy will be informed by assessing costs of its delivery versus financial benefits of having rivers and wetlands with relatively clean (unpolluted) water that can be used for local consumption, irrigation and public water supplies.
Risk 2: Government (including sub-national administration) may be unable to provide adequate human resources capacity to support implementation of the project and beyond.	Moderate	The Tanguar Haor is the most important freshwater wetland in the country and the Government considers it a high priority given signatory of relevant MEAs (e.g. Ramsar Convention). The project will ensure design of appropriate skills development and training to match the capacities of government during the initial years of implementation, following which implementation of the financing strategy should provide for institutionalization of more human resources before project ends. A key initiative to build and sustain technical capacity will be to institutionalize the project's modular training program in wetland management, monitoring and enforcement at all levels of governance. The project's exit strategy will systematically document the costs of continuing to expand human and technical capacities post-project, implementati

		ding to expand human and technical capacities post project, implementati on responsibilities, and sources of financial support as per the Financing S trategy.
Risk 3: Engaging with the private sector on pollutio n control measures includ ing enforcement and pro motion of eco-tourism mi ght be difficult	Modera te to High	This initiative of the project to demonstrate how pollution of wetlands can be reversed by tackling point sources of pollution, notably from industrial w aste and untreated sewage, will be supported by creation of awareness an d demonstration of the economic benefits of pollution management. Initial efforts will focus on “low hanging fruits”, meaning small industries that ca n be retrofitted with simple cost-effective measures to demonstrate econo mic savings and benefits. The project will make an assessment of the type s and scales of industry that can be retrofitted on the short, medium and lo ng-term so as to help government plan a staggered approach to pollution a batement, while looking also at financial incentives and other mechanism t o encourage change.
Risk 4: As the Tanguar Ho ar is located close to the i nternational boundary wit h India, there is potential t hat activities across the b order can affect the spati al and temporal distributi on of water availability in the wetland		As there are 54 transboundary rivers in Bangladesh, this is an issue that is not unique to the Tanguar Haor alone and needs to be addressed at a high political level that is beyond the scope of the GEF project. While, the project will not deal directly with these complex and politically sensitive transboun dary issues, the application of an ecological and co-management approac h to management of the Tanguar Haor, will to a small extent facilitate achie ving some ecological balance within the Haor, itself
Social and Environmental Risks		
Risk 5: Application of ECA rules and management pr actices might potentially r estrict access and/or res ult in economic displace ment to resources or basi c services, in particular, fo r marginalized individuals or tribal groups.	High	At PPG stage, a mechanism will be defined to: (i) ensure that project activit ies are detailed in collaboration with Upazila and Union governments and l ocal communities (including tribal groups); (ii) management of sustainable use of resources (for fisheries, wetland resource collection and farming) ar e planned and managed under community governance mechanisms that w ill be defined at PPG stage to take into consideration current uses of these resources. An ESMF developed at PPG stage will outline the required actions to furthe r assess this impact and develop appropriate management interventions t o mitigate this risk.
Risk 6: Women and other	Modera	A Gender Specialist will be assigned during the PPG stage to undertake a

disadvantaged groups may not be fully involved in planning, implementation and monitoring of project interventions or obtain benefits from such initiatives, rather than influential leaders and/or groups may have more control on local level decision making.	te	Gender Analysis of the proposed project interventions and develop a Gender Mainstreaming Action Plan to identify measures to ensure that the project contributes to gender equality and creates equitable opportunities for women and men at all levels of engagement. However, since the Tanguar Haor is situated in greater Sylhet district where people are more conservative and religious than other parts of the country, and women's participation in control and management of tangible and intangible natural resources is generally unfavorable. Hence, as a start the project would be to aim at 30% participation of women. Development of a comprehensive Stakeholder Engagement Plan at PPG stage that will identify key institutions in the country that can provide guidance for the preparation of the gender assessment and action plan, as well as oversee gender mainstreaming during the project period.
Risk 7: Interventions proposed under this project could fail or be severely reduced due to natural calamities, disasters or extreme weather conditions. Moreover, climate change impacts may limit the success of interventions.	Moderate	-Unpredictable weather patterns could influence the long-term effectiveness of project initiatives in the wetland. While it is likely that communities living in and around the wetland have probably adapted in some way to flooding, it is limited what the project can do to further improve people's resilience, although the livelihood and sustainable wetland resource use investments and improved conservation of the wetland and its ecology can help alleviate some of the damage. -Nevertheless, further assessments will be undertaken at PPG stage to consider climate change impacts on project activities in short-term and longer-term and to ensure that measures are reflected in project design to support climate-proofing and resilience of project activities and impacts as much as possible. It will also assess institutional capacity and information needs to enhance resilience to potential climate change impacts. During the PPG phase, the proposed project activities will be screened using the climate screening tool developed by the World Bank. Any identified climate change adaptation and mitigation actions for the proposed project activities will be incorporated in the project ESMF. It will identify specific management measures in design of the project to ensure that activities are environmentally sustainable and supporting best practices managed for their climate risks and improving protection and management of critical watersheds and ecosystems to help to increase the overall resilience of the natural systems to climate risks in the areas compared to business as usual.

