

**Safety Net Systems for the Poorest (SNSP)
(Component 4)
(IDA Credit 6137-BD & IDA Grant D591-BD)**

**ENVIRONMENTAL & SOCIAL
MANAGEMENT FRAMEWORK
(ESMF)**

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**Department of Disaster Management
Ministry of Disaster Management & Relief
Government of the People's Republic of Bangladesh**

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LIST OF ABBREVIATIONS

BBS	Bangladesh Bureau of Statistics
BDT	Bangladesh Taka (Currency)
BP	Bank Procedures
BCCSAP	Bangladesh Climate Change Strategy & Action Plan
BWDB	Bangladesh Water Development Board
CIC	Camp in Charge
DC	Deputy Commissioner
DG	Director General
DDM	Department of Disaster Management
DOE	Department of Environment
DRP	Displaced Rohingya Population
EA	Environmental Assessment
EIA	Environmental Impact Assessment
ECA	Environmental Conservation Act
ECC	Environmental Clearance Certificate
ECOPs	Environmental Code of Practices
ECR	Environment Conservation Rules
EGPP	Employment Generation Program for the Poorest
EGPP+	Employment Generation Program for the Poorest Plus
EIA	Environmental Impact Assessment
EMF	Environmental Management Framework
EMP	Environmental Management Plan
EMRCR	Emergency Multi-Sector Rohingya Crisis Response (Project)
EMRP	Environmental Management Regulatory Procedure
EMS	Environmental Management System
EH&S	Environmental Health & Safety
ESMF	Environmental & Social Management Framework
FGD	Focus Group Discussions
FY	Fiscal Year
GBV	Gender Based Violence
GOB	Government of Bangladesh
GRC	Grievances Redress Committee
GRO	Grievance Redress Officer
H&S	Health & Safety
HWC	Human Wildlife Conflict
ICT	Information and Communication Technology
IDA	International Development Association
IEE	Initial Environmental Examination

INGO	International Non-Governmental Organization
IOM	International Organization for Migration
IRC	Independent Review Committee
LGI	Local Government Institution
M&E	Monitoring and Evaluation
MODMR	Ministry of Disaster Management and Relief
MOEFCC	Ministry of Environment, Forest & Climate Change
MIS	Management Information System
NBSAP	National Biodiversity Strategy and Action Plan
NEMAP	National Environmental Management Action Plan
NEQS	National Environmental Quality Standards
NGOs	Non-Government Organizations
NOC	No Objection Certificate
NCS	National Conservation Strategy
NWP	National Water Policy
NWMP	National Water Management Plan
NEAP	National Environmental Action Plan
OP	Operational Policy
PAPs	Project Affected Persons
PDO	Project Development Objective
PIA	Project Influence Area
PIC	Project Implementation Committee
PIO	Project Implementation Officer
PPE	Personnel Protective Equipment
RRRC	Refugee Relief and Repatriation Commission
SNSP	Safety Net Systems for the Poorest (Project)
SWM	Solid Waste Management
TOR	Terms of Reference
TWS	Teknaf Wildlife Sanctuary
UC	Upazila Committee
UN	United Nations
UNHCR	United Nations High Commissioner for Refugees
UNO	Upazila Nirbahi Officer
UP	Union Parishad
UZ	Upazila
UP-PIC	Union Parishad- Project Implementation Committee
USD	United States Dollars
VGf	Vulnerable Group Feeding
WARPO	Water Resources Planning Organization
WASH	Water, Sanitation and Hygiene

WB

World Bank

WHO

World Health Organization

WFP

World Food Programme

GLOSSARY

Adverse impact	Adverse impact is an environmental impact that is harmful to human interest over either the short or long term.
Beneficial impact	Beneficial impact is an impact that improves the resources, economy, and/or quality of life.
Biodiversity	Biodiversity (biological diversity) is the variety of species within a given area or region.
Cumulative impacts	Cumulative impacts are environmental impacts that result from actions that are added to others of the past, present and the foreseeable future, caused by multiple human activities and/or natural events that are either repeated or occur in combination.
Drainage	The removal of excess surface water or groundwater from land by means of surface or subsurface drains.
Ecosystem	Ecosystem (ecological system) is a marine, freshwater or terrestrial linkage of dynamic and interactive components normally divided into two major categories – biotic (living) and abiotic (non-living).
Effect	Something produced either positive or negative by a cause or agent
Embankment	Fill constructed with soil materials to contain water.
Endangered species	Animals, plants, birds, fish, or other living organisms threatened with extinction by manmade or natural changes in the environment.
Enhancement	Enhancement is increasing the benefits of the positive impacts of a project.
Environment	Environment is the totality of the natural and human surroundings and includes biophysical components of the natural environment of land, water and air, including all layers of the atmosphere, all inorganic and organic matter both living and dead; and socio-economic components of the human environment including social, economic, administrative, cultural, historical, archeological, land and associated resources, structures, sites, human health, nutrition and safety.
Environmental Audit	Systematic, documented verification process of objectively obtaining and evaluating evidence to determine whether specified environmental activities, events, conditions, management systems, or information about these matters conform with audit criteria.
Environmental Impact	Environmental impact is a change in the state or functioning of an environmental resource or component caused by action(s) of a project. It should be distinguished from the impact to resources or components caused by natural factor, e.g., floods.
Environmental Impact Assessment (EIA)	Environmental impact assessment (EIA) is the systematic study, assessment and reporting of the impacts of a proposed program, plan or project, including a plan to deal with the negative impacts.

Environmental Management Plan (EMP)	Environmental management plan (EMP) is a plan to undertake an array of follow-up activities to provide for the mitigation of adverse environmental impacts and enhancement of beneficial impacts.
Environmental Performance	Measurable results of the environmental management system, related to an organization's control of its environmental aspects, based on environmental policy, objectives and targets.
Environmental Sensitive Areas	"Areas that are of significant value in their natural state" or areas that are of socio-cultural significance or sensitivity.
Habitat	Habitat is the division of the environment having a certain combination of physical (e.g., slope, drainage, soil type) and biological (e.g., food) factors necessary for sustained animal, plant or human use and survival.
Important Environmental Components (IECs)	Important environmental components (IECs) are components which by virtue of their importance to ecosystem functioning, production of food and/or maintenance of livelihoods and quality of life are considered essential and worthy of sustaining at existing or enhanced levels under the proposed new project.
Initial Environmental Examination (IEE)	Initial environmental examination (IEE) is environmental assessments undertaken for a regional or pre-feasibility level study for identifying and assessing possible environmental impacts.
Intervention	Intervention is the specific action caused by a project that creates an environmental impact, e.g., obstruction of a drainage canal by embankment.
Mitigation	Mitigation is any action taken to reduce unacceptable negative impacts. It includes both design changes to the project or operational strategies.
Monitoring	Activity involving repeated observation, according to a pre-determined schedule, of one or more elements of the environment to detect their characteristics (status and trends).
Reversible Impact	Reversible impact is an environmental impact that recovers either through natural process or with human assistance.
Public Participation	open, transparent, gender-sensitive, and community-based public involvement in the EA process, aimed at ensuring the social acceptability of a project or undertaking, involving the broad estrange of stakeholders, commencing at the earliest possible stage of project design and development and continuing until post-assessment monitoring.
Protected Area	Identified portions of land and water set aside by reasons of their unique physical and biological significance, managed to enhance biological diversity and protected against destructive human exploitation.
Project Affected Persons (PAPs)	refers to any person or persons who would be identified, during the project identification stage within the EA process and/or preparation of detailed

Screening	<p>proposal - a baseline census information collected for each of the inventories implemented in relation to a particular infrastructure project.</p> <p>The process by which a decision is taken on whether or not EA is required for a particular project</p>
Scoping	<p>Scoping is a process whereby the important environmental components, project development issues and concerns of local communities are determined.</p>
Significant Impacts	<p>Impact which damage the environment to the point that the environmental resource loses its capacity to sustain life or to continue functioning within baseline levels and efficiency; impacts which need action through prevention, (e.g. change in project siting or design) or mitigation (reduce, repair, rehabilitate) or other interventions to protect the environment from being harmed at levels that reduce its functionality for its users or dependent biota.</p>
Stakeholders	<p>entities who may be directly and significantly affected by the project or undertaking, including the proponent, government agencies who have mandates over the project, local government units who have jurisdiction over the project, local communities who may be affected by project impacts, locally-based or locally-active NGOs within the impact areas and other public sectors who may be potentially affected by the project as defined by the findings of the environmental impact assessment of the project.</p>
Sustainable Development	<p>Sustainable development is development that ensures preservation and enhancement of environmental quality and resource abundance to meet the needs of the present without compromising the ability of future generations to meet their own needs.</p>
Union	<p>administrative division – subdivision of an upazila</p>
Upazila	<p>administrative division – subdivision of a district</p>

EXECUTIVE SUMMARY

Introduction

The Safety Net Systems for the Poorest (SNSP) Project aims to improve the equity, efficiency, transparency, and shock-responsiveness of major safety net programs to benefit the poorest and most vulnerable households in Bangladesh. The Department of Disaster Management (DDM), under the Ministry of Disaster Management and Relief (MODMR), implements the country's flagship public workfare program – Employment Generation Program for the Poorest (EGPP). The EGPP provides short-term employment to poor and vulnerable households during lean seasons for work on small-scale community-level infrastructure (known as “subprojects”). The program has a shock-responsive window known as EGPP Plus (or EGPP+) which provides rapid incomes support to poor and vulnerable households affected by various disasters, crises, and shocks.

Under its original financing (IDA Credit 5281-BD), from FY 2014 to FY 2017 the Project co-financed a portion of wages paid to beneficiaries of the EGPP. This co-financing of beneficiary wages continued during the period FY 2018 to FY 2019 under a first Additional Financing (IDA Credit 6137-BD) to the Project. A second Additional Financing (IDA Grant D591-BD) from the IDA18 Regional Sub-Window (RSW) for Refugees and Host Communities was approved by the Bank in FY 2020, to strengthen the resilience of the host community and displaced Rohingya population (DRP) in the Cox's Bazar district affected by the Rohingya forced displacement crisis. This second Additional Financing (IDA Grant D591-BD) contributes to wages and stipends for beneficiaries of the shock-responsive EGPP+ only in Cox's Bazar district.

This Environmental and Social Management Framework (ESMF) pertains exclusively to the operation of the Government of Bangladesh EGPP+, which is supported under Component 4 of the SNSP Project. The first edition of this ESMF, which was approved and disclosed in November 2019, related solely to the Project's second Additional Financing (IDA Grant D591-BD). Government of Bangladesh has requested to World Bank to restructure the Project¹ to allow funds from the first Additional Financing (IDA Credit 6137-BD) to also support the EGPP+ in districts outside of Cox's Bazar in response to various natural disasters and economic shocks which have adversely affected poor and vulnerable households.

Therefore, the ESMF has now been updated to accommodate the operation of the EGPP+ across the country under two concurrent financings of the SNSP Project (altogether under Component 4).

¹ The request from Government of Bangladesh to the World Bank was made via letter on October 10, 2022.

Policy and Legal Framework

The Government of Bangladesh has promulgated a wide range of policies, acts and guidelines² governing environmental management. Article 18A of the Constitution of the Peoples' Republic of Bangladesh was amended in 2012 (15th Amendment) to include environmental protection as well as preservation and safeguarding of natural resources, biodiversity, wetlands, forests and wildlife. Cascading from this, the regulatory framework now emphasizes conservation of the environment, preservation of wild life, climate change mitigation and the management of water, fisheries, agriculture, embankment and drainage, etc. Regulatory requirements toward protection and conservation of environment have been enunciated by the GOB and World Bank pertinent policies and regulations among these requirements are summarized below:

The World Bank's relevant Environmental and Social Safeguard Policies include the following (1) Operational Policies / Business Procedures (OP/BP) 4.01 Environmental Assessment; (2) OP/BP 4.04 Natural Habitats; (3) OP/BP 4.11 Physical Cultural Resources; (4) OP/BP 4.36 Forestry; (5) OP/BP 4.12 Involuntary Resettlement; and (6) OP/BP 4.10 Indigenous People. Relevant World Bank guidelines include the Environmental, Health and Safety (EHS) Guidelines,

Environmental and Social Management Framework

Objectives

This ESMF pertains only to Component 4 (Strengthening Community Resilience with EGPP+) of the SNSP Project, which is applicable to all disaster-prone areas of Bangladesh where the EGPP+ may be implemented. The ESMF provides general policies, guidelines, and procedures to be integrated into the implementation of all subprojects under EGPP+ to minimize adverse environmental impacts and maximize positive environmental impacts. The ESMF consists of the Environmental Management Framework (EMF) and the Social Management Framework (SMF) discussed in chapters 4 and 5 respectively.

Project Description

Under the restructuring, the project activities will remain same. The EGPP+ is specially for the poorest section of the population. All the project beneficiaries will be the local vulnerable people and among

²(1) Environmental Conservation Act (ECA), 1995 and Amendments; (2) Environment Conservation Rules (ECR), 1997 and Amendments; (3) Environmental Policy, 2018; (4) Environmental Action Plan, 1992; (5) National Environmental Management Plan (NEMAP), 1995; (6) Bangladesh Wildlife (Preservation) Order, 1973 (Amended in 1994) ;(7) National Water Policy, 1999; (8) National Water Management Plan, 2001 (Approved in 2004) ; (9) The National Fisheries Policy, 1999; (10) The Protection and Conservation of Fish Rules, 1985 (11) National Agricultural Policy, 1999; (12) The Embankment and Drainage Act, 1952; (13) Bangladesh Climate Change Strategy and Action Plan; (14) DOE's IEE/EIA including EMP Guidelines for Industry, 1997; (15) LGED's Strategy, Guidelines and Environmental Code of Practices; (16) Bangladesh Water Act (2013); (17) Ecological Critical Area Rules (2016); & Bangladesh Biodiversity Act (2017)

them at least 40% beneficiaries will be women. Activities under the community services will be awareness building and trainings etc to the vulnerable people. Activities under community workfare will be digging/re-digging government owned ponds, reconstruction of earthen roads, construction of bamboo footbridge, construction of small reservoir for rainwater harvesting etc. All the activities will be small scale and no land acquisition or displacement will be required. The local vulnerable people will be engaged.

Potential Environmental Impacts

Although most EGPP+ subproject impacts are temporary, minor & localized due to small scale nature of the activities, there are some issues of concern that cut across the range of proposed interventions. Based on the findings of site visits, and lessons from similar public works programs show that issues such as community involvement, community ownership and selection of appropriate sites are some of the key concerns that influence program success and sustainability (details in the main report). The anticipated common negative impacts due to subprojects are: (1) Loss of topsoil of agricultural land; (2) Losses of trees/vegetation; (3) Disturbance to wildlife; (4) Air/dust pollution; (5) Noise pollution; (6) Surface water pollution; (7) Waste disposal; (8) Public & workers H&S and (9) Increased Human Wildlife Conflict (HWC).

Environmental Management Process

Specific EGPP+ subprojects are determined by the local communities on an annual basis. This ESMF has been prepared to establish a mechanism to determine and assess potential environmental impacts of subprojects identified and cleared based on a community demand driven process and to set out mitigation, monitoring and institutional measures to be taken during implementation of the subprojects. In addition to complying with the regulatory requirements of GOB and the safeguard policies of the World Bank, the principles provide a framework to (i) identify, predict, and evaluate beneficial and negative environmental impacts of subproject activities, (ii) design enhancement measures for beneficial impacts, and (iii) suitable institutional arrangements to implement the environment management measures.

The community level environmental screening will be an integral part of the subproject planning. Environmental screening (using the format provided in Annex B) would help identify concerns addressed early on and to ensure that actions to mitigate environmental impacts or enhance environmental opportunities will be carried out at the community level to understand the possible environmental impacts at subproject planning stage. A community meeting shall be held to discuss the subproject, identify the community priority and identify the environmental and social impacts. The community under the guidance of the Project Implementation Officer (PIO) and/or Sub-Assistant Engineer (SAE) (both under DDM/MoDMR) and Project Implementation Committee (PIC) (formed by local representatives of the Union Parishads) will carry out the environmental screening. In addition, the community will review the subproject specific environmental code of practices ECoP to avoid/address environmental concerns through modifications (if required) in subproject design and incorporation of mitigation measures.

The PIO/SAE will review the environmental screening and suggest appropriate mitigation measures for the impacts and will also estimate the cost for the environmental mitigation of the subprojects.