		- The project design will include specific measures to zone the parts of the wetland for various uses, including creation of fish sanctuaries, swamp forest conservation, various community productive activities such agriculture, agroforestry, conservation of riparian areas so as to enhance resilience through appropriate silvicultural and conservation practices. Local communities and local staff will be trained in adaptive measures to plan for, and reduce climate impacts -The sustainable resource management and livelihood activities, will focus to the extent possible on promoting climate-smart agricultural and crop practices, protection of river-wetland connectivity to reduce flooding, forest protection to reduce severity of droughts, prevention of siltation of wetland to ensure water availability, etc.
Risk 8: Indigenous peoples (Garo and Hajong tribes) may be directly or indirectly affected by the project if they are not adequately involved in project design and therefore, not engaged in, supportive of, or benefiting from project activities. Some project activities may require FPIC and this has not yet been obtained.	High	During the PPG stage, the project will recruit a consultant or NGO with expertise on indigenous communities to assess the potential for impact on indigenous groups that would be then included in the Environmental and Social Management Framework (ESMF), including defining FPIC procedures to be applied during the implementation phase. Based on the outcome of the assessment done at the PPG stage, an IPPF will be included in the ESMF and an IPP prepared during early project implementation. The ESMF will define FPIC procedures and initiate the FPIC process during the PPG stage.
Risk 9: Existing resource conflicts may be exacerbated and result in inequitable or discriminatory for poor or marginalized people if activities are planned without adequate consultation and consideration of the needs and aspirations of marginalized groups	High	ESMF will be prepared at PPG stage, and will assess risks and identify measures to manage it, including ensuring that design processes will detail mechanisms for collaboration with Upazila and Union governments and local communities so that actions for management and sustainable use of resources and application of GRM procedures can avoid discrimination and inequalities and hence, reduce conflict.
Risk 10: Restoration of freshwater evergreen swam	Moderate	At PPG stage, detailed plans for rehabilitation and restoration for the identified sites and restoration measures will be prepared that meet local and int

p forests and reeds might promote IAS introductions	te	ernational criteria (and SES requirements) for ecological restoration and biodiversity conservation. The restoration and rehabilitation plans will be based on ecological surveys to assess species (only native) composition and locations for rehabilitation (based on historical presence, rather than introduce species that were not historically found in that particular location).
Risk 11: COVID-19 and other potential zoonotic disease outbreaks could pose serious difficulties for effective project implementation and socio-economic hardships.	Moderate	<u>The risks will be managed through the following means:</u> -During the preparation of the ESMF, an assessment of the social and economic impacts of ongoing Covid-19 on vulnerable populations will be undertaken, hotspots will be mapped and plans for responding to and ensuring income recovery for affected vulnerable populations and target specific livelihood interventions to facilitate such recovery as well as improving awareness of risks of zoonotic diseases will be developed. The aim is to ensure that at 25% of beneficiaries of livelihood activities in targeted project areas would be those most affected by Covid-19. -Additionally, there is a possibility that there might be delays in project start-up on account of shift in government fiscal priorities. This can be further compounded by limited availability of remote means of communication. This would necessitate some adjustment and innovative means of project management to adapt to changing situations, - In the remote location of the Tanguar Hoar where communities are not well equipped with remote means of communication, the project will use local NGOs, local community mobilizers and local staff to carry out consultations, fieldwork and local level planning. This will entail application of existing Covid19 protocols to reach out the vulnerable groups, such as use of masks and social distancing, given the option to communities to decide if they are comfortable with participating. - COVID protocol will be developed and followed, such as testing, and supply of sanitizer and masks. In any case where either party is not comfortable to engage in discussions; it will not proceed. As much as possible, remote connections will be sought, for example via local government staff visiting communities. - The project will make use of the wide availability of national specialist to provide technical support rather than rely on international consultants. - The stakeholder engagement plan will establish protocols for national, provincial and district staff if the Covid19 situation remains unchanged to ensure less likelihood of disease transmission. These actions will be based

		on the guidance provided by the government - The Covid presents the following opportunities: -Promotion of a focused approach to ensure more sustainable use of wetla nd resources, coupled with alternative livelihoods to reduce poaching and consumption of wild meat. - Improving the ecological conditions and services provided by the wetland, by promotion of sustainable fisheries, sustainable agriculture, local touris m, agro-forestry, sustainable aquaculture that can enhance the diversity of livelihoods and hence help vulnerable communities to better cope with futu re disease outbreaks -Restoration of natural vegetation, improving river-wetland connectivity, red uction of pollution, enhancing *beel* stabilization and other measures that c an enhance the environmental quality and improve the general health of th e wetland population -The enhancement of community decision-making and management of the wetland, can help build community institutional capacity and enhance their overall ability to ensure equity and self-determination, promote a more sust ainable approach to wetland resource management, enhance local owners hip and success and hence the inherent capacity of the community to bett er deal with crises. -Th
Risk 12: Management an d control of urban waste, agro-chemical pollutants and untreated industrial waste may involve occup ational health and safety r isks,	Modera te	An assessment will be made during the PPG stage on the effectiveness of current storage, transport, handling application and disposal of chemicals. Based on the assessment, the ESMF will include additional measures to re duce chemical use and effluent discharges and the health and ecological h azards associated with chemical use. A similar assessment will be undertaken in relation to chemical use in agri cultural lands and the ESMF will include specific measures to address this.
Risk 13: Unknown potenti al impacts of small grant projects under outputs 2.	Modera te	The ESMF will identify potential menu of livelihood and resource managem ent activities, and their potential impacts and management interventions. The ESMF and Project Document will then include specific safeguard proc

1 and 2.5. Relevant Principles/Standards TBC		edures and/or exclusionary criteria to ensure that the risks from these activities will be avoided or managed during implementation, when those grants projects are defined

The overall risk is classified as **'High'** at PIF stage. The identified risks will be revised based on further assessment and information during the project formulation. To meet the SES requirements, at the PPG stage, the following will be prepared: (i) ESMF with FPIC procedures (in an IPPF, if feasible); (ii) Stakeholder analysis and comprehensive Stakeholder Engagement Plan; (iii) Gender Analysis and Gender Action Plan; (iv) project-level Grievance Redress Mechanism; (v) specific management measures to address risks and opportunities provided by Covid19 and potential future crises; and (vi) address of climate change risks and its management. If the High categorization is confirmed during the PPG, then during implementation the project will commission the required ESIA and ESMP (including an IPP).

6. Coordination

Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

The Implementing Partner for this project is Bangladesh's Department of Environment (DoE) under the Ministry of Environment, Forest and Climate Change (MoEFCC). The Implementing Partner will be responsible for executing this project. Specific tasks include: Project planning, coordination, management, monitoring, evaluation and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by the project supports national systems.

At the PPG stage, the benefits of establishing a project management unit will be assessed along with the technical and project management expertise to be funded by the GEF and co-financing. Initial considerations are that the National Project Director will be designated by the MoEFCC to provide the oversight function to the Project Management Unit (PMU). The responsibility for coordination with complementary projects, stakeholder entities and relevant private sector to enhance synergy and avoid duplication will be featured in the TORs of the PMU. The potential for setting up a national Technical Advisory Committee (TAC) consisting of technical staff of key agencies, including national and district level representatives, NGOs and representatives for universities and research institutions will be assessed to guide and advise the PMU in the implementation of the project as well as to ensure coordination and collaboration across the agencies that are involved in development activities and donor financed projects in the project area. At the local level, project activities will be coordinated through multi-sector coordination mechanisms at various levels (district, upazila, union council and community levels).

To assist with successfully delivering project outcomes and components, several partners (e.g. Forest Department, department of Agriculture Extension, Department of Fisheries, Local Govt Institutions, etc.) will likely work with DoE, MoEFCC to deliver the project. UNDP will be accountable to the GEF for the implementation of this project, which will be implemented using National Implementation Modality (NIM). This will include oversight of project execution to ensure that the project is being carried out in accordance with agreed standards and provisions. UNDP is responsible for delivering GEF project cycle management services comprising project approval and start-up, project supervision and oversight, and project completion and evaluation. The project implementation will be governed by a Project Steering Committee (PSC)/Project Board, the composition of which will be defined during the PPG stage and will likely consist of a group of representatives responsible for making consensus-based strategic, policy and management decisions for the project.
The project will liaise with ongoing projects to build synergies and avoid duplication of work. A coordinated approach will be outlined in the project document, which will include drawing from the ongoing and planned GEF projects and other initiatives (as discussed in baseline section), in particular from the following projects: (i) GEF Atlas 92054/PIMS 4620 Expanding the Protected Area System to incorporate important aquatic ecosystems, (ii) GEF Atlas 89619/PIMS 4884 National Capacity Development for Implementing Rio Conventions through Environmental Governance; (iii) GEF Atlas 87558/PIMS 4878 Integrating Community-based Adaptation into Afforestation and Reforestation Programs in Bangladesh; (iv) GIZ Managing the Sundarbans mangrove forests to conserve biodiversity and adapt to climate change; (v) Forest Department is currently implementing US$ 175 million Sustainable Forests and Livelihoods Project; (vi) Implementing Ecosystem-based Management in Ecologically Critical Areas in Bangladesh and (vii) Community Partnerships to Strengthen Sustainable Development' (Compass).

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assesments under relevant conventions

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

Bangladesh Environment Conservation Act: The proposed project is aligned directly with the provisions of The Bangladesh Environment Conservation Act, 1995 and its 2010 Amendment Act that concerns the declaration and planning of ECAs under the remit of the Department of Environment, along with the Department's mandate to control pollution. More specifically, it supports the application of the Ecological Critical Area Management Rules, recently introduced in 2016, which provide a governance structure for managing ECAs and address the need for alternatives for people dependent on ECAs for their livelihood. Governance roles for a National Committee, District and Upazila committees, Union Coordination Committee and Village Conservation Group are defined. Other provisions include management by public-private partnerships and constitution of Ecological Management Funds for individual ECAs. These new rules have been informed by over a decade of experience in establishing and managing ECAs and now is a timely opportunity to apply them in an holistic, integrated manner, while also piloting a public-private partnership or similar approach to extend that experience to the private sector over pollution issues from industry and from agriculture.

National Biodiversity Strategy and Action Plan (2016-2021): The project will contribute significantly to achieving at least half of the 20 national targets identifed in the Action Plan, as listed below.

(1) Relevant stakeholders will be aware of the value of wetland biodiversity and play an active role in ensuring sustainable use.

(6) Stock assessment of fish, invertebrate stocks and aquatic plants will be undertaken keeping in mind the safe ecological limit and awareness raising of the stakeholders will be enhanced so that aquatic biodiversity will be managed and harvested sustainably, legally taking into account of ecosystem based approach towards avoidance of overfishing and conservation of threatened species and vulnerable ecosystems.

(8) Study on impact of pollution and excess nutrient on functioning of major ecosystems will be conducted and enforcement drive for controlling pollution will be strengthened.

(12) The extinction of known threatened species will be prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

(14) Develop and implement restoration plan for degraded forests and reeds and river banks taking into account the needs of vulnerable people and local communities.

(15) Initiate implementation of restoration plan for degraded ecosystems, especially forest lands and wetlands for addressing climate change mitigation, adaptation and combating desertification.

(18) Traditional knowledge, innovations and practices of local communities or ethnic groups will be recognized and documented.