Design and implementation of the selected subprojects shall be aligned to the Environmental Codes of Practice (ECoP)³ mentioned in this ESMF. The ECoPs have been developed to guide the planning, design, construction and maintenance stages of EGPP+ activities in terms of avoidance or mitigation of the negative environmental impacts that may result from the subprojects. The codes define methods and procedures to be followed by the executing agencies, contractors and other agencies involved. The implementation of ECoPs shall be monitored as part of the safeguards monitoring arrangements of the SNSP Project.

Principles Governing Resettlement

OP 4.12 will not be triggered because acquisition of land, resettlement, and relocation will not be allowed, and there will not be any negative impacts on livelihoods. The original SNSP Project triggered OP 4.10 as the Project was implemented nationwide. This remains triggered under both Additional Financings as a precaution in case EGPP+ subprojects encounter any such communities, although the likelihood is low.

Voluntary Land Donation

During screening, the PIC will try to avoid any kind of land use for EGPP+ subprojects. However, in case land is required, private land can be temporarily used through voluntary land donation. The decision to donate land or temporary use must be taken based on a full understanding of the subprojects and the consequences of agreeing to donate the land, and thus, consultation should be held. Informed consent of the landowners must be verified in coordination with the local Government. Finally, written agreement to donate the land should be in place and relevant documents and records conserved.

GAP and GBV prevention Plan

As the grant portion of the EGPP+ is under implementation in the host community of Cox's Bazar who were affected due to influx of the Displaced Rohingya People, and there are ongoing humanitarian activities under different development partners, DDM has prepared a stand-alone Gender Action Plan (GAP) to coordinate SEA/SH interventions for Component 4 of the SNSP in the Host Community of Cox' Bazar.

The restructuring activities will remain same and due to the nature of the project, all the labors will be involved locally. There are no new risks of Gender exclusions and GBV thus the GAP is not updated.

Screening and documentation

Each subproject planning stage will need to include a social screening (Annex C) to identify any potential social effects the subproject might have. The Project Implementation Committee (PIC) will need to undertake the screening with assistance from the PIO, to ensure that the subproject does not result in or include any of the ineligible activities or effects. If the screening reveals the risks of land acquisition and/or

³ (1) Project Planning & Design Stage, (2) Site Preparation (3) Borrow Areas; (4) Top-soil Salvage; (5) Storage and Replacement; (6) Slope Stability and Erosion Control; (7) Waste Management; (8) Water Bodies; (9) Drainage; (10) Worker's Health and Safety; (11) Environmental Monitoring; (12) Tree Plantation; (13) Fertilizer Production; (14) Natural Habitats; (15) Consultations for Environmental Aspects; (16) Dust and Air Quality Management (17) Noise Management and (18) COVID protocol.

resettlement, or any other social ramifications, the PIC and PIO shall prepare a report on the risks and submit it to the DDM who will then determine how the ramifications can be avoided.

Tribal Peoples planning framework (TPPF)

The Project will not operate in the areas where there are concentrations of Tribal People (TPA Tribal Peoples Planning framework (TPPF) is already being prepared for the original financing which will be applicable for this AF. If there are any tribal people (TP) in the subproject area, a Tribal Peoples Plan (TPP) will be prepared based on free, prior, informed consultation. This will serve as the basis for subproject implementation and monitoring. In addition, the TP will need to be identified and consulted to make sure that the subproject causes no economic, cultural or settlement related effects. Together with the TPs, community elders and local community-based-organizations that are familiar to TP issues, the PIC and PIO would need to screen the subproject/s and explore alternatives to minimize any adverse impacts on TPs.

Consultation and Citizen Engagement

During preparation of safeguard documents, MODMR conducted meetings with the local government and community. Stakeholders were found to be in favor of the EGPP+ to respond to needs of poor and vulnerable households. In addition, the following were highlighted: voluntary donation of land was deemed possible for public works and community services under EGPP+, though the use of the top soil was discouraged; the possibility of livelihood opportunities were welcomed in the form of an expanded works range e.g. afforestation and grass plantation on earthen road, land filling if community institutions, garbage collection, pond/canal digging, dry fish processing and guide wall construction; in addition, the need for a wage rate higher than the rate provided by the “regular” EGPP, and pro-poor beneficiary selection processes were emphasized.

A well-defined grievance redress mechanism (GRM), as defined in the EGPP Guidelines (approved in FY 2014), is already established to resolve grievances and complaints in a timely and satisfactory manner for existing EGPP and which will continue to apply to the EGPP+ window. The GRM operates at national, district and upazila levels. At the Upazila level, the Upazila Nirbahi Officer (UNO) is the Grievance Redress Officer (GRO), while at the district level the Deputy Commissioner (DC) is the GRO. At each level, there is a Grievance Redress Register, where complaints are entered, and petitioners given receipts. The DC of respective district is the appellate authority for the upazila level complaints, while the National Steering Committee (NSC) headed by the Secretary, MODMR, will act as the final appellate authority for grievance redress.

The ESMF, including all updates, will be made available for public consultation by MoDMR/DDM, with key portions translated in Bengali, on their official websites as well as at places accessible to the people impacted / benefited by the EGPP+ (supported by Component 4 of the SNSP Project) and members of civil society (schools, libraries, Union Parishad offices, etc.). The World Bank will also disclose the document(s) as per their policies. Advertisements will be published in both English and Bengali daily newspapers announcing the disclosure of the documents and the websites and localities where they can be found.

Capacity Assessment and Implementation Arrangements

EGPP was established in 2009 and since then DDM is implementing the project nationwide. Under the EGPP+, there is a fulltime E&S specialist within the PMU. A consulting firm is also hired to support the implementation the project. Component 4 of the SNSP Project and thereby the EGPP+ are implemented by DDM centrally. At the local level, existing implementation mechanisms will be used, e.g. PICs, Union Committees, Upazila Committees, and District Committees. Union Parishads, which are the main vehicles of implementation, have limitations in capacity and that is likely to affect the implementation of the ESMF. In addition, DDM's field level capacity only includes one PIO and/or one SNSP Project-supported SAE at the upazila level to support the implementation of all DDM programs at this administrative level. It is therefore recommended that the capacity building activities under Component 2 (Strengthening MoDMR Program Administration and Shock-Responsiveness) of the SNSP Project continue to include safeguards training for the Union Parishads and field officials of DDM in the following practices: screening and understanding and working with screening impacts, scoping assessments, planning mitigation options, public consultation to assess feasibility and acceptability options; site selection and route alignment to minimize environmental impacts and social disruption; restoration of drainage patterns, land use, etc.; including mitigation measures in contracts, management of impacts during construction, monitoring of effectiveness of measures; monitoring and grievance redress, transparency and public administration in planning, reporting and supervision responsibilities and formats during implementation, documenting land transactions, complaint response record keeping and procedures. PICs and PIOs will take on the role of monitoring implementation at the field level. They will be complemented by any other implementation and monitoring support deployed by DDM.

1 INTRODUCTION

1.1 Background

1. The Project aims to improve the equity, efficiency, transparency and shock-responsiveness of major safety net programs to benefit the poorest and most vulnerable households. During its first phase from FY 2014 to FY 2017, the Project co-financed the country's flagship public works program – the Employment Generation Program for the Poorest (EGPP) – and supported improvements to its administration, alongside that of other safety nets. Two additional financings (AF) were approved in FY 2018 and FY 2020. The first AF continued co-financing for the EGPP during FY 2018 to FY 2019, and focused support on improvements to safety net beneficiary targeting, data management and payments during this second phase of the Project. The second AF aims to strengthen resilience of both the displaced Rohingya population (DRP) and the host community in the Cox's Bazar district in southern Bangladesh affected by the Rohingya forced displacement crisis which began in 2017. This ESMF applies solely to Component 4 of the SNSP Project.

1.2 Objectives of the ESMF

2. **This ESMF is applicable to all disaster-prone areas of Bangladesh where Bank-financing supports implementation of the EGPP+ (specifically under Component 4 of the SNSP Project).** Since the exact location, size and the extent of specific intervention of the project remains unknown, a framework approach has been adopted. The ESMF has been prepared to guide the detailed environment and social assessments addressing overall safeguard issues on each physical intervention at any site from preparation, through review and approval, to implementation of the program.

2 PROJECT OBJECTIVES AND DESCRIPTION

2.1 Project Development Objective (PDO)

3. The PDO is to improve the equity, efficiency, transparency, and shock-responsiveness of major safety net programs to benefit the poorest households.

2.2 Project description

4. Component 1 has supported the Department of Disaster Management (DDM) under the Ministry of Disaster Management & Relief (MoDMR) to incrementally improve the performance of selected safety net programs. Component 2 provides technical assistance to DDM to utilize poverty data from the National Household Database (NHD) to identify potential recipients of social assistance, establish a

common safety net program management information system (MIS) for more efficient administration, and scale-up digital payments of program benefits, among others. Component 3, implemented by the Bangladesh Bureau of Statistics (BBS) under the Statistics & Informatics Division (SID), supports the establishment of the NHD – the country’s first universal social registry. Component 4 finances wages and stipends to beneficiaries of EGPP+. Component 5 provides support to the DRP in partnership with the World Food Program (WFP).

The ESMF pertains solely to Component 4 (Strengthening Community Resilience with EGPP+). EGPP+ is intended to provide much needed income support to disaster-affected households in the short-term while helping to rehabilitate damaged community infrastructure. Under the first AF (IDA Credit 6137-BD) EGPP+ would operate in districts outside Cox’s Bazar. The second AF (IDA Grant D591-BD) would exclusively support EGPP+ in Cox’s Bazar.

Table 2.1: SNSP Project Component 4 Activities and Eligibility

<p><i>Eligible beneficiaries:</i></p> <p><u>Community workfare:</u></p> <ul style="list-style-type: none"> • Aged 18-60yrs (at least 33% women) <p>Able bodied;</p> <ul style="list-style-type: none"> • Owning < 0.1 acre of land, or not a significant number of poultry or livestock; • Maximum monthly earnings: as determined by the implementation guidelines of EGPP+; and, • Not receiving benefits from any other safety net programs of the government. <p><u>Community services:</u></p> <ul style="list-style-type: none"> • Aged 18-60yrs (at least 33% women) (this age restriction may be relaxed for subprojects not involving labor intensive efforts) • Women and female-headed households to be prioritized • People with disability (14yrs+ prioritized) • Child-headed households • Elderly (unconditional assistance if unable to work) • Owning < 0.1 acre of land, or not a significant number of poultry or livestock; • Maximum Monthly earnings: as determined by the implementation guidelines of EGPP+; and, • Not receiving benefits from any other safety net programs of the government.

Eligible activities**Community workfare:**

- Pond/canal digging/re-digging for irrigation and/or prevention of waterlogging
- Construction/reconstruction of Bridges (as requested by the Water Development Board)
- Digging/re-digging of Government or institution-owned ponds for public use
- Landfilling and construction of latrines in the compounds of different educational, social and religious institutions
- Bamboo footbridge construction
- Construction/re-construction of earthen shelters for animals in proximity of disaster shelters during times of cyclone and tidal surge
- Arranging garbage dumps for compost creation
- Development of (temporary) helipads
- Development of open spaces and drainage within livestock markets
- Construction of small reservoirs for rainwater harvesting
- Repair of rural roads and other rural infrastructure
- Afforestation along roads and ponds
- Plot demarcation
- Improvement of natural disaster tolerant houses for extreme poor households
- Rehabilitation of community infrastructure (sidewalks, public spaces, public offices, community centers, drainage, WASH infrastructure, schools, clinics etc.)
- Any other project requested by the Ministry of Disaster Management and Relief

Community Services:

- Community engagement in awareness/ community meetings
- Community engagement in volunteer network activities
- Community engagement in spending time/supporting vulnerable children and elderly
- Urban and community cleaning
- Garbage collection
- Messaging on uptake of basic services
- Messaging to improve disaster preparation
- Social cohesion promotion/sensitization

3 POLICY AND LEGAL FRAMEWORK

3.1 Relevant Environmental Government Policies, Acts, Rules, Strategies and Guidelines

5. Article 18A of the Constitution of the Peoples’ Republic of Bangladesh was amended in 2012 (15th Amendment) to include environmental protection as well as preservation and safeguarding of natural resources, biodiversity, wetlands, forests and wildlife. This commitment is to present and future generations.

6. Regulatory requirements toward protection and conservation of environment have been enunciated by the GOB and these requirements are listed below:

Table 3.1: Relevant Environmental Laws/Acts and Provisions

SI No.	Policy/Acts/Rules	Key provisions and purpose
1.	National Environmental Policy, 2018	Major elements of the policy are <ul style="list-style-type: none"> • maintaining the ecological balance for ensuring sustainable development; • protection of the country against natural disasters; • identifying and controlling activities which are polluting and destroying the environment; • ensuring environment-friendly development in all sectors; • promoting sustainable and sound management of natural resources; and • active collaboration with international initiatives related to the environment
2.	National Environmental Management Action Plan (NEMAP), 1995	The NEMAP was developed with the following objectives: <ul style="list-style-type: none"> • to identify key environmental issues affecting Bangladesh; • to identify actions to halt or reduce the rate of environmental degradation; • to improve management of the natural environment; • to conserve and protect habitats and bio-diversity; • to promote sustainable development; and • to improve the quality of life.
3.	Environment Conservation Act (ECA), 1995(Amended in 2000, 2002 & 2010)	The main objectives of ECA are: <ul style="list-style-type: none"> • Conservation and improvement of the environment; and • Control and mitigation of pollution of the environment. The main focuses of the Act can be summarized as: <ul style="list-style-type: none"> • Declaration of ecologically critical areas and restriction on the operations and processes, which can or cannot be carried out/initiated in the ecologically critical areas (ECA); • Regulations in respect of vehicles emitting smoke harmful for the environment; • Environmental clearance;

		<ul style="list-style-type: none"> • Regulation of industries and other development activities' discharge permits; • Promulgation of standards for quality of air, water, noise and soil for different areas for different purposes; • Promulgation of a standard limit for discharging and emitting waste; and • Formulation and declaration of environmental guidelines.
4.	The Water Act, 2013	The Act recognizes the significance of managing all forms of water resources in the natural flow of surface water and recharge of groundwater. The private landowners will be able to use the surface water inside their property for all purposes per the Act. No individuals or organizations will be allowed to extract, distribute, use, develop, protect, and conserve water resources, nor will they be allowed to build any structure that impedes rivers and creeks' natural flow.
5.	Environment Conservation Rules, 1997 (Amended in 2002)	The Environment Conservation Rules, 1997 were issued by the GOB in exercise of the power conferred under the Environment Conservation Act (Section 20), 1995. Under these Rules, the following aspects, among others, are covered: <ul style="list-style-type: none"> • Declaration of ecologically critical areas; • Classification of industries and projects into four categories; • Procedures for issuing the Environmental Clearance Certificate (ECC); and • Determination of environmental standards.
6.	Wetland Protection Act, 2000	The latest Wetland Act -- The Playground, Open Spaces, Gardens, and Wetland Conservation Act 2000 -- suffers from loopholes and inadequacies regarding protection of water bodies. Section 1 of this Act suggests that it has application on the water bodies of the cities, divisional and district towns and municipalities. The water bodies in the rural areas are outside the jurisdiction of this Act
7.	National Water Policy, 1999	The policy emphasizes efficient and equitable management of water resources, proper harnessing and development of surface and ground water, availability of water to all concerned and institutional capacity building for water resource management
8.	National Agriculture Policy, 1999	This policy aims to make the nation self-sufficient in food through increasing production of all crops including cereals and ensure a dependable and secure food system for all
9.	The Embankment and Drainage Act, 1952	It provides provision for the construction, maintenance, management, removal and control of embankments and water courses for the better drainage of lands.
10.	Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009	This is a comprehensive strategy to address climate change challenges in Bangladesh. Bangladesh Climate Change Strategy and Action Plan built on and expanded the NAPA.