(19) Agencies responsible for Biodiversity and Natural Resources Management will be adopting modern information technology like GIS and RS and information on biodiversity will be shared through Clearing House Mechanism (CHM).

(20) Financial resources will be mobilized towards accelerated implementation of targets and activities of updated NBSAP.

Ecologically Critical Area (ECA) Rules: The Bangladesh Environment Conservation Act (BECA), 1995 has provision for Ecologically Critical Area (ECA) declarations by the Director General of the Department of Environment in certain cases where ecosystem considered to be threatened to reach a critical state. If the government is satisfied that due to degradation of environment, the ecosystem of any area has reached or is threatened to reach a critical state, the government may by notification in the official gazette declare such areas as Ecologically Critical Areas. The government shall specify, through the notification provided in sub-clause (1) or by separate notification, which of the operations or processes cannot be initiated or continued in the Ecologically Critical Area (Bangladesh Environment Conservation Act/BECA), 1995. In April 1999, the Director General of the Department of Environment (DOE) officially declared nearly 40,000 ha, within seven separate wetland areas, as ECAs. In order to identify priority sites, a series of biodiversity 'importance criteria' have been taken into account in addition to the above 'urgency criterion'. Tanguar haor, an important wetland area located in northeastern Bangladesh was declared as an ECA.

Sixth National Report to CBD (2019): The following were the national targets:

· National Target 5: By 2021, studies on the rate of habitat loss will be furnished towards promoting implementation of land use policy and enforcement of relevant legislation on conservation of natural habitats

· National Target 8: By 2021, study on impact of pollution and excess nutrient on functioning of major ecosystems will be conducted and enforcement drive for controlling pollution will be strengthened.

· National Target 11: By 2021, Bangladesh's 3% area under terrestrial ecosystem (forests), 3% area under inland wetlands and coastal ecosystems and 5% of total marine area will come under PAs or ECAs with development and implementation of management plan for these areas.

· National Target 12: By 2021, the extinction of known threatened species will be prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

· National Target 14: By 2021, develop and implement restoration plan for degraded wetlands and rivers taking into account the needs of vulnerable people and local communities.

· National Target 15: By 2021, initiate implementation of restoration plan for degraded ecosystems, especially, forestlands and wetlands for addressing climate change mitigation, adaptation and combating desertification.

Land Degradation Neutrality (2018): The project will achieve the following targets to contribute to Bangladesh's voluntary national LDN targets to UNCCD.

· To increase soil fertility and Carbon in 300 hectares of cropland

· To improve forest cover in 200 hectares of freshwater evergreen swamp forests

Seventh Five-Year Plan: The core theme of the 7th Five Year Plan for Bangladesh is "Accelerating Growth, Empowering Citizens". This is enshrined within the context of climate resilient, sustainable growth, with special focus on governance isues to enhance productivity and on developing a knowledge-based economy. Much of this theme resonates well with the conceptual design of this project and its more innovative elements, including its focus on: consolidating

and institutionalising the governance of the ECA; piloting engagement with the private sector to address industrial and agricultural pollution of wetlands; and underpinning the system with a web-based GIS that will include a reporting facility to document Tanguar Haor ECA condition (health) and the effectiveness of managing the system.

Within the environment sector, these themes translate into a number of goals and targets to which this proposed project will contribute, notably:

- Increase productive forest coverage to 20 percent.
- Promote zero discharge of industrial effluents.
- Rural wetlands are restored and protected in line with the Wetland[1] Conservation Act.
- At least 15% of the wetland in peak dry season is protected as aquatic sanctuary.
- Land zoning for sustainable land/water use completed.

More specifically, the 7th five-year plan in relation to wetland management calls for the following:

- a program of actions for ECAs, including the creation of a knowledge centre for ECAs and Wetland Management.
- a new approach to industrial pollution/waste management involving communities, local institutions, news media, law enforcement agencies and other relevant stakeholders to engage with the polluters;
- management of agrochemicals to avoid/reduce pollution of water bodies; and
- Sustain & replicate ECA & wetland management project(s) in other areas with the ultimate objective of restoration and damage prevention.
- Develop Tanguar Haor ECA specific protection/restoration management plan in consultation with local community and implement the plan in a time bound manner.
- Sustain and replicate ecosytem based management of Ramsar Site and ECA.
- Sustain and replicate community-based adaptation of ECAs through biodiversity conservation and social protections.
- Create a knowledge Centre for ECA and Wetland management.

National Targets for Aichi: Government of Bangladesh set National Targets in line with Aichi Biodiversity Target expected to be achieved by 2021. The key relevant national targets related to the project are the following:

- National Target 11: The NBSAP 2016 -2021 target is to bring country's 3% area under terrestrial ecosystem (forests), 3% area under inland wetlands and coastal ecosystems and 5% of total marine area will come under PAs or ECAs with development and implementation of management plan for these areas.

· National Target 12: By 2021, the extinction of known threatened species will be prevented and their conservation status, particularly of those most in decline, sustained

· National Target 14: By 2021, develop and implement restoration plan for degraded wetland and rivers taking into account the needs of vulnerable people and local communities.

· National Target 15: By 2021, initiate implementation of restoration plan for degraded ecosystems, especially, forestlands and wetlands for addressing climate change mitigation, adaptation and combating desertification.

· National Target 18: By 2021, traditional knowledge, innovations and practices of local communities or ethnic groups will be recognized and documented.

The project will contribute to the **2030 Agenda for Sustainable Development** and achievement of the its goals, notably:

· SDG 5 Gender Equality [Target 5.5: Ensure full participation in leadership and decision-making]

· SDG 13: Climate Action [Target 13.1: Strengthen resilience and adaptive capacity to climate-related disasters]

· SDG 14: Life Below Water [Target 14.2: Protect and restore ecosystems; Target 14.4: Sustainable fishing]

· SDG 15: Life on Land

o Target 15.1: Conserve and restore terrestrial and freshwater ecosystems

o Target 15.2: End deforestation and restore degraded forests

o Target 15.5: Protect biodiversity and natural habitats

o Target 15.8: Prevent invasive alien species on land and in water ecosystems

o Target 15.9: Integrate ecosystem and biodiversity in governmental planning

The proposed project will also complement the Post-2020 Biodiversity Framework that is expected to apply a “theory of change” approach to help plan, implement and evaluate the impacts of the actions taken and allows diverse stakeholders to articulate challenges, work together towards common goals, and ensure that collective actions are aligned towards achieving the greatest possible impact

[1] This is an error in the Plan and should read “Environment”.

8. Knowledge Management

Outline the Knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

The project will generate knowledge products to support implementation processes and improvement of its performance. These will also be disseminated to inform policy making and South-South and Triangular Cooperation. Many of the knowledge products will be generated through Components 1 and 2 which will produce training modules, develop strategy and plans, guidelines and protocols for both the private and public sector on ecosystem and community-based management. Learning products from the project will be documented and disseminated through different media and target a range of stakeholders and project beneficiaries. The knowledge materials to be generated under the project will be clearly defined during PPG phase.
Limited awareness of the value and role of wetlands in particular, among all levels of government and civil society within Bangladesh is a barrier to sustainable financing of wetland conservation and the enforcement of legal provisions to safeguard them from degradation. Ready access to sound knowledge, wetland management plans and associated experience and best practices in managing these wetlands, and monitoring data on their ecological condition will be an important to raise awareness levels and promote support for and compliance with the sustainable management of Tanguar Haor wetland system. This will be achieved primarily through establishing a national, spatial, web-based information and monitoring system for Tanguar Haor, probably linked via a portal to the MoEFCC's website. Further guidance on the design of the information system and its linkages with other platforms will be incorporated in the Project Document.

9. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
High or Substantial			

Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the GEF ESS Minimum Standards) and describe measures to address these risks during the project design.

Project Information

Project Information	
1. Project Title	**Community-based Management of Tanguar Haor Wetland in Bangladesh**
2. Project Number	PIMS 6563
3. Location (Global/Region/Country)	Bangladesh

Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?
Briefly describe in the space below how the Project mainstreams the human-rights based approach
The proposed project is designed to conserve globally important species in the Tanguar Haor wetland in Bangladesh. To achieve this objective, the proposed project aims to apply an integrated community participatory process to mainstream biodiversity conservation and sustainable wetland resource use principles through a set of targeted outputs that will support necessary assessments, provide technical guidance and promote alternative community and private sector business models and livelihood that are less polluting, including related to agriculture, fisheries, tourism and other production systems. The project will uphold human rights principles by ensuring inclusiveness and equitable distribution of development opportunities and benefits, including women, smallholder farmers, IPs and marginalized groups. Project design and implementation will be built around meaningful engagement, participation and inclusion of stakeholders at regional level and at project site. The project will promote accountability and transparency and develop a grievance redress process to address any conflicts in resource use and benefit sharing. Project design will ensure the following: (i) engaging stakeholders in an inclusive, transparent and equitable manner by means of processes, protocols and other mechanisms that ensure either an open-door policy (e.g. consultation meetings) or representation of relevant, interested stakeholder groups. Consultation in the further design of this project will begin at the onset of the PPG process; (ii) adopting and further enhancing the recent 2016 ECA Ma

nagement Rules that define an institutional structure and process for managing ECAs, with committees established at all levels of government administration, from union to national levels; and (iii) by monitoring and reporting on the ecological condition of ECAs in a transparent manner and ensuring that the results are readily accessible by citizens via the Department of Environment's website and other means.

The project will ensure that community access to wetland resources are not impacted, but in the event there is inadvertent loss of access, the project will facilitate the development of a livelihood action plan early in project implementation to ensure that affected households are provided alternative livelihoods to match or exceed their current incomes through the proposed income and livelihood investments. Principles of environmental governance, mutual accountability between rights holders and duty-bearers, rule of law are upheld through improved management of natural resources within the wetland.

Briefly describe in the space below how the Project is likely to improve gender equality and women's empowerment

A gender analysis will be conducted during the PPG phase, in accordance with standard UNDP procedure, to identify the differences, needs, roles and priorities of women and men as they relate to engagement in activities in the fisheries, agriculture, tourism and related sectors. Specific project activities will be developed to support the engagement of women in project activities during the PPG phase. At PPG satge, the following actions will be taken:.

- Developing a full gender analysis and gender mainstreaming action plan. This Plan will ensure that gender equity and social inclusion opportunities are maximized during project implementation.
- Ensuring that women are engaged in participatory consultative processes during the project development and, thereafter, by means of implementing the gender mainstreaming plan.
- Concerns of vulnerable groups, including women and girls as well as their voices are integrated in all relevant sections of the PRODOC towards maintaining inclusive approach in project designing, and then implementation and its monitoring.
- The project results framework contains measurable indicators related to gender equality and women's empowerment; a gender marker of 2 and above will be assigned to this project.