3.2 Social Policies, Acts and Guidelines

7. Important social policies, acts and guidelines include:

Table 3.2: Relevant Social Laws/Acts and Provisions

S.N.	Policy/Acts/Rules	Key Provisions
1	The Acquisition and Requisition of Immovable Property Act 2017 (ARIPA)	It is the principal legislation governing eminent domain land acquisition in Bangladesh. The Act requires that compensation be paid for: (i) land and assets permanently acquired (including standing crops, trees, houses); and (ii) any other damages caused by such acquisition. The Act also provides the acquisition of properties belonging to religious organizations like mosques, temples, pagodas, and graveyards if acquired for the public interest.
2	Labor Related Laws	The Bangladesh Labor Act 2006 is a comprehensive legislation and addresses three areas: (i) Conditions of service and employment including wages and payment, the establishment of Wages Boards, employment of young people, maternity benefits, working hours and leave; (ii) Health, safety, hygiene, and welfare, and compensation for injury; (iii) Trade unions and industrial relations.
3	Community Health and Safety Related Laws	The management of community health and safety of development projects is covered under ECA and ECR. Typically, OHS measures extend to the general public at construction sites. There are two components of CHS. One is the physical safety of project communities exposed to the project activities during construction and operation, including risks of accidents and risks of violence due to increase in crimes and cultural conflict between locals and migrant populations. The other pertains to the community's exposure and/or increased risks of diseases due to influx of people during construction and operation and due to the changes in the project area, including pollution and ecological change. The OHS provisions of Labor Act partly address the physical safety aspects. Traffic road accidents are a severe issue in Bangladesh and Road safety issues have been incorporated in Some road Improvement projects.
4	Stakeholder Engagement and Information Disclosure	The DoE guidelines for IEE/EIA preparation guidelines encourage the implementing agency to conduct public consultations of orange-B and red category projects. The current environmental and social framework in Bangladesh does not recognize public consultation as a means for environmental decision making. Implementing agencies present the outcome of their assessment in the IEE/EIA reports which they submit to the DoE for clearance. However, opportunities for the public to review the final/completed IEE/EIA report are under the discretion of the Director-General of the DoE. The DoE does not officially disclose EIA report findings publicly on their website.

		However, when carrying out donor projects public consultation of reports are a standard practise and DoE is cognizant of this.
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3.3 World Bank’s Relevant Environmental Safeguard Policy

3.3.1 Background

8. The Bank requires environmental assessment (EA) of projects proposed for Bank financing to ensure that they are environmentally sound and sustainable, and thus to improve decision making. The World Bank’s environmental assessment policy and recommended processing are described in Operational Policy (OP)/Business Procedure (BP) 4.01: Environmental Assessment. This policy is considered to be the umbrella policy for the Bank’s environmental "safeguard policies" which among others include: Natural Habitats (OP 4.04), Forests (OP 4.36), Pest Management (OP 4.09), Physical Cultural Resources (OP 4.11), and Safety of Dams (OP 4.37). Operational Policies (OP) are the statement of policy objectives and operational principles, including the roles and obligations of the Borrower and the Bank, while as Business Procedures (BP) are the mandatory procedures to be followed by the Borrower and the Bank. OP/BP 4.01 issued in January 1999 is the central document defining the Bank’s environmental assessment requirements. The following are the WB’s environmental policy guidelines:

- OP 4.01 Environmental Assessment
- OP 4.10 Indigenous people
- OP 4.04 Conservation of Natural Habitats
- OP 4.36 Forestry
- OP 4.37 Safety of Dams

9. The relevant World Bank policy for Component 4 of the SNSP Project is OP 4.01 Environmental Assessment. Environmental Assessments are used by the World Bank to identify, avoid, and mitigate the potential negative environmental impacts associated with Bank lending operations.

3.3.2 OP/BP 4.01 Environmental Assessment

10. The Bank requires Environmental Assessment (EA) of projects proposed for Bank support to ensure that they are environmentally sound and sustainable, and thus to improve decision making. The EA is a process whose breadth, depth, and type of analysis depend on the nature, scale, and potential environmental impact of the proposed project. The EA evaluates a project’s potential environmental risks and impacts in its area of influence; examines project alternatives; identifies ways of improving project selection, siting, planning, design, and implementation by preventing, minimizing, mitigating, or compensating for adverse environmental impacts and enhancing positive impacts; and includes the process of mitigating and managing adverse environmental impacts throughout project implementation. The EA takes into account the natural environment (air, water and land); human health and safety; social aspects (involuntary resettlement, indigenous peoples and physical cultural resources); and transboundary and global environmental aspects. The borrower is responsible for carrying out the EA and the Bank advises the borrower on the Bank’s EA requirements.

11. The Bank classifies the proposed project into three major categories, depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts.

- *Category A:* The proposed project is likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented. These impacts may affect an area broader than the sites or facilities subject to physical works.
- *Category B:* The proposed project's potential adverse environmental impacts on human population or environmentally important areas-including wetlands, forests, grasslands, or other natural habitats- are less adverse than those of Category A projects. These impacts are site specific; few if any of them are irreversible; and in most cases mitigatory measures can be designed more readily than Category A projects.
- *Category C:* The proposed project is likely to have minimal or no adverse environmental impacts.

Other policies that exist but not applicable to this ESMF are described below for reference.

3.3.3 OP/BP 4.04 Natural Habitats

12. The conservation of natural habitats, like other measures that protect and enhance the environment, is essential for long-term sustainable development. The Bank therefore supports the protection, maintenance, and rehabilitation of natural habitats and their functions in its economic and sector work, project financing, and policy dialogue. The Bank supports, and expects borrowers to apply, a precautionary approach to natural resource management to ensure opportunities for environmentally sustainable development. The Bank promotes and supports natural habitat conservation and improved land use by financing projects designed to integrate into national and regional development the conservation of natural habitats and the maintenance of ecological functions. Furthermore, the Bank promotes the rehabilitation of degraded natural habitats. The Bank does not support projects that involve the significant conversion or degradation of critical natural habitats.

3.3.4 OP/BP 4.10 Indigenous People

The EGPP+ will be implemented in additional districts as well as Cox's Bazar in response to natural disasters and other economic shocks. Since the exact location of the sub-projects is not known at this stage, there is a possibility of triggering OP 4.10 should the sub-projects be implemented in tribal areas or areas where indigenous peoples are present. The World Bank policy on tribal peoples requires that the development process fully respects the dignity, human rights, economies, and cultures of Tribal Peoples. The Bank provides project financing only where free, prior, and informed consultation results in broad community support to the project by the affected Tribal Peoples. Such Bank-financed projects include measures to (a) avoid potentially adverse effects on the Tribal Peoples' communities; or (b) when avoidance is not feasible, minimize, mitigate, or compensate for such effects. Bank-financed projects are also designed to ensure that the Tribal Peoples receive social and economic benefits that are culturally appropriate and gender and intergenerationally inclusive. The term "Tribal Peoples" is used in a generic

sense to refer to a distinct, vulnerable, social and cultural group possessing the following characteristics in varying degrees:

- self-identification as members of a distinct tribal cultural group and recognition of this identity by others.
- collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories.
- customary cultural, economic, social, or political institutions that are separate from those of the dominant society and culture; and
- a tribal language, often different from official language of the country/ region.

3.3.5 OP/BP 4.11 Physical Cultural Resources

13. Physical cultural resources are defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Their cultural interest may be at the local, provincial or national level, or within the international community. Physical cultural resources are important as sources of valuable scientific and historical information, as assets for economic and social development, and as integral parts of a people's cultural identity and practices. The Bank assists countries to avoid or mitigate adverse impacts on physical cultural resources from development projects that it finances. The impacts on physical cultural resources resulting from project activities, including mitigating measures, may not contravene either the borrower's national legislation, or its obligations under relevant international environmental treaties and agreements. The borrower addresses impact on physical cultural resources in projects proposed for Bank financing, as an integral part of the environmental assessment (EA) process. The following projects are classified during the environmental screening process as Category A or B and are subject to the provisions of this policy: (a) any project involving significant excavations, demolition, movement of earth, flooding, or other environmental changes; and (b) any project located in, or in the vicinity of, a physical cultural resources site recognized by the borrower. Projects specifically designed to support the management or conservation of physical cultural resources are individually reviewed, and are normally classified as Category A or B. When the project is likely to have adverse impacts on physical cultural resources, the borrower identifies appropriate measures for avoiding or mitigating these impacts as part of the EA process. These measures may range from full site protection to selective mitigation, including salvage and documentation, in cases where a portion or all of the physical cultural resources may be lost.

3.3.6 OP/BP 4.36 Forestry

14. The Policy envisages the protection of forests through consideration of forest-related impact of all investment operations, ensuring restrictions for operations affecting critical forest conservation areas, and improving commercial forest practice through the use of modern certification systems. In the process of forest conservation interventions, especially the local people, the private sector and other pertinent stakeholders should be consulted. In general, the Policy aims at reducing deforestation and enhancing the environmental and social contribution of forested areas. Experience with the Bank reveals that the Bank does not support commercial logging in primary tropical moist forest.

3.3.7 OP/BP 4.12 Involuntary Resettlement

15. This Policy is based on assisting the displaced persons in their efforts to improve or at least restore their standards of living. The impetus of this Policy is that development undertakings should not cause the impoverishment of the people who are within the area of influence of the undertakings. In cases where resettlement of people is inevitable, or in cases where loss of assets and impacts on the livelihood of the PAPs is experienced, a proper action plan should be undertaken to at least restore, as stated above, their standard of life prior to the undertakings.

16. Concerning public consultation, re-settlers as well as the host communities should be consulted for the successful implementation of the resettlement process. The views of the consulted resettles and the host communities should be incorporated into the Resettlement Action Plan (RAP) including the list of their choices.

3.3.8 WB Group Environmental, Health and Safety Guidelines

17. The Environmental, Health and Safety (EHS) Guidelines of the WB Group, 2008 is the safeguard guidelines for environment, health and safety for the development of the industrial and other projects. They contain performance levels and measures that are considered to be achievable in new facilities at reasonable costs using existing technologies.

3.4 Implication of Policies and Legislations with DDM Activities

18. The relevant policy and legislation documents underscore the importance of environmental consideration in project planning and implementation to promote sustainable development. These provide the general guidelines to integrate environmental issues with different sector projects and programs. The ECR 1997 (including later amendments) is the main legislation in Bangladesh. ECR 1997 defines different sectors (industries and projects) as 'Green', 'Orange-A', 'Orange-B' and 'Red' categories, without considering the extent and types of interventions. For example, construction/ reconstruction/ expansion of flood control embankment, polders, dikes etc. are classified as the 'Red' category project. However, it does not explicitly mention the environmental category for earthen embankments/polders, small-scale repairing or rehabilitation projects having minor environmental impacts. Again, environmental clearance is mandatory for projects (3 years for Green category and 1 year for other categories). Considering the numbers of small-scale subprojects, EGPP+ requires a flexible approach on environmental categorization and clearance.

19. The EGPP+ involves earthworks including road construction/repairs, landfill for community institutions, etc. and the nature of these the subprojects may lead to negative environmental impacts. Subprojects may also have adverse environmental impacts if they are not properly designed or executed, or mitigation measures are not implemented. However, most of the environmental impacts are expected to be insignificant, localized and reversible. In order to address the potential environmental impacts and

improve existing environmental conditions, the World Bank Policy on Environmental Assessment (OP/BP 4.01) has been triggered for this project.

4 ENVIRONMENTAL AND SOCIO-ECONOMIC BASELINE

In terms of coverage, the EGPP+ may be implemented nationwide. However, component activities and locations are yet to be finalized. As result it is not possible to prepare any Project-specific environmental baseline. Alternatively, the ESMF includes the generic environmental baseline for relevant component type and guideline for collection of information and data. The baseline information can be used in the screening matrix given in chapter 5 to identify and monitor probable impacts and identify mitigation measures.

The baseline data/information on physical, biological, and socio-economic environments of the subproject areas can be collected from:

- Secondary Sources: This included data from literature reviews, maps, websites, etc.; and
- Primary Sources: This included gathering information from field visits and public consultations in the sample subproject areas.

4.1 Physical Environment Baseline

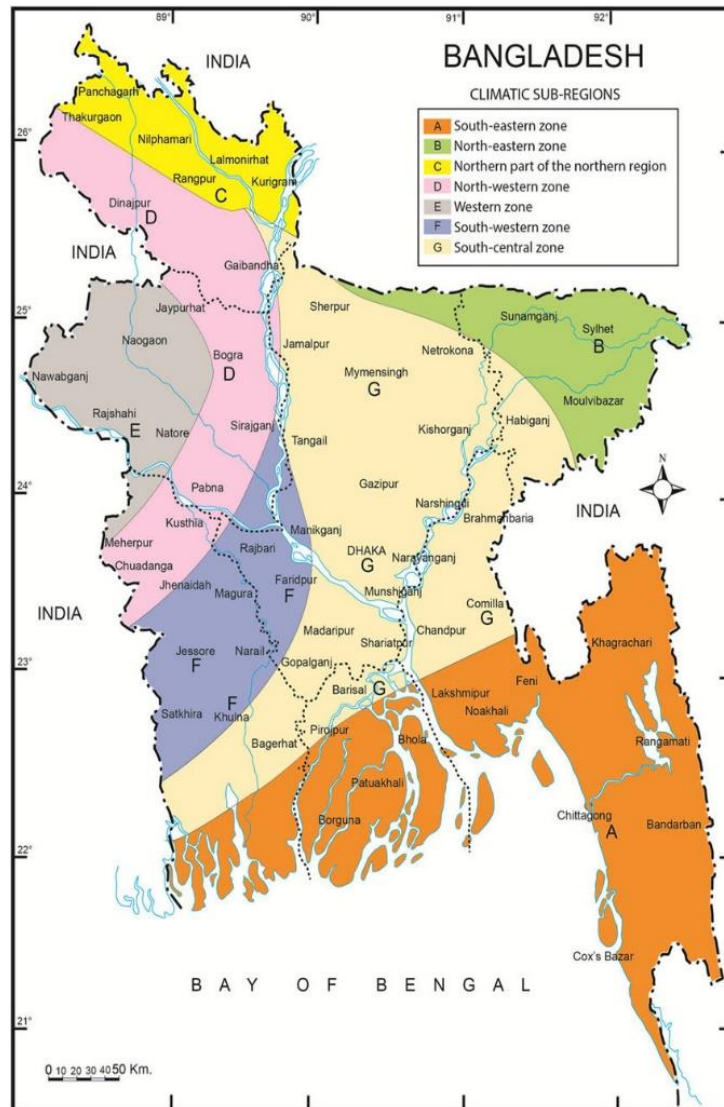
4.1.1 Climate

The climate of all over Bangladesh is heavily influenced by Asiatic monsoon. The monsoonal influence results in three distinct seasons:

- Pre-monsoon hot season (from March to May);
- Rainy monsoon season (from June to September); and
- Cool dry winter season (from October to February).

Bangladesh, a small country with generally low-lying area, is a country located at the central part within the Asiatic monsoon region where the climate is tropical. The climate peculiarity of this country happens between June and September, this period is known as monsoon period and during those months' climate conditions change dramatically due to changes in atmospheric circulation and precipitation associated with the asymmetric heating of land and sea as main reason. Because of this type of climate, the country has moderately warm temperatures, high humidity and heavy rainfalls.

The climate of Bangladesh ranges from subtropical to tropical, with a pleasantly warm and sunny winter from November to February, a short hot spring between March and May, and a long rainy season from June to October due to the summer monsoon. The climate of Bangladesh is divided in 7 sub-regions shown in Figure 4.1, whereby temperature, wind, cloud cover, rainfall and humidity are specifics of each sub-region, according to Bangladesh Meteorological Department.



Source: BMD

Figure 4.1: Climatic sub-regions of Bangladesh

4.1.2 Hydrology and Hydrogeology

20. Bangladesh, a riverine country is famous for its rivers and their geographical positions. According to the Bangladesh Water Development Board (BWDB 2011) there are 57 are trans-boundary in nature of 407 rivers. Most of the rivers flow from north to south and finally discharging the water into the Bay of Bengal. Three of Asia's most mighty rivers, the Ganges-Padma, the Brahmaputra-Jamuna and the Meghna flow through Bangladesh. The country's major rivers have originated mainly from outside of the country. These rivers carry 1.2 trillion cubic meters of water along with more than 1 billion tons of sediment every year from the catchment area outside the country.

21. The National Water Management Plan, 2004 has delineated the eight Hydrological Regions in Bangladesh, based on appropriate natural features, for planning the development of their water resources. The Hydrological Regions are Southwest (SW), Northeast (NE), North Central (NC), Northwest (NW), South Central (SC), Southeast (SE), Eastern Hills (EH), River and Estuary Region (RE).

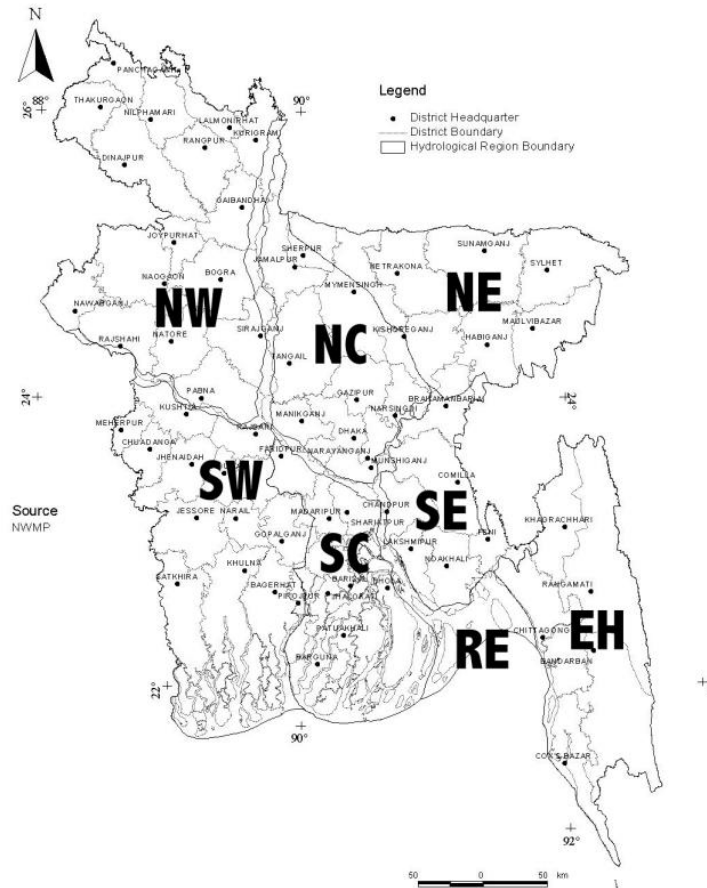


Figure 4.2: Hydrological regions of Bangladesh

22. NW Region encompasses the Rajshahi Administrative Division and is bounded by the Brahmaputra and Ganges rivers. It is the driest hydrological region in Bangladesh. Severe flooding occurs in the southern part of the region, often for long periods in the monsoon when flood levels in the Ganges and the Brahmaputra are higher than internal river levels. This causes the internal drainage flows to pond up in the lower reaches of the Atrai, Hurashagar and Bangali rivers. Erosion along the right bank of the Brahmaptura is the cause of much hardship to those living in the area.

23. NC Region is bounded by the Brahmaputra, Padma and Meghna rivers and by the Old Brahmaputra and Lakhya rivers in the north and north east. It is physiographically more diverse than other regions except EH, with the elevated Madhupur Tract, much of which is forested, covering some 2,400km²

in the center of the region. Flooding and drainage problems exist in various parts of the region. These are most serious in the low-lying parts on the left banks of the Brahmaputra and Padma rivers.

24. The NE region has the highest rainfall in Bangladesh. The physiography of the division consists mainly of hill soils, encompassing a few large depressions known locally as "beels" which can be mainly classified as oxbow lakes. Several beels become connected in the monsoon to form haors. There are many haors in the region and the largest ones include Hakaluki, Kawadighi, Tanguar and Hail. The region experiences flash flood during pre-monsoon and monsoon seasons. Early flash floods during the months of April-May damage the main crop Boro rice nearly or just before the harvesting. About 60% of the total runoff in the region is produced, mostly in the form of flash flood occurring outside Bangladesh.

25. This SW region comprises two distinct zones, the inland zone extending from the Ganges and Padma rivers south to around Khulna, and the coastal zone. Arsenic occurs widely throughout the region but is most concentrated in the groundwater areas adjacent to the main rivers. Dry season flows down the Gorai river, the main conduit for Ganges river water into the region ceased between 1988 and 1998 due to excessive siltation at the intake from the Ganges. The northern and southern parts of the SW region are very different. Almost all the northern inland zone has widespread STW irrigation, and the dry season surface water is generally fresh rather than saline. Most shallow groundwater there is saline and surface water salinity is widespread, with consequently severe constraints on both domestic water supplies and irrigation.

26. Adjoining the SW Region and bounded by the Padma and Meghna rivers, the SC Region has a similar inland-coastal zone division. The region does not have the same dry season water shortage problem as the SW. On the other hand, it is much more vulnerable to cyclone surges in the coastal zone, partly because it lacks a protective mangrove belt. Like the South West, the region has a serious arsenic problem. In the south of the SC, numerous large tidal channels dissect the land area. SC Region is less industrialized than the country as a whole and only 12% of its population is urban. The north eastern part of the SC is regularly flooded from the Padma river and the river intakes, notably of the Arial Khan, are unstable and frequently changing location. The Padma is morphologically a young river, and attempts to stabilize and/or embank it may well be premature

27. The SE region is one of the smaller regions, like SW and SC Regions, it has an inland zone and a coastal zone, with widespread STW irrigation in the former and a serious cyclone risk and drainage congestion and salinity intrusion problems in the latter. It is the region most seriously affected by arsenic contamination of groundwater with between two-thirds and three-quarters of its inhabitants at risk. Whilst water shortage is generally not serious except in the very south, as is demonstrated by the substantial LLP irrigation development in most of the region. However, there are limitations on overall peak flow requirements and problems with gas in the aquifer, which inhibits tube well abstraction in the north of the region. Bank erosion by the Meghna is serious around Chandpur and other areas, whereas there is major land accretion along the southern shores of the region.

28. The EH Region comprises of two distinct sub-regions, the Chittagong Coastal Plain and the Chittagong Hill Tracts (CHT). The CHT has no flooding problems and has some potential for small developments of drip irrigation for high values crops. Other important issues in the CHT concern the improvement of rural and urban water supplies and sanitation and other water-related urban services in the small number of existing towns. In the Chittagong Coastal Plain (CCP), the Chittagong conurbation

(population 3M) has serious water supply, sanitation, pollution and other water-related problems. Cyclone risks are high. Most of the CCP is water-short, especially with the general lack of useable groundwater.

29. Groundwater in Bangladesh occurs at a very shallow depth where the recent river-borne sediments form prolific aquifers in the floodplains. In the higher terraces, the Barind and Madhupur tracts, the Pleistocene Dupi Tila sands act as aquifers.

4.1.3 Air Quality

30. In general, the air quality in the rural areas is not susceptible to intense pollution due to lack of industries or intense vehicular movement. Some localized dust pollution temporarily occurs near construction sites and brick kilns in the dry season (November to May). Some noise and vehicular pollution increase along roadsides. Detailed baseline data on air quality is currently not available.

4.1.4 Soils and Topography

31. Regarding soil formation, two distinct conditions occur in Bangladesh: alternating seasonal wet or inundated and dry conditions, as prevalent on most of the flood plain areas, and intermittently wet or moist or dry conditions, as on the upland areas of hills and terraces. In many areas, soil surveys show active, young, and old floodplain landscapes. Active floodplains occupy land within and adjacent to the main rivers where shifting channels deposit and erode new sediments during the annual floods. Usually, silty and clay deposits are finely stratified, and sandy deposits, as well as mixed sandy and silty deposits are coarsely stratified.

32. The young and old floodplains are virtually stable land that the main river channel has moved away, but they are crossed by tributary or distributary channels that vary from active to moribund delta. On these floodplains, the process of soil formation dominates over sediment deposition, as evidenced by soil characteristics i.e. the original alluvial stratification has been broken up by biological mixing; the subsoil has developed structure and oxidized mottles; and, in older soils, the topsoil has become acid.

33. Topography configuration of a land surface including its relief and contours, the distribution of mountains and valleys, the patterns of rivers, and all other features, natural and artificial, that produce the landscape. Although Bangladesh is a small country, it has considerable topographic diversity with three distinctive features: (i) a broad alluvial plain subject to frequent flooding, (ii) a slightly elevated relatively older plain, and (iii) a small hill region drained by flashy rivers. On the south, a highly irregular deltaic coastline of about 600 km fissured by many estuarine rivers and channels flowing into the Bay of Bengal. The alluvial plain is part of the larger plain of Bengal, which is sometimes called the Lower Gangetic Plain. Elevations of the plains are less than 10m above the sea level.

4.2 Biological Environment Baseline

34. Most part of Bangladesh consists somewhat of a “secondary ecosystem”, where the area has long been utilized for cultivation and various other activities. The area consists of seasonally flooded cropland and seasonal and perennial water bodies, which represent the majority of the country.

35. Bangladesh is a land of water and wetlands with the largest delta in the world and one of the most fertile regions. The wetlands in Bangladesh encompass a wide variety of ecosystems including the main rivers (the Ganges, the Brahmaputra and the Meghna) and their 700-plus tributaries and distributaries; about 6,300 beels (permanent and seasonal shallow lakes in floodplain depressions); at least 47 major haors (deeply flooded depressions in the north-east), baors (oxbow lakes); vast areas of seasonally flooded land; and fish ponds and tanks (Nishat 1993, Khan 2001). Floodplains in Bangladesh occupies a greater part of the landscape and offers important habitats of wide variety of wild flora and fauna. A total of 200-300 plant species in Bangladesh are considered to be wetland species for all or part of their life spans.

36. Bangladesh possesses a good species diversity of flora and fauna. The tropical semi-evergreen forests in the country are botanically amongst the richest in the Indian subcontinent, and they also support a good diversity of mammals and great diversity of birds. Bangladesh possesses rich species diversity particularly for angiosperms. It has been reported from previous studies that there is a total of 3,611 species of angiosperm. Although endemism is relatively low for the country, the records suggest the existence of at least 16 endemic species of flowering plants in Bangladesh (Encyclopedia of Flora and Fauna of Bangladesh (2007) and Indian Forth National Report to CBD).

37. Rivers, Floodplains, wetlands and estuaries of Bangladesh support a myriad of species comprising biological diversity. Aquatic biodiversity of the country is also a basis of renewable resources-based economic growth and millions of people enjoy their day-to day livelihoods from these important resources. Biodiversity has a very close relationship between ecosystem services and livelihoods when allocating land and natural resources. Healthy ecosystems ensure human well-being by providing food, materials (e.g. wood, crops, fiber, fruits and vegetables) and clean water, and also by breaking down waste materials. Diversity of ecosystems and its rich floral and faunal resources have made Bangladesh and its ecosystems resilient to natural calamities. The rich biodiversity of this land with moderate tropical climate makes it soothe for the human habitation. As an agrarian society, Bangladesh and its population heavily depend on the genetic resources of crop varieties. The history of its rich agricultural practices goes back to many centuries and farmers were highly innovative to create many cultivars using wild genetic resources. Presence of 10,000 plus rice varieties is a clear example of our vast wealth of genetic resources. Bangladesh is also one of the oldest producers of cotton and its rich and diverse collection of medicinal plants attracts attentions throughout the history.

38. The Cox’s Bazar sea beach also supports five species of sea turtles including olive ridley turtle (*Lepidochelys olivacea*), green turtle (*Chelonia mydas*), hawksbill turtle (*Eretmochelys imbricate*), loggerhead turtle (*Caretta caretta*), and leather back turtle (*Dermochelys coriacea*). Mudflats and sand dunes across the sea beach are the other two environmental assets of the project area. The *Ipomoea pes-caprae* dominated sand dune vegetation in the shoreline of Cox’s Bazar through Teknaf protect the beach from soil erosion and recruit sands for increasing elevation of the beach. It supports the breeding of the

turtles. There is a significant land of sea-beach found to be planted by Jhau (*Casuarina equisetifolia*) and Baen (*Avicennia officinalis*) tree in Cox's Bazar zone. A large size sand dune formation due to this plantation was observed⁴. Himchari National Park, declared in 1980, is one of the important protected areas in Bangladesh. It lies under the Cox's Bazar South Forest Division covering the area 1729 ha. This is the home of 56 species of reptiles, 13 amphibians, 286 birds, and more than 100 species of trees, shrubs, grasses, canes, palms, ferns and herbs, etc. Waterfalls adds a great weight with the total beauty of the Himchari national park. It attracts more than two million visitors each year. According to IUCN (2016), there are 50-78 elephants in the Cox's Bazar District South region (which consists 5 forest ranges in Ukhiya and 4 in Teknaf)⁵. Around 40 of these are trapped in and around the camps due to the sudden influx of DRP⁶.

39. To date, Bangladesh has two Ramsar sites⁷, the world's largest mangrove forest, the Sundarbans, and Tanguar Haor and proposed Hakaluki Haor. The Sundarbans is situated at the Southwest corner of Bangladesh, with India, is the largest mangrove wetland of the world.

4.3 Socio-Economic Baseline

4.3.1 Female-headed households and household size

Generally, the country is characterized as a patriarchal society. According to Bangladesh Labor Force Survey 2016-17, with nearly 85.8 per cent having a male head, compared with 14.2 per cent with a female head. By area, female-headed households are more, (15.1 per cent) in urban areas, compared with (13.8 per cent) in the rural areas. It is also observed from the 2016-17 labor force survey that the household size is less for female-headed households.

4.3.2 Dependency ratio

The dependency ratio measures the proportion of children and older persons to the proportion of persons of workforce age. According to the Labor Force Survey, the age dependency ratio was defined as the ratio of the sum of the population younger than 15 years and the population aged 65 or older, divided by the number of persons aged between 15 and 64 years. The age dependency ratio is thus a summary indicator of the burden falling on the working-age population. Considering the inactive population (aged 0–14 years and 65 or older) are more likely to concentrate in rural areas than the workforce population. Thus, the dependency ratio for the youth population is 45.8 per cent in urban areas and 54.2 per cent in the rural areas. Among the elder population, the dependency ratio is 5.7 per cent in the urban and 8.7 per cent in the rural areas.

⁴ UNDP (2017) Report on Environmental Impact of DRP Influx.

⁵ IUCN (2016) Status of Asian Elephants in Bangladesh.

⁶ Personal communication with Mr. Motaleb of IUCN.

⁷ A Ramsar site is a wetland site designated to be of international importance under the Ramsar Convention

4.3.3 Household by sources of drinking water

According to the Labor Force Survey, the use of Tube well was the dominant (88.0 per cent) type of source of drinking water both in rural (95.6 per cent) and urban (86.7 per cent) and city corporation (47.4 per cent) areas. However, tap water is the second highest (10.1 per cent) source of drinking water.

4.3.4 Vocational training

Vocational training outside the formal school system provides an important opportunity for many people to develop skills useful in the workforce. Based on the Labor World Force survey of Bangladesh, an estimated 1.9 million persons (about 1.7 per cent of the total working age population) have participated in a formal training course outside the general school system. The proportion of training in urban areas (3.4 per cent) was much higher than that of rural areas (1.1 per cent) for both sexes

4.3.5 Occupation

In the four primary selected districts, most of the population are farmers and related with agricultural labor. This restructuring will cover three rather different groups who face various types of shocks and risks. These include: (i) the chronic poor, i.e., those who are poor even during “good times,” because they have limited access to assets and income to manage risks and even small reductions in their assets and income can have serious adverse consequences for them; (ii) the transient poor, i.e., those who live close to the poverty line and could fall into poverty when an individual household or the economy as a whole faces hardships; and (iii) other vulnerable population groups for whom general stability and prosperity alone would not be sufficient such as the disabled and divorced/separated/widowed women without access to any regular employment or help from others. Thus, given the types of shocks and risks, employment to the project activities will raise the incomes and employment opportunities of the poor people.

A detailed are given below.

Table 4.1: Occupation of the project districts

Occupation	Percentage
N	527
Agriculturist	12.33
Farmer at others cultivation	3.23
Labor (construction, port labor etc)	21.25
Fisherman	1.71
Raising livestock	5.69
Poultry farm	2.47
Vegetable cultivation/nursery	0.19
Employee at shop/hotel	0.57
Household helping hand	0.57
Sewing/ cottage industry/ handmade job	1.52
Rickshaw puller/truck/bus driver	4.55
Hawker	0.19
Owner of shop/hotel	1.90
Business, wholesale/industry	3.04
Skilled labor (carpenter/potter/blacksmith/jeweler/mechanic)	2.47
Teacher/home tutor	0.95
Private employee	9.68
Government employee;	1.14
Imam, priest;	0.57
Leasing/renting out land	1.33
Renting out property other than land (shop/tractor);	2.47
picking leftover paddy	0.38
other small business	7.02
Student	8.54
Housewife	1.52
NGO employee	0.19
Unemployed/ retired/ disable/child	3.23
Other (Specify)	1.33

Source: BBS 2016

5 ENVIRONMENTAL MANAGEMENT FRAMEWORK

5.1 Objectives of the Environmental Management Framework

40. This chapter deals with the environmental management framework to be applied to the various subprojects under EGPP+. Although EGPP+ is designed to support employment generation of the poorest people through small scale interventions, its implementation must be designed to be environmentally sensitive so as to avoid any undesirable consequences of the given interventions.

41. Although most of the subproject impacts are temporary and less significant due to small scale nature of the activities, there are some issues of concern that cut across the range of proposed interventions. Based on the findings of site visits, PIOs' judgment and lessons from similar programs show that issues such as community involvement, community ownership and selection of appropriate sites are some of the key concerns that influence project success and sustainability. However, the exact type of the subproject will be chosen by the communities.