Briefly describe in the space below how the Project mainstreams environmental sustainability

The project will not adversely impact on environmental sustainability, rather it will promote, enhance and mainstream such sustainability in the following ways:

The project will develop cost-effective and sustainable solutions for effective management of wetland habitats), improve sustainable management practices in agriculture and other productive activities, reduce pollution, develop and new, environmentally-friendly livelihood models and ensure sustainable harvest of wetland resources. The intent is to reach agreement in project design on measures to be instiituted in the project to achieve desired or favorable ecological conditions in the wetland. Further, the project will integrate outputs and lesson learned into existing programs that has been undertaken in Tanguar Hoar and other wetlands in Bangladesh.

The proposed project intervention and leveraged resources will generate global environmental benefits both direct and indirect of improvement in 9.727 hectares of the wetland, conserve existing freshwater swamp forest and attempt to restore about 200 hectares of degraded swamp forests to their natural condition and ensure that fish and other wetland product harvest are kept to acceptable limits. In the long term, it will improve quality of species habitat and environment and improve the quality of wetland habitats for key species through reduction of effluent discharge and improve produtivity of agricultural lands. It will improve capacities of communities for implementing effective biodiversity-friendly fisheries, agriculture and income generatio

agricultural lands. It will improve capacities of communities for implementing effective biodiversity-friendly fisheries, agriculture and income generatio n, including alternative livelihood activities

Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? *Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any "Yes" responses). If no risks have been identified in Attachment 1 then note "No Risks Identified" and skip to Question 4 and Select "Low Risk". Questions 5 and 6 not required for Low Risk Projects.*	QUESTION 3: What is the level of significance of the potential social and environmental risks? *Note: Respond to Questions 4 and 5 below before proceeding to Question 6*			QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?
Risk Description	*Impact and Probability (1-5)*	*Significance* *(Low, Moderate, High)*	*Comments*	*Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.*
Risk 1: Application of ECA rules and management practices might potentially restrict access to resources or basic services, and/or result in economic displacement in particular, for marginalized individuals or tribal groups. **Principle 1, Standard 5 and Standard 6**	I=4 P=3	**High**	With the improved management of ECAs and improved sustainable harvest regimes for multiple different uses, community rights of access may be restricted or even result in economic displacement in specific situations	At PPG stage, mechanism will be defined to: (i) ensure that project activities are detailed in collaboration with Upazila and Union governments and local communities (including tribal groups); (ii) management of sustainable use of resources (for fisheries, wetland resource collection and farming) are planned and managed under community governance mechanisms that will be defined at PPG stage to take into consideration current uses of these resources. An ESMF developed at PPG stage will outline the required actions to further assess this impact and develop appropriate management interventions to mitigate the risk.

Risk 2: Women and other disadvantaged groups may not be fully involved in planning, implementation and monitoring of project interventions and getting benefits from such initiatives, rather influential leaders and/or groups may have more control on local level decision making. **Principle 2**	I=3 P=2	**Moderate**	Since there are gender disparities in the region there is a risk that these consultations might not fully capture or reflect views of women and girls and other disadvantaged groups	A Gender Specialist will be assigned during the PPG stage to undertake a Gender Analysis of the proposed project interventions and develop a Gender Mainstreaming Action Plan to identify measures to ensure that the project contributes to gender equality and creates equitable opportunities for women and men at all levels of engagement. Development of a Comprehensive Stakeholder Engagement Plan at PPG stage that will identify key institutions in the country that can provide guidance for the preparation of the gender assessment and action plan.
Risk 3: Interventions proposed under this project could fail or be severely reduced due to natural calamities, disasters or extreme weather conditions. Moreover, climate change impacts may limit the success of interventions. **Standard 2**	I=3 P=2	**Moderate**	Unpredictable weather patterns could influence long-term effectiveness of project initiatives, in the wetland.	Project interventions will include adaptive, ecosystem-based measures to strengthen resilience to climate change impacts. A climate-proofing plan will be prepared at PPG stage.
Risk 4: Indigenous peoples (Garo and Hajong tribes) may be directly or indirectly affected by the project if they are not adequately involved in project design and therefore not engaged in, supportive of, or benefitting from project activities. Some project activities may require FPIC and this has not yet been obtained. **Standard 6**	I=4 P=3	**High**	There is a small group of IPs living in the northern part of the wetland that might be left out of benefits if they are not directly engaged in consultation and participation in project design	During the PPG stage, the project will recruit a consultant or NGO with expertise on indigenous communities to assess the potential for impact on indigenous groups that would be then included in ESMF, including defining FPIC procedures to be applied during the implementation phase. Based on the outcome of the assessment done at the PPG stage, if deemed relevant an IPP Framework will be included in the ESMF and an IPP prepared during early project implementation. The ESMF will define FPIC procedures and initiate the FPIC process during the inception phase or early part of implementation.
Risk 5: Existing resource conflicts may be exacerbated and result in inequitable or discriminatory for poor or margina	I=4 P=3	**High**	If wetland activities are not carefully designed, conservation and resource use strategies coul	An ESMF will be prepared at PPG stage outlining required actions to further assess this impact and develop appropriate management interventions including a GRM proc