5.2 Potential Environmental Impacts for each Subproject

42. As described earlier the possible subprojects are (i) construction and maintenance to rural roads (mainly earthen roads); (ii) construction and maintenance of river embankments; and (iii) excavation or re-excavation of irrigation canals and drains; (iv) land-fill for community institutions like school, mosque, pagoda, temple, graveyard, prayer ground (eidgah) etc.; (v) earthen shelters to protect animals against cyclones; (vi) re-excavation of public ponds or fish farms; (vii) organic fertilizer production; (viii) further development of rural markets or (temporary) helipad; (ix) excavation or re-excavation of small water reservoirs; (x) cleaning ponds and bushes etc.

43. Depending on the work activities and the nature of infrastructure, two or three subprojects are grouped for identifying the anticipated impacts and the possible impacts, those may arise from the subprojects are given below.

5.2.1 Specific Impacts for the sub projects

- (i) Construction and maintenance to rural roads (mainly earthen roads) and
- (ii) Construction and maintenance of river embankments

44. The anticipated impacts due to subprojects for construction and maintenance of rural roads (mainly earthen roads) or the river embankments are given below:

- Damage of agricultural land due to excavation of fertile topsoil (about 0.3m) for the road construction
- Erosion of lands, landslides, slips or slumps from roadbed or in borrow areas
- Stagnant water in left borrow pits

- Increased sediments into streams, ponds and rivers due to erosion from roadsides during high flood.
- Increased flooding conditions/drainage congestion at one side of the road or embankment due to improper drainage structure
- Disruption of wildlife (specially birds)
- Loss of natural vegetation during construction
- Disturbance of culturally important sites e.g. graveyards, mosques, prayer grounds.

5.2.2 Specific Impacts for the sub projects

(iii) excavation or re-excavation of irrigation canals and drains

(vi) re-excavation of public ponds or fish farms

(ix) excavation or re-excavation of small water reservoirs and

(x) cleaning ponds and bushes

45. The anticipated impacts due to subprojects for excavation or re-excavation of irrigation canals and drains; re-excavation of public ponds or fish farms; re-excavation of small water reservoirs and cleaning ponds and bushes etc. are given below

- Increase in soil erosion
- Soil waterlogging due to improper proper design of canals or ponds
- Clogging of canals from weeds
- Inefficient water flows due to siltation during high flood
- Disturbance to flow regimes if proper drainage measures not provided
- Disturbance of natural habitats
- Risk of waterborne diseases from artificial water flows

5.2.3 Specific Impacts for the subproject

(vii) organic fertilizer production

46. The anticipated impacts due to subprojects for the organic fertilizer production and uses are given below

- Generation of odor from fertilizer production
- Under fertilization, results in soil nutrient depletion
- Over application, increases levels of nitrate in ground and high ammonia emissions from agriculture,
- Leaching due to the choice of fertilizer type, increases the optimum rate, improper timing and method of application.

5.2.4 Specific Impacts for the sub project

(iv) land-fill for community institutions like school, mosque, pagoda, temple, graveyard, prayer ground (eidgah) etc ,

(v) earthen shelters to protect animals against cyclones and

(viii) further development of rural markets or (temporary) helipad

47. The anticipated impacts due to subprojects for landfill for community institutions, earthen shelters to protect animals against and further development of rural markets or (temporary) helipad are given below

- Erosion of lands, landslides, slips or slumps in borrow areas
- Loss of natural vegetation
- Risk for generation of dust during operation period, mainly at land-filling area and the (temporary) helipad area.
- Vulnerable (causes cracking, rutting) to weather conditions for improper selection of soil and compaction

5.2.5 Common Impacts for all Subprojects

48. In addition to the above specific impact, the subprojects will generate some other impacts on environment, and these are identical for all subprojects activities. These impacts are described below:

- **Air/Dust Pollution**

49. A considerable amount of air borne particulate matter (dust) will be generated by the construction activities during improving of any subproject site and this will happen mainly due to lack of watering of dry earth surface and uncovered storage of materials. The impact of dusting is short-term, lasting for the duration of the construction activity, but it may be severe if it causes significant health problems.

- **Noise Pollution**

50. The construction activities will generate noise due mass workers, vehicles and truck movement can affect the quietness of the communities.

- **Surface Water Pollution**

51. Surface Water Pollution may be occurred due to disposal of waste (mainly vegetation, food etc) in to the nearby the water bodies generated during preconstruction & construction stages.

- **Waste Disposal**

52. Solid waste mainly vegetation during preconstruction, & construction needs to be remove from the sites. This waste would negatively impact the site and surrounding environment if not properly managed and disposed of at an approved dumpsite. Cleared vegetation burnt onsite would generate smoke, possibly impacting negatively on ambient air quality and human health. Vegetation and solid waste, if allowed to accumulate in drainage ways, could cause flooding & Pooling. Pooling of water, in turn, would create conditions conducive to the breeding of nuisance and health-threatening pests such as mosquitoes. Poor construction waste management constitutes a short-term negative impact.

- **Occupational Health and Safety (OH&S)**

53. Since the subproject activities do not include any large construction and risky activities, no major occupational health and safety (H&S) issues are anticipated. However, the safety of the local population should be considered during construction activities. The movement of trucks to and from the site and the actual construction activities will expose the workers to work-related accidents and injuries. Pollutants such as dust and noise could also have negative implications for the workers' H&S as well as nearby communities.

54. Traffic congestion and obstruction to pedestrian movement due to vehicular movement and other project activities (e.g., storage of excavated soils/delivery of construction materials and equipment, etc.) are important concerns. In order to allay the possibility of accidents during crossing of roads by workers at site and the pedestrian from the community adequate signage will be installed as per Worker's Health and Safety ECOPs.

5.3 Environmental Screening and Implementation of ECoP

55. EGPP+ subprojects will be identified by the Project Implementation Committee (UP), formed out of members of the Union Parishad and the targeted beneficiaries. After selection of a subproject, the community level environmental screening will be integral part of the subproject planning. A community meeting has been suggested to discuss the subproject, identify the community priority and identify the environmental and social impacts. The community under the guidance of the PIO and PIC will carry out the environmental screening process. In general, the environmental screening process identifies what impacts will be generated and what type of mitigation measures will be required for subprojects. The participation and consultations with local communities are important to identify the potential impacts of the project interventions. Screening will be used for taking decision about the inclusion or exclusion of the subprojects to be funded under the project. A sample screening format for all subprojects is attached in **Annex B**. The Bangla form will be used for the screening purposes at field level. The proposed screening format has been developed from the public consultation during the base line survey of sample subproject, experience of other project and the typical environmental impacts of the proposed project interventions.

56. The screening will help in determining whether a proposed subproject should be subjected to follow the Environmental Code of Practices (ECoP) to mitigate or avoid the impacts or need further review with preparation of separate environmental management plan for that subproject with appropriate mitigation measures in consultation with the PIO. In addition, the community will review the impact related ECoP to avoid/address environmental concerns through modifications (if required) in subproject design and incorporation of mitigation measures.

57. In general, the environmental screening process identifies what level of EA will be required for subprojects. The participation of and consultations with local communities are important to identify the potential impacts of the project interventions. EGPP+ screening will be used for taking decision about the inclusion or exclusion of the subprojects to be funded under the project. The proposed screening criteria have been selected from the experience of other Projects and typical environmental impacts of the proposed interventions.

5.4 Environmental Codes of Practice

58. The ECoPs have been developed to guide the planning, design, construction and maintenance stages of EGPP+ in terms of avoidance or mitigation of the negative environmental impacts that may result from the projects. The codes (provided in Annex F) define methods and procedures to be followed by the executing agencies, contractors and other agencies involved in the three project states.

59. The ECOPs include:

1. Project Planning & Design Stage,
2. Site Preparation;
3. Borrow Areas;
4. Top-soil Salvage;
5. Storage and Replacement;
6. Slope Stability and Erosion Control;
7. Waste Management;
8. Water Bodies;
9. Drainage;
10. Worker's Health and Safety (including traffic safety);
11. Environmental Monitoring;
12. Tree Plantation;
13. Fertilizer Production;
14. Natural Habitats;
15. Consultations for Environmental Aspects;
16. Minimizing Human Elephant Conflicts;
17. Dust and Air Quality Management and
18. Noise Management
19. COVID protocol

60. The implementation of environmental measures shall be monitored through the environmental audit procedures provided in ECoPs. This includes format for reporting the addresses of issues in various stages of the project.

61. Once impacts are identified, the necessary mitigation measure will then be recommended, and the subproject will be designed to implement these mitigation measures. The PIO will review the environmental screening and suggest appropriate mitigation measures. If required, PIO will prepare a simple EMP for the subproject. A typical environmental mitigation measures for sample subproject have been suggested in **Annex B**.

62. The PIO will estimate the cost for the environmental mitigation of the subprojects. For example, if the subproject requires plantation to compensate the trees lost due to construction/extension of roads/embankments, the cost of plantation of local suitable species must be considered in subproject design.

5.5 Environmental Monitoring

63. The supervision and monitoring of EGPP+ subprojects will be carried out at different levels. The primary responsibility of the supervision of implementation including environmental mitigation measures is assigned to the PIC. They will ensure the proper implementation of EMP (if required) and maintain all necessary records in this regard. The UC will be responsible for subproject monitoring. On behalf of the UC, the PIO of each Upazila will monitor the environmental compliance issue.

64. The purpose of the environmental monitoring is to ensure that envisaged purpose of the project is achieved and results in desired benefits to the target population without adversely affecting environmental resources. Monitoring activities will include the compliance of the EMP implementation. In general, the PIO will monitor the following indicators during field visit as ‘spot check’ and the related mitigation measures (i) top soil degradation and erosion; (ii) drainage congestion by blocking natural drainage; (iii) inappropriate waste disposal; (iv) cutting and/or trimming of trees; (v) temporary noise and air/dust pollution; (vi) loss of biodiversity (loss of habitat for any fauna and flora); (vii) temporary decline in surface water quality; and (viii) potential public health concerns (spread of communicable disease by any community worker). Details of monitoring indicators have been presented in the Table 5.1.

Table 5.1: Sample Monitoring Plan for EGPP+ Subprojects

Phase for the Proposed Mitigation Measure	Parameters to be Monitored	Location	Measurements (incl. Methods & equipment)	Frequency of Measurement	Responsibilities (incl. review and reporting)	Cost (equipment & individuals)
Pre-Construction Phase	Surface Water Quality	Surrounding areas and at the site	Visual, Consultation. Sample testing at laboratory if needed	Once in dry season and another in wet season	Field Officer/ Upazila Level officer	
	Water Supply and Sanitation	Surrounding areas and at the site	Photo Survey, Visual and Consultation	Once in dry season and another in wet season	Field Officer/ Upazila Level officer	
	Agricultural Land and Crop	Surrounding areas and at the site	Visual and Consultation	Once in dry season and another in wet season	Field Officer/ Upazila Level officer	
	Plantation of Trees and Grass	Surrounding areas and at the site	Visual and Consultation	Once in dry season and another in wet season	Field Officer/ Upazila Level officer	
Construction Phase	Damage to vegetation	Surrounding areas	Visual and by comparison	Monthly throughout	Field Officer/ Upazila Level	

Phase for the Proposed Mitigation Measure	Parameters to be Monitored	Location	Measurements (incl. Methods & equipment)	Frequency of Measurement	Responsibilities (incl. review and reporting)	Cost (equipment & individuals)
		and at the site	with pre-construction photo survey	construction period;	officer	
	Loss of fertile topsoil and soil erosion	Soil storage sites	Visual	Weekly during site preparation and construction period	Field Officer/ Upazila Level officer	
	Waste disposal	All active construction sites	Visual	During construction	Field Officer/ Upazila Level officer	
	Air pollution by dust	All active construction sites	Visual	During construction	Field Officer/ Upazila Level officer	
	Noise from construction works	All active construction sites	Measurements by a licensed organization using certified measurement devices	During construction	Field Officer/ Upazila Level officer	
	Health & safety	All active construction sites	Visual	During construction	Field Officer/ Upazila Level officer	
Operation and Maintenance Phase	Dust Pollution	Surrounding area of the site	Visual	During dry season	Upazila Level officer	
	Soil erosion	The site area	Visual	Annually	Upazila Level officer	
	Drainage Congestion	Surrounding area	Visual and Consultation	During rainy season	Upazila Level officer	
	Availability of fish	Surrounding area	Consultation	Annually	Upazila Level officer	
Total Cost for all Phases					Estimated Cost	

6 SOCIAL MANAGEMENT FRAMEWORK

6.1 Objectives of the Social Management Framework

65. The SMF provides general policies, guidelines, and procedures to be integrated into the implementation of all EGPP+ subprojects to minimize adverse social impacts and maximize positive social impacts.

6.2 Principles Governing Resettlement

66. Land acquisition under any circumstances is not allowed under EGPP+. However, local people may prefer to construct or reconstruct earthen (kutcha) road by donating land voluntarily. As there is no specific law or ordinance for temporary land taking or voluntary land donation, Acquisition and Requisition of immovable Property Act 2017 will not trigger in this project.

67. The objectives of OP 4.12 with regard to involuntary resettlement are: (i) to avoid involuntary resettlement wherever possible; (ii) to minimize involuntary resettlement by exploring project and design alternatives; (iii) to enhance, or at least restore, the livelihoods of all displaced persons in real terms relative to pre-project levels; and (iv) to improve the standards of living of the displaced poor and other vulnerable groups. The OP 4.12 covers physical displacement (relocation, loss of residential land, or loss of shelter) and economic displacement (loss of land, assets, access to assets, income sources, or means of livelihoods) as a result of (i) involuntary acquisition of land, or (ii) involuntary restrictions on land use or on access to legally designated parks and protected areas. It covers displaced persons whether such losses and involuntary restrictions are full or partial, permanent or temporary.

68. For any WB operation requiring involuntary resettlement, resettlement planning is an integral part of project design, from the early stages of the project cycle, taking into account the following basic principles:

- Involuntary resettlement (IR) will be avoided or minimized as much as possible and where IR is unavoidable, displaced persons (DPs) will be compensated full replacement close for their losses.
- Improve, or at least restore, the livelihoods of all DPs and provide physically and economically displaced persons with needed assistance.
- Carry out meaningful consultations with affected persons, host communities, and concerned nongovernment organizations. Inform all displaced persons of their entitlements and resettlement options. Develop procedures in a transparent, consistent, and equitable manner if land acquisition is through negotiated settlement to ensure that those people who enter into negotiated settlements will maintain the same or better income and livelihood status.
- Ensure that displaced persons without titles to land or any recognizable legal rights to land are eligible for resettlement assistance and compensation for loss of non-land assets.
- Prepare and disclose a resettlement plan elaborating on displaced persons' entitlements, the income and livelihood restoration strategy, institutional arrangements, monitoring and reporting framework, budget, and time-bound implementation schedule.
- Consider and execute involuntary resettlement as part of a development project or program. Include the full costs of resettlement in the presentation of project's costs and benefits. Pay compensation and provide other resettlement entitlements before physical or economic

displacement. Monitor and assess resettlement outcomes, their impacts on the standards of living of displaced persons, and whether the objectives of the resettlement plan have been achieved by taking into account the baseline conditions and the results of resettlement monitoring.

6.3 Voluntary Land Donation Procedure

69. During implementation, EGPP+ may require using private land temporarily or voluntary land donation may require. It is the responsibility of the community people and local government to select the subprojects with due consultation with land donors. Subproject will be selected, if and only if donors agree to donate the land (if land is required) and donors get directly benefit from the subproject. During the preparatory stage, DDM has conducted several consultations with the local communities, and they have requested for many subprojects in their locality. All of them including local government wanted to provide lands for the subprojects. Those people will donate land (if require), at least one member from that family (if poor) will get job opportunity with the EGPP+ program. However, during screening DDM will try to avoid any kind of land acquisition, donation etc. If voluntary land donation is required, the following steps will be followed.

- the potential donor or donors have been appropriately informed and consulted about the project and the choices available to them;
- potential donors are aware that refusal is an option, and have confirmed in writing their willingness to proceed with the donation;
- the amount of land being donated is less than 10% of the potential donor's land holding and that it would not have significant impact on their livelihood
- no household relocation is involved;
- the donor is expected to benefit directly from the project; and
- for community or collective land, donation can only occur with the consent of individuals using or occupying the land. LGED will maintain a transparent record of all consultations and agreements reached.
- all consultations regarding the donation have been well documented.

70. DDM and local government will ensure that the land study will include specific surveys to understand the type of land rights that exist in the subproject area, and to identify any particular issue relating to land ownership and use. The specific surveys must be conducted on each parcel of land proposed for donation to identify:

- The owner or owners of the land;
- The users of the land, or any parties that occupy the land (either physically or through ownership of an asset or conduct of livelihood or business activities on the land);
- Any competing claims of ownership or use;
- Structures and assets on the land; and
- Any encumbrances on the land.

71. Owners can donate the land for temporary use during construction and operation.

72. It is important to: (i) identify the right that is being transferred (an ownership right, a use right, a right of way, etc.); and (ii) check whether the transferee actually has the right s/he claims to have. In many circumstances where careful due diligence has not been carried out, significant conflict has arisen at a later stage when another party claims that they have the same or a competing right. In some circumstances – but not all – the transferee will have documentary evidence of such right. Where no such evidence exists, the due diligence can establish rights by speaking with local community officials and neighbors.

6.3.1 Public consultations and disclosure

73. The decision to donate land must be taken based on a full understanding of the subprojects and the consequences of agreeing to donate the land. Accordingly, the parties that will be affected by the donation (the owners and users of the land) must be provided with accurate and accessible information regarding what the land will be used for, for how long, and the impact the donation will have on them and their families. It is important that prior written notification indicating the location and amount of land that is sought be provided and that its intended use for the subproject is disclosed.

74. Where the intention is to deprive the parties affected by the donation of the land permanently, or for a significant length of time, this must be made clear. It should be noted that in many communities the concept of alienation of land is uncommon and difficult to understand, and care needs to be taken to ensure that the implications of this are fully understood. It is also important to decide who else should be consulted about the proposed donation, for example, spouses and older children.

75. All the measurement costs, documentation and notarial fees, transfer taxes, registration fees etc. must be paid by project authority. It should also include the costs of re-measuring/re-titling the transferee's remaining land and any new documentation relating to it.

6.3.2 Establishing Informed Consent

76. DDM, in coordination with local government, would verify the informed consent or power of choice by the people who would donate land or an asset. The following will be verified and documented in the voluntary donation report:

- What the land is going to be used for, by whom and for how long;
- That they will be deprived of the ownership or right to use the land, and what this really means;
- That they have a right to refuse to donate the land;
- Whether there are alternatives to using this land;
- What they will need to do to donate the land (e.g., execute documents, get spousal consents, pay taxes);
- The effect of the donation on their family, and what they can do if they (or their family or heirs) want the land back; and
- The right to refuse must be a legitimate right, unconditional, and the potential transferee can exercise it in the local community and political context. For this reason, it is important to be sure that the decision to donate is undertaken without coercion, manipulation, or any form of pressure on the part of public or traditional authorities. For collective or communal land,

donation must be based upon the informed consent of all individuals using or occupying the land.

6.3.3 Proper Documentation

77. During the voluntary land donation process for subproject investments, it is important to distinguish between: (a) the agreement to donate the land; and (b) the document that carries out and evidences the legal transfer of the land. While it is important to have evidence of an intention and agreement to donate the land, it is equally important to ensure, where required and appropriate, that the land is legally transferred. While the process relating to the legal transfer of the land is frequently complicated and time consuming, it must be addressed. In specific circumstances, for example where the land is being transferred to the community, it may not be necessary to legally transfer the land. However, experience indicates that lack of formal transfer can create significant uncertainty in the future, which impacts on the sustainability of the infrastructure and services and can have a negative effect on community relations.

78. DDM will ensure that the documentation:

- Refers to the consultation that has taken place;
- Sets out the terms of the transfer;
- Confirms that the decision to transfer was freely made, and was not subject to coercion, manipulation, or any form of pressure;
- Includes an accurate map of the land being transferred (boundaries, coordinates);
- Sets out who will bear the costs of the transfer (e.g., notarial fees, taxes, title issues) and documenting the residual land rights;

79. In addition, the PIO will also:

- Ensure that all necessary parties sign the documents, including obtaining consent from spouses and children over a certain age;
- Ensure that the transfer and title is registered or recorded; and
- Ensure that the land remaining after the donated land is excised, is properly titled, registered or recorded.

6.4 Screening and Documentation

6.4.1 Preliminary Screening

80. During the identification and preliminary stages of any subproject preparation, the PIO along with the PIC will fill up social screening check-lists designed for the project. A list of some criteria that will need to be filled up for eligibility (called Negative List) is attached in Annex-A. A preliminary assessment to identify the types, degree and scale of potential social impacts of the subproject will be undertaken via the checklists (attached in Annex-B). If the subproject eventually requires land acquisition and/or physical displacement of households/people, the project authority will take initiative to avoid land acquisition and displacement by introducing alternative design options or changing the location/alignment of the subproject by consulting the local people and key stakeholders. Usually, it is seen that the subprojects do not require land acquisition and displacement due to its nature.

6.4.2 Project Preparation

81. It is understood that given the short time allowed between the identification of schemes and the actual implementation of those, the preparation time for subprojects will be minimal. Given the above time constraints, there will not be enough time to conduct a full-scale Social Impact Assessment (SIA) for each subproject. However, where the checklists demonstrate that land acquisition is required and/or displacement of squatters is expected (on public lands, or on private lands) the PIC will prepare a brief report on potential impacts and submit it to DDM. The project authority will try to avoid land acquisition and displacement considering nature and allocated timeline for each of the subprojects as the land acquisition is a cumbersome process and will take long time to implement the Resettlement Action Plan (RAP).

6.5 Tribal Peoples Planning Framework

The project will not operate in the Chittagong Hill Tracts where there are concentrations of tribal people (TP). The original SNSP Project triggered OP 4.10 as the Project was implemented nationwide. This remains triggered under both Additional Financings as a precaution in case EGPP+ subprojects encounter any such communities, although the likelihood is low. If there are any tribal people (TP) in the subproject area, a Tribal Peoples Plan (TPP) will be prepared based on free, prior, informed consultation. This will serve as the basis for subproject implementation and monitoring. In addition, the community will need to be identified and consulted to make sure that the subproject causes no economic, cultural or settlement related effects. Together with the identified community, community elders and local community-based-organizations that are familiar to their issues, the PIC and PIO would need to screen the subproject/s and explore alternatives to minimize any adverse impacts on TPs.

82. EGPP+ will ensure that it does not adversely affect TPs, and that they receive culturally compatible social and economic benefits. This will require the institutes to carefully screen all proposed activities to determine presence of TPs in the locality and ensure informed direct participation of the TPs in the activities. It is expected that the project will not affect any tribal people and will not conduct any activities that will impact tribal groups. Although the TPs of Bangladesh are well recognized locally, the PIO will examine the following characteristics to make formal identification:

- Self-identification as members of a distinct Tribal cultural group and recognition of this identity by others;
- Collective attachment to geographical distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories;
- Customary cultural, economic, social or political institutions that are separate from those of dominant society and culture; and
- A Tribal language, often different from the official language of the country or region.

6.5.1 Basic Principles

83. To avoid or minimize adverse impacts and, at the same time, ensure benefits for TPs, the PIOs will apply the following basic principles in selection and design of particular activities:

- Ensure that TP communities in general and their organizations are not excluded by any means in activities selection, design and implementation processes.

- Together with TPs, carefully screen the activities for a preliminary understanding of the nature and magnitude of potential impacts and explore alternatives to avoid or minimize any adverse impacts.
- Where alternatives are infeasible and adverse impacts on TPs are unavoidable, the PIOs together with TPs and others knowledgeable of TP culture and concerns, will immediately make an assessment of the key impact issues.

84. The PIOs will undertake the necessary tasks in order to adopt appropriate mitigation measures. The most important in this respect is intensive consultation with the TP communities, community elders/leaders, formal and informal TP organizations, civil society organizations and others who are interested in and have knowledge of TP issues.

6.5.2 Identifying TP Social Concerns

85. Impacts on TPs will vary in terms of activities and their scopes, presence and size of TP population in the institution locales, as well as the magnitude of potential adverse impacts and social risks. To the extent applicable for a particular activity, information on the cultural and socioeconomic characteristics and potential vulnerability will be used to identify the TP social concerns and adopt alternative mitigation measures.

6.5.3 Impact Mitigation & Development Measures

86. The PIOs will explore, together with the TP communities, the possibilities of reinforcing any existing and promoting new culturally compatible development activities/measures that will benefit the TPs. Such measures may include providing credits where TPs are found to engage in production of marketable goods; small-scale horticulture and orchards; basic water supply and sanitation facilities; and those, such as schools, that could also be used by the communities as a whole.

6.5.4 TP Consultation Strategy

87. As required for informed consultation, concerned institutes will provide TPs with all activity related information, including that on potential adverse impacts. To facilitate consultation, DDM will:

- Prepare a timetable for dialogues during sup-project selection, design and implementation processes, and consult them in manners so that they can express their views and preferences freely.
- In addition to the communities in general, consult TP organizations, community elders/leaders and others with adequate gender and generational representation; and civil society organizations and groups knowledgeable of TP issues.
- Consultation will include the activity objectives and scope; the likely key adverse impacts on (and benefits for) TPs; TPs' own perception of the impacts and feedback; and a preliminary assessment of economic opportunities which the DDM could promote – in addition to mitigation of the adverse impacts.
- Consultation will in general concentrate on the adverse impacts perceived by the TPs and the probable (and feasible) mitigation measures, as well as exploring additional development activities that could be promoted under the project. The PIO office will keep Minutes of these consultation meetings in the activity files and make them available for inspection by World Bank and senior GOB officials and other interested groups and persons.

88. If the presence of TP is identified in the subproject area, then a Tribal Peoples Plan (TPP) will be prepared based on free, prior, informed consultation. This will serve as the basis for subproject implementation and monitoring.

6.5.5 Major Impact Areas and Indicators

89. The following major impact areas and indicators are suggested for assessment of TP concerns and social risks.

a) Cultural Characteristics

- Relationships with areas where they live-relating to religious/cultural affinity with the ancestral lands, existence of livelihood opportunities, etc.
- Presence of customary social and political organizations – characteristics indicating internal organization and cohesion of the communities, and their interaction with those of the non- Tribal population.
- Interactions and relationships with other Tribal peoples' groups in the same and other areas.
- Presence of TP organizations, working with TP development issues, and their relationships with mainstream organizations engaged in community development activities.
- Identification of any cultural aspects that are likely to be affected or made vulnerable because of the proposed development works.

b) Settlement Pattern

- The extent to which the Tribal settlements are physically separated from those of the non-Tribal peoples, indicating interactions and mutual tolerance between the groups.
- Characteristics indicating physical organization of homesteads and the existing community facilities, such as schools, water supply, etc.
- Presents distance between the settlements and the participating institute.

c) Economic Characteristics

- Prevailing land tenure indicating legal ownership and other arrangements that allow them to reside in and/or cultivate the lands in their areas.
- Access to common property resources- prevailing conditions under which they may have been using natural resources like forests, water bodies, and others that are considered important sources of livelihood.
- Occupational structure - indicating relative importance of household's present economic activities, and the extent to which they might be affected or benefited because of the proposed activity.
- Level of market participation - engagement in activities that produce marketable goods and services, and how and to what extent market participation would be affected or enhanced.

7 CONSULTATIONS AND CITIZEN ENGAGEMENT

7.1 Public Consultations

90. Public consultations form a very crucial part of all development projects, including infrastructure and are usually carried out as a continuous process through the project cycle. Public and stakeholder consultations and workshops during the design and project planning stages provide the medium for sharing information about the project objectives and scope, alternative design options, and stakeholder perceptions regarding proposed investment plans. Ensuring an open and transparent information exchange about the project at this stage, lays a good foundation for an inclusive and participatory implementation process.

91. Conforming to the GoB Environment Conservation Rules (ECR), 1997 and the World Bank Consultation and Disclosure Policy, and to meet the Project's needs for an inclusive participatory process during project planning, design, implementation, supervision and monitoring, DDM will facilitate (public and focused group) consultations/workshop plan covers the following key stages:

- Preliminary consultative session at the very early stages of the project design when the first set of planning and designs are developed
- Public consultations on the environmental potential issues with the respective stakeholders

92. Overall, the consultations would:

- Learn about the community needs and preferences with respect to the project objective
- Discuss the environmental and social safeguard implications/impacts that might be associated with the suggested subproject along with the impact mitigation guidelines and measures adopted in the EMF
- Have the community identify grievance and redress mechanisms for resolving project design and implementation concerns
- Determine the main pillars of a consultation strategy that will be adopted throughout the project phases

93. During preparation of the safeguard documents, MODMR has conducted 8 meetings with the local government, different UN agencies, donors, host communities and DRP. All the stakeholders are in favor of the project.

94. Host communities are facing many problems due to the influx of the DRP. They have requested project financiers and implementers to involve them with the project, so that they can be benefitted from this project. Project authorities have also disclosed the tentative project interventions. Host communities have also requested to engage local community during the construction stage.

95. The Project financier has consulted with different UN agencies, as they are also involved in different development activities for the DRP. Through the project cycle, DDM will keep good coordination with the different development partners.

96. DRP have also been consulted during project preparatory stage. As their language is different from the local language, they have requested to engage Rohingya people with the project for the better communication with the project authority. Project authority has also informed that Rohingya people will

be involved with GRC, so that they will be able to raise any issues to the authority. Moreover, Rohingya labors will be engaged during construction.

97. Community leaders and other influential community people shall be leveraged for encouraging the landowners in the selected subprojects area to provide soil for road maintenance and other earthen work of the subproject. The PIO, the UP Chairman and Member should ensure that the standing crops are not damaged due to collection of soil, or any residential, commercial or common/community properties are not affected due to the project interventions. Tribal People are to be consulted about their social custom, occupational preference, social hierarchy, role of the Headman and Karbari in the society, etc. The Headman and Karbari of the Tribal community must be consulted regarding selection of the subproject and beneficiary from the Tribal community. The consultation meeting would be held with issuing prior notice to the community people by the PIO or UP Chairman. The community people will have to participate in the decision-making process of the subproject selection and implementation.

98. PICs will carry out continued consultation with and information dissemination to the key stakeholders regarding:

- ✓ The relevant details of the project
- ✓ The various degrees of project impact
- ✓ Benefits of the project

99. Roles and responsibilities of the project authority, local government institutions and Community people in selection and implementation process of the subproject Implementation schedule with a native timetable of the subproject.

100. DDM has conducted preliminary consultations with all four District’s Project Implementation Officers, Social Specialists of the DDM and existing beneficiaries of the EGPP project. All the stakeholders expressed positive opinion on the restructuring of the EGPP+. During the consultations, DDM has informed the purpose of the project, potential impacts and benefits, GRM and monitoring mechanism. They were informed that consultation will be conducted on a regular basis before selection of any sub-projects and during implementation of those.

Table 7.1: Key stakeholders and future engagement

Key stakeholders	Topic(s) of engagement	Method(s) used/to be used	Responsibilities
PREPATORY			
<ul style="list-style-type: none"> • Project benefited community • Land donors • Project beneficiaries • Local government 	<ul style="list-style-type: none"> • All the safeguard documents will be disclosed • Project selection procedures 	<ul style="list-style-type: none"> • Public meetings, separate FGD for women and vulnerable • Face-to-face meetings with potential project beneficiaries • Disclosure of written information: brochures, website Information boards or desks in local language 	DDM

Key stakeholders	Topic(s) of engagement	Method(s) used/to be used	Responsibilities
<ul style="list-style-type: none"> • Media • Local government • Host communities • Educational and religious institutions • Vulnerable HHs 	<ul style="list-style-type: none"> • Land donation process • Project scope and rationale • Resettlement principles • Grievance mechanism process • Future consultation 	<ul style="list-style-type: none"> • Grievance procedures through consultation, information brochures • Future consultation procedures • FGD with women separately so that they can speak freely • Notice board for employment recruitment will be presented once the subproject is selected • Training/workshop on safeguards is conducted and will be continued through the project period • GBV mitigation plan and procedures were disclosed. 	
Construction Phase			
<ul style="list-style-type: none"> • Project benefited community • Land donors • Project beneficiaries • Local government • Media • Local government • Host communities • Educational and religious institutions • Vulnerable HHs 	<ul style="list-style-type: none"> • Grievance mechanism • Occupational health and safety • Payment method • Employment opportunities • Project status 	<ul style="list-style-type: none"> • Public meetings, trainings/workshops • Separate meetings as needed for women and vulnerable • Meetings with project beneficiaries • Notice board(s) at construction sites • Grievance mechanism • GBV mitigation plan and procedures • Resources allocation towards local administration representatives and councilors. 	DDM

7.2 Grievance Redress Mechanism

101. A well-defined grievance redress mechanism (GRM), as defined in the EGPP Guidelines (approved in FY 2014), is already established to resolve grievances and complaints in a timely and satisfactory manner

for existing EGPP and which will continue to apply to the EGPP+ window. The GRM operates at national, district and upazila levels. The grievances are to be resolved, facilitated by Grievance Redress Officers i.e. UNO at the upazila level, Deputy Commissioner (DC) at the district level and the Project Director at the national level. Grievance's resolution should be reached at the upazila level within 15 days of lodging a complaint. If the complainant is not satisfied with the outcome, she/he may appeal to the district level i.e. the DC. If the outcome at the district level is not satisfactory, the aggrieved may escalate the grievance to the National Steering Committee led by the Senior Secretary/Secretary, MoDMR. At the same time DDM can be contacted directly to file grievances at any time. In receiving and solving grievances in time, the upazila committee and district committee will perform the role of GRC at upazila and district level respectively.