lized people if activities are planned without adequate consultation and consideration of the needs and aspirations of marginalized groups **Principle 1**			d have adverse impacts on livelihoods	edures. Stakeholder consultation will be undertaken during the project design and a stakeholder engagement plan (SEP) will be prepared which would outline mechanisms for collaboration with Upazila and Union governments and local communities so that actions for management and sustainable use of resources can avoid discrimination and inequalities and hence, reduce conflict.
Risk 6: Restoration of freshwater evergreen swamp forests and reeds could promote IAS introductions **Standard 1**	I = 3 P=2	**Moderate**	Unless there is clear plan and precautions to ensure that restoration is planned and executed along with maintenance activities to bring back the natural forests species, there is possibility for non-native species to take a foothold	At PPG stage, detailed plans for rehabilitation and restoration for the identified sites and restoration measures will be prepared that meet local and international criteria (and SES requirements) for ecological restoration and biodiversity conservation. The restoration and rehabilitation plans, which will be included in the Project Document will encourage the use of native species and restoration efforts.
Risk 7: The COVID-19 and other potential zoonotic disease outbreaks could pose serious difficulties for effective project implementation and benefit sharing **Standard 3**	I=4 P=3	**High**	As a consequence it would affect the ability of vulnerable people to get back into economic activities as any lingering or new zoonotic disease outbreaks can affect vulnerable groups in the project area the most and leave them out from participating and accruing benefits from the project in particular from the livelihood activities.	During the preparation of ESMF, an assessment of the social and economic impacts of ongoing Covid19 on vulnerable populations will be undertaken, hotspots will be mapped and plans for responding to and ensuring income recovery for affected vulnerable populations and target specific livelihood interventions to facilitate such recovery as well as improving awareness of risks of zoonotic diseases will be developed.
Risk 8: Management and control of urban waste, agro-chemical pollutants and untreated industrial waste may cause pollution of wetland and involve occupational health and safety risks, **Standard 3 and 7**	I=3 P=2	**Moderate**	While the project does not entail the purchase of additional chemicals and their use, unless alternate and safer chemical use is promoted the health and biological hazards will continue	An assessment will be made during the PPG stage on the effectiveness of current storage, transport, handling application and disposal of chemicals. Based on the assessment, the ESMF will include additional measures to reduce chemical use and effluent discharges and the health and ecological hazards associated with chemical use. A similar assessment will be undertaken in relation to ch

				emical use in agricultural lands and the ESMF will includ e specific measures to address this.
Risk 9: Unknown potential impacts of s mall grant projects under outputs 2.1 a nd 2.5. Relevant Principles/Standards TBC	I= 3 P=3	**Moderate**	As the project is promoting a p articipatory approach to define community livelihood and reso urce management investments, the location and scale of such a ctivities will only be defined duri ng the community consultation process in early project period, but protocols and procedures a re needed to ensure that any so cial and environmental impacts and management measures are integrated into the investment a ctivities	Separate safeguards procedures and/or exclusionary cri teria will be included in the ProDoc and ESMF to ensure t hat the risks from these activities will be avoided or man aged during implementation, when those grants projects are defined.

	QUESTION 4: What is the overall Project risk categorization?		
	Select one (see SESP for guidance)		Comments
	Low Risk	☐	
	Moderate Risk		
	High Risk	X	At PIF stage, the overall risk for the project is classifi ed as **'High'**. The identified risks will be revised based on further assessment and information during the pr oject formulation. To meet the SES requirements, at t he PPG stage, the following will be prepared: (i) ESM F with FPIC procedures (in an IPPF, if feasible); (ii) St akeholder analysis and comprehensive Stakeholder E ngagement Plan; (iii) Gender Analysis and Gender Ac tion Plan; (iv) project-level Grievance Redress Mecha nism. If the High categorization is confirmed during t he PPG, then during implementation the project will c ommission the required ESIA and ESMP (including an IPP).
	QUESTION 5: Based on the identified risks and risk categoriz		

	ation, what requirements of the SES are relevant?		
	Check all that apply		Comments
	Principle 1: Human Rights	x	High
	Principle 2: Gender Equality and Women's Empowerment	x	Moderate
	1. Biodiversity Conservation and Natural Resource Management	x	Moderate
	2. Climate Change Mitigation and Adaptation	x	Moderate
	3. Community Health, Safety and Working Conditions	x	High
	4. Cultural Heritage	☐	
	5. Displacement and Resettlement	x	High
	6. Indigenous Peoples	x	High
	7. Pollution Prevention and Resource Efficiency	x	Moderate

Supporting Documents

Upload available ESS supporting documents.

Title	Submitted
PIMS 6563_Pre-SESP_20 August 2020	

Part III: Approval/Endorsement By GEF Operational Focal Point(S) And Gef Agency(ies)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name	Position	Ministry	Date
Ziaul Hassan	Secretary	Ministry of Environment, Forest and Climate Change	9/27/2020