102. At Upazila level GRC, UNO will be the Grievance Redressal Officer, and PIO will be the member secretary. The GRO with the support of PIO will do screening of the grievances related to the project. If the case is under arbitration or court of law, the GRO will refer the case to the DC office for resolving the case as per law. The Ward members and union chairmen represents the local beneficiaries as all the projects will be implemented locally. Upazila Nirbahi Officer at the upazila level is the designated grievance redress officer (GRO). Moreover, The Grievance sessions may be conducted in presence of the parties where requested or at GRO office or at the concerned-UP office. The upazila committee will also inform the aggrieved persons about the decision of the GRC in preferred method. If the grievance is not resolved at Upazila level, the GRO will forward it to the DC (district level GRO) with observation and comments for resolution. DRRO and relevant members of the district committee will investigate the grievance and advise for regulation of the grievances to district GRO. Project beneficiaries and stakeholders are well aware of the option to seek redress under the judicial system of Bangladesh.

7.3 Disclosure

The ESMF, including all updates, will be made available for public consultation by MoDMR/DDM, with key portions translated in Bengali, on their official websites as well as at places accessible to the people impacted / benefited by the EGPP+ (supported by Component 4 of the SNSP Project) and members of civil society (schools, libraries, Union Parishad offices, etc.). The World Bank will also disclose the document(s) as per their policies. Advertisements will be published in both English and Bengali daily newspapers announcing the disclosure of the documents and the websites and localities where they can be found. Once the EGPP+ locations are defined and the specific TPPs are in place, these too will be disclosed publicly following the same process.

7.4 Incident Reporting

DDM should notify the Bank of any incident or accident related to the Project which is expected to have an adverse effect on communities, the public, or workers within 24 hours of learning about the event. Such incidents may include Project-related occupational accidents or fatalities, social unrest, or similar issues. The report should provide sufficient detail on the incident or accident, describing the

immediate measures taken or that are planned to be taken to address it, while ensuring confidentiality as appropriate. Subsequently, DDM should submit to the bank a report on the incident or accident, suggesting adequate measures to prevent the recurrence of such events, within 7 calendar days.

8 IMPLEMENTATION ARRANGEMENTS

8.1 Institutional Responsibilities

103. The overall implementation and institutional arrangements applicable are described in Annex 1 of the Project Paper for the SNSP Project’s second AF.

104. Specifically, with regards to the ESMF, DDM has a focal points/specialist for public works, community services and safeguards with experience in social management issues and in dealing with TP issues to provide training to PIOs and to help review and clear social and environmental screening reports. In addition, an implementation support firm contracted by DDM ensures compliance with the ESMF.

8.2 Capacity Building

105. Stakeholders of the project have limited experience on environmental assessment and management. Component 2 will help strengthen DDM capacity building to monitor and evaluate. It was agreed that environmental management, climate change adaptation and disaster risk reduction will be included in the capacity building program for Sub-Assistant Engineers (SAEs) and PIOs. In addition, the project will organize several orientation programs on operations manual including screening and ECoPs.

106. Other stakeholders like the Local Government involved in the project also have limited or no experience on environmental management. Thus, to ensure their capacity, it is vital that sufficient resources are allocated by DDM to training and capacity building. These efforts will also build local capacity to undertake other development initiatives.

107. Proposed criteria for capacity building are shown in Table 8.1, which will be used as modules in capacity building at all levels.

Table 8.1: Capacity Building Criteria for Managing Subprojects

Issue	Concern	Eligibility Criteria
<p>1. Environmentally sound sub projects, complying with agreed ESMF policy</p>	<ul style="list-style-type: none"> • Realistic environmental standards for planning and implementation. 	<ul style="list-style-type: none"> • PICs effectively decide questions of what mitigation is needed to manage risks, who is eligible for what and determining how much is enough to achieve the standards, for environmental protection.
	<ul style="list-style-type: none"> • Effective monitoring of actual mitigation results. 	<ul style="list-style-type: none"> • Accuracy and credibility of baseline data and reasonable certainty of detecting and correcting any errors or problems during planning and implementation. To be able to

Issue	Concern	Eligibility Criteria
		meet standards, the proponents must have sensitive monitoring systems & specific indicators for the adequacy of the mitigation delivered and actual results.
	<ul style="list-style-type: none"> • Clear incentives and accountability for all partners. 	<ul style="list-style-type: none"> • PICs have clear statements of task assignments, reasonable corrective consequences for mistakes or failures and unambiguous responsibility and sources of financing to correct problems, and functioning grievance redress systems.
	<ul style="list-style-type: none"> • Common awareness and understanding of the above. 	<ul style="list-style-type: none"> • Communication to ensure common awareness of standards, monitoring and accountability by those affected, organizations and individuals deployed for implementation support, PICs, government agencies and donors.
<p>2. Participatory planning and implementation and inclusion of the poor in project benefits.</p>	<ul style="list-style-type: none"> • Subproject prioritization is based on adequate consultation. 	<ul style="list-style-type: none"> • Resolution of the PICs in support of the sub – project after public meeting.
	<ul style="list-style-type: none"> • Effective accountability to citizens. 	<ul style="list-style-type: none"> • Formal endorsement by the community through public hearings and documented periodic reporting of PICs performance to citizens;

108. Capacity building will enhance the subprojects’ environmental and social management capacity by allowing real application of the critical practices such as the following:

- **Basic practices:** screening impacts, scoping assessments, planning mitigation options, public consultation to assess feasibility and acceptability options;
- **Environment:** site selection and route alignment to minimize environmental impacts and social disruption; restoration of drainage patterns, land use, etc.; including mitigation measures in

contracts; management of impacts during construction; monitoring of effectiveness of measures;

- **Monitoring and grievance redress:** transparency and public administration in planning, reporting and supervision responsibilities and formats during implementation, documenting land transactions, complaint response record keeping and procedures.

109. The local and national institutions and individuals experienced in environmental aspects will be called upon through a competitive process to develop and conduct courses on various modules.

110. The section describes the training needs and plan for the various participants involved in implementing the ESMF based, in part, on the institutional assessment described above. The training on ESMF may be integrated with social framework and other related training program for cost effectiveness.

The objectives of the training under the ESMF are to:

- support representatives and leaders of **community groups and associations** to prioritize their needs, and to identify, prepare, implement and manage the environmental aspects of their subprojects;
- ensure that **local government officials** have the capacity to assist in preparing subproject proposals, and to appraise, approve and supervise the implementation of subprojects; and
- strengthen local **stakeholders** which may be involved in the public participation in preparing and implementation of subprojects.

111. Different groups involved in EGPP+ implementation have different training needs in terms of raised awareness, sensitization to the issues, and detailed technical training:

- **Awareness-raising** for participants who need to appreciate the significance or relevance of environmental issues;
- **Sensitization to the issues** for participants who need to be familiar enough with the issues that they can make informed and specific requests for technical support; and
- **Detailed technical training** for participants who will need to analyze potentially adverse environmental impacts, to prescribe mitigation approaches and measures, and to prepare and supervise the implementation of management plans. This training will address such matters as community participation methods; environmental analysis; using the ER checklist, reporting; and subproject supervision and monitoring.

112. DDM and all local level committees responsible for EGPP+ implementation will be responsible for overall monitoring and evaluation. A third-party implementation support firm has been engaged to enhance this capacity. The different training needs that are generally associated with the subprojects are given in Table 8.2. Based on these needs, a training plan has to be worked out for the lifetime of the project. The needs for various participants (e.g. government officials, community leaders etc.) have to be different of necessity. While some would require training on general awareness building and more specific training would be needed for others. The table shows the initial training needs as well as the needs for further or “refresher” training. It should include mechanisms for periodically bringing trainees together to examine the need for and design of additional training.

Table 8.2: Suggestive outline of Different Training Needs

Group	Participants	Resource persons	Duration
Local government approval authorities	UNOs	Experts/ Consultants	2- day workshop
			1-day refresher workshop
UZ Resource Team	UZ Officials from Govt. Departments/ Line Ministries	Experts/ Consultants	6-day workshop
			2-day ESMF review workshop
Community Leaders/Workers	PIC/UP Chairmen, Members, Secretary	UZ resource Team Members	3-day workshop
Stakeholders	NGO workers, Concerned individuals	UZ resource Team Members	3-day workshop per community

113. The detailed agenda and specification of resource needs (venue, trainers, materials, etc.) for each type of training activity should be worked out in detail before the training activities are undertaken. Wherever there is a wide-spread need for a particular form of training, especially at the community level, the training-of-trainers (TOT) approach may be undertaken. In the TOT approach, identified groups who have a special role or access to communities are given a combination of technical and pedagogical training, and are provided with manuals and other training aids, so that they can organize their own courses at local levels. In the present case Upazila level technical personnel could be such trainers for UP level subproject personnel and concerned people including those from community-based organizations.

114. The capacity building and training resources needed include:

- Institutional development activities
- The training program for communities, extension teams and local authorities to implement their ESMF responsibilities
- Allowances for the preparation of subproject LEAs etc. (The costs of implementing these plans are included in the subproject budgets.)
- Annual reviews and audits

8.3 Monitoring, Reporting and Budget

115. Projects will require no private land or only require temporary using of soil from nearby land plots for maintenance of the road or land filling in any social/educational/religious institutions. People generally willingly offer soil for subproject implementation. In some cases, people give specific land plots with a view to digging a pond. In this case both parties will be benefited by the project. The project authority, especially PIO through the UP Chairman, Member and local elites will try to find out such land plots and encourage people to offer soil for subproject implementation. PIOs will be responsible to ensure

compliance with the Bank policies. A semi-annual random spot check will be performed on this batch of subprojects to ensure compliance. The results of the spot checks will be shared with the Bank.

116. For subprojects that may trigger land acquisition and/or physical displacement of the households or other entities, the PIOs along with the concerned-UP Chairman and Member will avoid or minimize the impacts by choosing alternative design options and or changing the alignment. Initially a social screening would be carried out by PIOs and Upazila Project Implementation Committee to select each of the subprojects. Land acquisition and resettlement would be avoided during selection process of the subprojects. The screening reports would be cleared by DDM. Third party spot checks will be undertaken for a sample of such subprojects and those involving impacts on TPs, by a renowned national CBO/consulting firm/think-tank with the requisite expertise and experience in conducting such audits, to assess compliance with the requirements of the ESMF. These results will be shared with the Bank upon completion.

DDM has contracted an implementation support firm which assists, among others, in subproject screening and overall environmental/social safeguards compliance monitoring. A Social & Environmental Safeguards Specialist at DDM has broader oversight of safeguards matters pertaining to EGPP+ implementation and coordinates with the firm. In addition, DDM also has three Program Specialists specialized in public works and community services provide additional support and monitoring of safeguard compliance matters.

As per disclosed procurement plan of the project the estimated cost of implementation of safeguard related monitoring/capacity building activities is USD 1.1 million.

ANNEX A: NEGATIVE LIST OF THE PROJECT

Negative List
<p>Activities that involve the following characteristics will be ineligible under EGPP+ where it is supported by Component 4 of the SNSP Project:</p> <ul style="list-style-type: none">• Poses any direct or indirect discriminatory criteria for selection• Affect private land, residential or commercial establishments• Affect mosques, temples, graveyards, cremation grounds, and other places/objects that are of religious and cultural significance• May significantly restrict access to common property resources and livelihood activities of groups and communities• Negative Impact on livelihood and income loss• Those activities that would require land acquisition• Leads to permanent flooding or water logging of water courses• Leads to damage/removal of 15cm of topsoil• Leads to permanent pollution of surface water or groundwater resources• Leads to increased human-wildlife conflicts• Activities located within any forest area• Entail construction/re-construction of dam• Any activity adversely affecting biodiversity and natural habitat
<p>Activities that affect Tribal peoples with long-term consequences will be ineligible for support. These activities are those that</p> <ul style="list-style-type: none">• Poses possibility of exclusion• Affect private land, residential or commercial establishments• Negative Impact on livelihood and income loss• Threaten cultural tradition and way of life• May severely restrict access to common property resources and livelihood activities• May affect places/objects of cultural and religious significance (places of worship, ancestral burial grounds, etc.)

ANNEX B: ENVIRONMENTAL SCREENING FORMAT

- 1. Sub project Name:
- 2. Location (Village, Ward, District, Union):
- 3. Type of sub project:
- 4. Size of the subproject.....
- 5. Number of people benefiting the sub project:
- 6. Contact person.....
- 7. Telephone.....
- 8. General Description of the sub project:-

i. Sub project objectives:

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ii. Sub project components:

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iii. Subproject activities

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9. Baseline Description of affected Environment

i. Description of physical chemical environment (soil, air, water, etc.)

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.....

ii. Description of Biological Environment (habitats and Communities, Flora, etc.):

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.....
.....
.....
.....

iii. Description of Socio-economic Environment e.g. historical sites, aesthetic aspects,

public health, infrastructure

.....

10. Identification of Negative Environmental Impacts

Aspects	Yes	No	Scale of Impact			Remarks ⁸
			High	Medium	Low	
• loss of top soil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• negative effects on species of flora or fauna or their habitat?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• negative effects on designated wetlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• negative effects on vegetation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• destruction of trees and vegetation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• impact on fish migration and navigation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• drainage congestion in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• water logging in the project areas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• negative effects on surface water quality, quantities or flow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• negative impact on soil stability and compactness?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• negative impacts on irrigation and canals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• increased noise due to day-to-day construction activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• increased wind-blown dust from material (e.g. fine aggregate) storage areas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• degradation or disturbance of historical or culturally important sites (mosque, graveyards, monuments etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

11. Possible environmental impacts of the subproject

⁸ Note: Please add any other screening questions relevant to the demonstration. Also provide additional comments and/or positive impacts in 'remarks' column.

Environmental impacts	Mitigation measures (Identify the relevant ECoP)	Project Categorization (Low/Medium/High)

12. The Environment Management Plan (EMP) to be taken during implementation of the subproject. (If impacts beyond the **ECoP**)

4. Recommendations:			
SIGNATURE OF UNION COMMITTEE MEMBERS INVOLVED:			
Chairperson Union Committee	Name:	Signature:	Date:
Field Supervisor / PIO	Name:	Signature:	Date:
Community members (add columns if required)	Name:	Signature:	Date:
Indigenous Community/ Groups (If required)	Name:	Signature:	Date:

ANNEX C: SOCIAL SCREENING FORMAT

EGPP+

This form will be filled up by the Upazila Project Implementation Committee along with the community members at Union Level and must be submitted to PIO before being selected]

A. General Information

Title of the Subproject: Village/Mouza..... Upazila:
..... District: Screening Date:

B. Project Related Information

B1 Activities of Subproject includes: New construction/ Improvements/ Repair /Renovation (described in brief regarding subproject activities)

.....
.....

B2. Describe existing land use/occupancy of site and surroundings in brief and accordingly draw a free-hand map (Please use separate sheet)

.....
.....

C. Socio-economic Information

C1 What are the asset(s) that would be affected due to Subproject Interventions? Yes or No

Land.....

Physical Structure (dwelling or commercial).....

Trees/crops.....

Natural resources (water bodies/Forest/Public Pond).....

Community Resource Property.....

Others (please specify).....

C2 Land

C.2.1 Ownership of Land: Public/Private.....

C.2.2 Type of Land: Agricultural/ Homestead/ Low Land /Fallow/ Pond

Please specify.....

Does the subproject require additional land permanently or on a temporary basis?.....

Sometimes as part of road/canal/community resource property upgrading interventions, subprojects may require small parcels of land permanently to meet engineering design requirements. In such case what would be the land procurement policy?

Direct Purchase...Yes/no.....; voluntary donation.....yes/no...; acquisition
Yes/no.....?

To except voluntarily donated land what would be the legal procedure?.....