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place

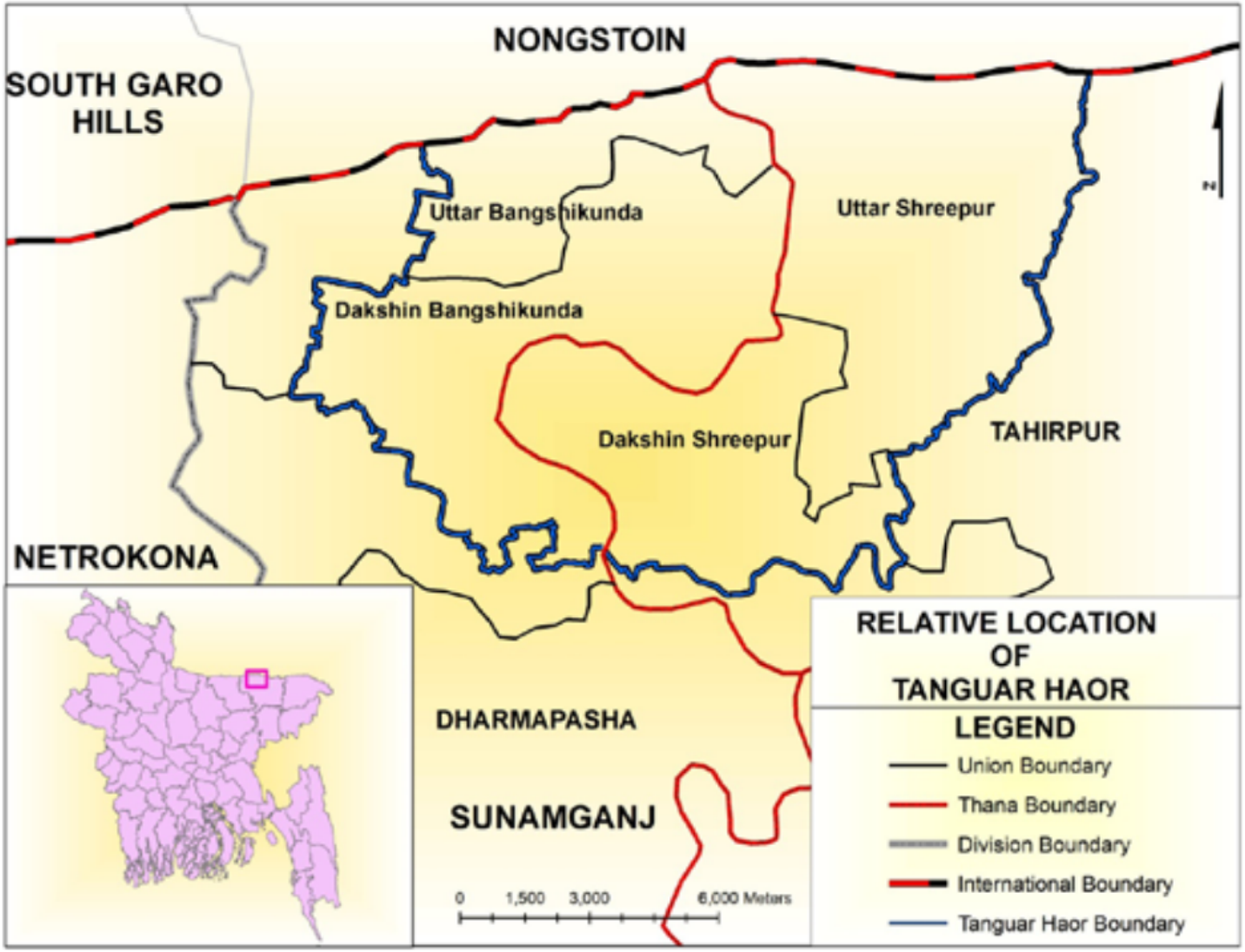
Proposed Project Description and Map

A globally significant wetland, in north-eastern part of Bangladesh, adjacent to the Indian border, is part of a wetland/floodplain complex of the river basin. Although several hundred kilometers from the sea, the is located at an elevation of only 2.5 – 5 meters above sea level, and water movement is generally sluggish. Tanguar Haor is one of the largest natural freshwater wetlands in the northeast region of Bangladesh. This haor (haors are wetland ecosystems in the north eastern part of Bangladesh) is extremely important for its large and diverse waterfowl populations, fisheries and natural resources. Realizing its importance in national, regional and global environmental perspective, a few steps have been taken to preserve its diverse biological resources, especially the large number of waterfowl and freshwater fishes. Other than being globally important for its exceptional biodiversity, Tanguar Haor plays a significant role in the economy of Bangladesh. Tanguar Haor supports freshwater fisheries, directly sustains the livelihoods of surrounding villages and largely contributes to the country's food production and security.

During the monsoon, the diverse water bodies merge into one large body of water in a natural depression between the levees of several rivers. During this season (June - September), it is entirely under water except for villages, mostly located in the periphery, which are constructed on raised mounds, appearing as small islands in this vast body of fresh water. In the dry season, the waters recede into the rivers and all that remains are some *50 beels* that cover about 25 - 30% of the area. These deeper bodies of water are heavily fished. They attract many waterfowl during the winter season. This is considered to an important breeding ground of many species of fish. This wetland consists mainly of water backing up in the river system, although some water is received from streams flowing from the surrounding hills.

Although rich in nutrients, waters are generally clear, especially in the dry season. The river, to the north-east, brings large amounts of sand to this part of the Sylhet basin. Tanguar Haor provides immediate subsistence and livelihoods to some 60,000 people residing in some 88 villages located in its periphery. Standards of living are very poor. The principal economic resource is fish. In 1999, the Government of Bangladesh, recognizing the ecological importance of the area and the over-exploitation of resources declared it an "Ecologically Critical Area". In 2002, it was listed as the country's second RAMSAR site - wetland of international importance. The management of the wetland was transferred from the Ministry of Land to the Ministry of Environment and Forests in 2001.

The haor is an ideal place for the migratory birds. Every winter about 200 types of migratory birds come to this haor and make their temporary habitat here. The haor is an important source of fisheries. More than 140 species of freshwater fishes occur here. Hijal (*Barringtonia acutangula*), Karach (*Pongamia pinnata*), Gulli, Balua, Ban Tulsi (*Ocimum americanum*), Nalkhagra (*Phragmites karka*) and some other important threatened species of freshwater wetland trees are available in this haor.


NONGSTOIN
SOUTH GARO HILLS
Uttar Bangshikunda
Uttar Shreepur
Dakshin Bangshikunda
Dakshin Shreepur
TAHIRPUR
NETROKONA
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0 1,500 3,000 6,000 Meters
RELATIVE LOCATION OF TANGUAR HAOR
LEGEND
Union Boundary
Thana Boundary
Division Boundary
International Boundary
Tanguar Haor Boundary