In case of land acquisition, will there be physical and / or economic displacement of people?

What is the total yearly income of the land donor ?:

Is there any income from the proposed donated land? If yes, please write the amount

C2.3 Is there any squatter/ encroacher/ leaseholder residing on public lands? Yes/ No and specify type
.....

If yes.

What would be the total numbers of Affected Families?.....

Is there any possibility of physical displacement?.....

How will their livelihoods be affected? (example: due to loss of shelter and housing structure, loss of income source, loss of grazing field/ social network/ family bondage etc)
.....

Do the affected families have school going children? YES/No

If yes,.....how many such children are there?

Among the affected household, is there any person holding long term lease? Yes/no..... if yes, Land uses for what purpose?....., Till how many years remains out of total leasing period?.....

C3 Structure (Housing/Commercial)

C 3.1 Type and total number of Housing structure that would be affected: (Type : Kachcha temporary structure made by tin/bamboo/ straw etc, semi-pucca- brick made structure with tin at roof and pucca-permanent brick made structure)
.....

C 3.2 Is there any commercial/ business structure that would be affected?.....

C 3.3 Ownership types of the affected structures: Private/ Leaseholder/squatter/encroacher
Please specify.....

C 3.4 Is there any tenant identified using the affected structure? Yes/No

C 4. Trees and Crops

C 4.1 Is there any tree/plant that might be affected? Yes/no..... Total estimated number by size.....?

C 4.2 Is there any social forestry /plantation project that would be affected? Yes/no.....

C 4.3 Is there any common fruit bearing tree that would be affected? Yes/no..... Species.....

C 4.4 Any agricultural land included with in the subproject footprint? Yes/no.....

If yes, please provide necessary information regarding productivity of land, type and quantity of Crop that might be affected and market value

.....

 C 5. Is there any Community Resource Property that would be affected?
 Yes/No..... Please Specify..... Who are the beneficiaries of the affected
 Community Resource? What is their reaction- Positive/negative?.....
 Did they support the project?. Yes/No.....What are the reasons to support/ stand
 against the project?

.....

 C6. Is there any Natural Resource that might be affected? Example: Social forest, Beel, Depression area,
 Grazing field, Wet-land, etc Yes/No.....
 If yes, please describe regarding dependency on the Affected Resources

.....

 C7. Tribal Peoples
 C 7.1 Is there any community of Tribal Peoples residing within or adjacent the project site?
 Yes/No.....For how long?
 C 7.2 Any Households of Tribal Peoples would be affected? Yes/No..... If yes, how many families
 would be affected?.....

C 8 Beneficiaries
 C 8.1 Who are the Beneficiaries? How they would be benefited by the subproject?
 Access to health facilities/services? Yes/No.....
 Project activities would provide income generating source. Yes/No.....Please
 describe.....
 Shall subproject promote marketing opportunities of the local products? Yes/No.....If yes, how would that
 happen? Please elaborate
 Are people ready to co-operate with the project? Yes/No..... Please elaborate the reasons

C 9 How will the subproject create opportunities for Beneficiaries?

1. Prepared by (Name): Signature:..... Date:
2. Upazila Project Implementation Committee District: Upazila: Name of the Committee Head (UNO): 01. Names of Committee Members participated in Screening 02.

3. Union Project Implementation Committee

District: Upazila:

Name of the Committee Head (Chairman):

01. Names of Committee Members participated in Screening:

ANNEX D: TYPICAL ENVIRONMENTAL MANAGEMENT PLAN

Impact	Mitigation Measures	Project Stage	Implemented by	Monitoring /Supervising by
Loss of Fertile Topsoil of Agricultural Land	<ul style="list-style-type: none"> ▪ Try to avoid fertile topsoil from agricultural land to use as fill materials for the subprojects. ▪ Strip off topsoils (depth>0.3m) & stockpile them & reuse the top soils on the surface of the excavated agricultural land. 	Preconstruction /Construction	Contractor	DDM
Losses of Trees and Vegetation	<ul style="list-style-type: none"> ▪ Consider alternation options to reduce the loss of tress and vegetation ▪ Plant same species of local trees and vegetation on the slopes of the subprojects. 	Preconstruction /Postconstruction	PAPs/DDM	DDM
Noise pollution	<ul style="list-style-type: none"> ▪ Plan the work schedule of noise creating activities in consultation of local community ▪ Construction activities should be done only during daytime (7:00AM to 6:00PM). 	Construction	Contractor	DDM
Air/Dust Pollution	<ul style="list-style-type: none"> ▪ Spray of water during dry season and in windy conditions ▪ Immediate compaction after filling of earth ▪ Cover the stockpiles of fine materials in construction yard. 	Construction	Contractor	DDM
Waste Disposal	<ul style="list-style-type: none"> ▪ Waste should be separated at source & store in separate waste bin/basket. ▪ Inorganic waste can be sold & organic waste can be used for manufacturing of organic manure by composting. 	Construction	Contractor	DDM

Impact	Mitigation Measures	Project Stage	Implemented by	Monitoring /Supervising by
Occupational H&S	<ul style="list-style-type: none"> ▪ Provision of first aid facility ▪ Arrangement of safe drinking water for the labors working in the subprojects 		Contractor	DDM

ANNEX E: DESCRIPTION OF ACTS, POLICIES AND REGULATIONS

Environmental Conservation Act (ECA), 1995

The ECA is currently the main legislation relating to environment protection in Bangladesh. This Act is promulgated for environment conservation, environmental standards development and environment pollution control and abatement.

The main objectives of ECA are:

- Conservation and improvement of the environment; and
- Control and mitigation of pollution of the environment.

The main focuses of the Act can be summarized as:

- Declaration of ecologically critical areas and restriction on the operations and processes, which can or cannot be carried out/ initiated in the ecologically critical areas (ECA);
- Regulations in respect of vehicles emitting smoke harmful for the environment;
- Environmental clearance;
- Regulation of industries and other development activities’ discharge permits;
- Promulgation of standards for quality of air, water, noise and soil for different areas for different purposes;
- Promulgation of a standard limit for discharging and emitting waste; and
- Formulation and declaration of environmental guidelines.

Before any new project can go ahead, as stipulated under the ECA, the project promoter must obtain Environmental Clearance from the Director General (DG), DOE. An appeal procedure does exist for those promoters who fail to obtain clearance. Failure to comply with any part of this Act may result in punishment to a maximum of 5 years’ imprisonment or a maximum fine of Tk.100, 000 or both. The DOE executes the Act under the leadership of the DG. The Project will be undertaken in line with the aims and objectives of the Act by conserving the environment and controlling and mitigating potential impacts throughout the drilling program.

Environmental Conservation Act (Amendment 2000)

The Bangladesh *Environment Conservation Act* Amendment 2000 focuses on ascertaining responsibility for compensation in cases of damage to ecosystems, increased provision of punitive measures both for fines and imprisonment and the authority to take cognizance of offences.

Environmental Conservation Act (Amendment 2002)

The 2002 Amendment of the ECA elaborates on the following parts of the Act:

- Restrictions on polluting automobiles;
- Restrictions on the sale, production of environmentally harmful items like polythene bags;
- Assistance from law enforcement agencies for environmental actions;
- Break up of punitive measures; and
- Authority to try environmental cases.

Environmental Conservation Act (Amendment 2010)

This amendment of the act introduces new rules & restriction on:

- No individual or institution (Gov. or Semi Gov, / Non Gov. / Self Governing) cannot cut any Hill and Hillock. In case of national interest; it can be done after getting clearance from respective the department
- Owner of the ship breaking yard will be bound to ensure proper management of their hazardous wastes to prevent environmental pollution and Health Risk
- No remarked water body cannot be filled up/changed; in case of national interest; it can be done after getting clearance from the respective department; and
- Emitter of any activities/incident will be bound to control emission of environmental pollutants that exceeds the existing emission standards.

Environment Conservation Rules (ECR), 1997 and Amendments

These are a set of rules, promulgated under the *ECA*, 1995 and its amendments. The Environment Conservation Rules provide categorization of industries and projects and identify types of environmental assessment required against respective categories of industries or projects. The Rules set:

- The National Environmental Quality Standards (NEQS) for ambient air, various types of water, industrial effluent, emission, noise, vehicular exhaust etc.;
- The requirement for and procedures to obtain environmental clearance; and
- The requirement for IEE and EIA according to categories of industrial and other development interventions.

The Environment Conservation Rules, 1997 were issued by the GOB in exercise of the power conferred under the Environment Conservation Act (Section 20), 1995. Under these Rules, the following aspects, among others, are covered:

- Declaration of ecologically critical areas;
- Classification of industries and projects into 4 categories;
- Procedures for issuing the Environmental Clearance Certificate (ECC); and
- Determination of environmental standards.

Rule 3 defines the factors to be considered in declaring an 'ecologically critical area' as per Section 5 of the ECA (1995). It empowers the Government to declare the area as the Ecologically Critical Areas (ECA), if it is satisfied that the ecosystem of the area has reached or is threatened to reach a critical state or condition due to environmental degradation. The Government is also empowered to specify which of operations or processes may be carried out or may not be initiated in the ecologically critical area. Under this mandate, the Ministry of Environment and Forest (MOEF) has declared Sundarban, Cox's Bazar-Teknaf

Sea Shore, Saint Martin Island, Sonadia Island, Hakaluki Haor, Tanguar Haor, Marzat Baor and Gulshan-Baridhara Lake as ecologically critical areas and prohibited certain activities in those areas.

Rule 7 of the 1997 ECR provides a classification of industrial units and projects into four categories, depending on environmental impact and location. These categories are:

- Green;
- Orange A;
- Orange B; and
- Red.

The categorization of a project determines the procedure for issuance of an Environmental Clearance Certificate (ECC). All proposed industrial units and projects that are considered to be low polluting are categorized under "Green" and shall be granted Environmental Clearance. For proposed industrial units and projects falling in the Orange-A, Orange-B and Red Categories, firstly a site clearance certificate and thereafter an environmental clearance certificate will be required. A detailed description of those four categories of industry/project is in Schedule-1 of ECR (1997). The Rules were essentially developed for industrial developments, but under Schedule 1 of the Guidelines (Clauses 63 and 64) the following falls into the Orange B Category.

Environmental Policy 2018

The concept of environmental protection through national efforts was first recognized and declared with the adoption of the Environmental Policy, 1992 and the Environmental Action Plan, 1992. The importance of policies in beefing up the environmental regime is recognized in a number of international instruments including the World Conservation Strategy in 1980 and the Brundtland Commission Report, 1987. Paragraph 14 of Chapter 8 of Agenda 21 underscored the necessity of formulation of national policies as well as laws for environmental protection and sustainable development. The major objectives of Environmental Policy are to:

- i) maintain ecological balance and overall development through protection and improvement of the environment;
- ii) protect country against natural disaster;
- iii) identify and regulate activities, which pollute and degrade the environment;
- iv) ensure environmentally sound development in all sectors; and
- v) ensure sustainable, long term and environmentally sound base of natural resources; and vi) actively remain associate with all international environmental initiatives to the maximum possible extent.

Environmental Action Plan, 1992

The National Environmental Action Plan, 1992 recommended sector specific action plan to achieve the objectives and implement the policy recommendations of the National Environment Policy. The followings are water resources key recommended actions:

- Environmental audit on an emergency basis will be conducted for water resources development, flood control and irrigation projects. Steps to mitigate the adverse impact on the environment identified in the audit will be taken through appropriate modification of these projects.

- Environmental Impact Assessment will be incorporated in all new projects. Adverse impacts will be prevented through proper steps and adequate investments.
- Operation and maintenance will be ensured subsequent to execution of projects related to water resources development and management. Regular monitoring will be conducted to evaluate the impact of all projects.

National Environmental Management Plan (NEMAP), 1995

The National Environment Management Action Plan (NEMAP, 1995), based on a nationwide consultation program identified the main national environmental issues, including those related to the water sector which EA practitioners should note. The main related national concerns included flood damage, river bank erosion, environmental degradation of water bodies, increased water pollution, shortage of irrigation water and drainage congestion; various specific regional concerns were also identified.

Bangladesh Wildlife (Preservation) Order, 1973 (Amended in 1994)

The Bangladesh Wildlife (Preservation) Order makes provisions for the safety of wildlife, particularly those vulnerable to extinction. It has provisions for the establishment of 'wildlife sanctuaries', banning hunting of certain species, banning 'game reserves' and provision for special permits to keep and care for certain types of animals. Schedule III to the statute includes a list of animals that are declared as protected animals, which shall not be hunted, killed or captured. The maximum penalty for any offence committed under this statute is two years' imprisonment and a maximum fine of 10,000 taka.

The Government of Bangladesh under the provisions of the Act, has established three categories of protected areas being National Parks, Wildlife Sanctuaries and Game Reserves. In addition to these, the Government of Bangladesh has declared 14 protected areas and is considering declaring more. Further, the Government of Bangladesh has recently declared six areas as Ecologically Critical Areas under the Environmental Conservation Act 1995.

National Conservation Strategy (NCS), 1992 (updated 2016)

The National Conservation Strategy (NSC) was drafted in late 1991 and submitted to the Government in early 1992.

In 2016, the NCS was updated by Bangladesh Forest Department with support from International Union for Conservation of Nature.

Wetland Policy, 1998 (Draft)

The Policy is relevant to the Project because it seeks to:

- Conserve wetlands to sustain their ecological and socio-economic functions and further sustainable development;
- Establish key principles for wetland sustainability and unsustainable practices;
- Maintain existing levels of biodiversity;
- Maintain wetland functions and values; and
- Actively promote integration of wetland functions in resources management and economic development decision taking.

National Water Policy, 1999

The National Water Policy promulgated in 1999 with the intension of guiding both public and private actions in the future for ensuring optimal development and management of water that benefit both

individuals and the society at large. The policy aims to ensure progress towards fulfilling national goals of economic developments, poverty alleviation, food security, public health and safety, decent standard of living for the people and protection of natural environment. According to the policy, all agencies and departments entrusted with water resource management responsibilities (regulation, planning, construction, operation, and maintenance) will have to enhance environmental amenities and ensure that environmental resources are protected and restored in executing their tasks. Environmental needs and objectives will be treated equally with the resources management needs.

The policy has several clauses related to the protection and prevention of the natural environment for ensuring sustainable development. Some of the relevant clauses are:

Clause 4.5b: Planning and feasibility studies of all projects will follow the Guidelines for Project Assessment, the Guidelines for People's Participation (GPP), the Guidelines for Environmental Impact Assessment, and all other instructions that may be issued from time to time by the Government.

Clause 4.9b: Measures will be taken to minimize disruption to the natural aquatic environment in streams and water channels.

Clause 4.9e: Water development plans will not interrupt fish movement and will make adequate provisions in control structures for allowing fish migration and breeding.

Clause 4.10a: Water development projects should cause minimal disruption to navigation and, where necessary, adequate mitigation measures should be taken.

Clause 4.12a: Give full consideration to environmental protection, restoration and enhancement measures consistent with National Environmental Management Action Plan (NEMAP) and the National Water Management Plan (NWMP).

Clause 4.12b: Adhere to a formal Environmental Impact Assessment process, as set out in the EIA guidelines and manuals for water sector projects, in each water resources development project or rehabilitation program of size and scope specified by the Government from time to time.

Clause 4.12c: Ensure adequate upland flow in water channels to preserve the coastal estuary ecosystem threatened by intrusion of salinity from the sea.

Clause 4.13b: Only those water related projects will be taken up for execution that will not interfere with aquatic characteristics of those water bodies.

National Safe Drinking Water Supply and Sanitation Policy 1998

National Safe Drinking Water Supply and Sanitation Policy (NSDWSSP 1998) sets out the basic framework for the improvement of public health quality and to ensure improved environment, together with a set of broad sectoral action guidelines. The draft policy offered various objectives to achieve the goal, and these are:

- To manage water supply and sanitation related basic needs for all.
- To bring the positive change of peoples' attitudes regarding water and sanitation.
- To reduce the outbreak of water borne diseases.
- To increase the efficiency of the Local Government and associated community for handling more effectively the problems related to water supply and sanitation.
- To improve sustainable water supply and sanitation system.

- To ascertain proper conservation, management and use of surface water and to control water pollution due to the scarcity of underground water.
- To take necessary steps to use and conserve rainwater.

National Water Management Plan, 2001 (Approved in 2004)

The National Water Resources Council approved on March 31, 2004, a 25-year National Water Management Plan. The plan provides a framework within which all concerned with the development, management and use of water resources water services in Bangladesh can plan and implement their own activities in a coordinated and integrated manner. The planned activity programs have been presented in the eight sub-sectoral clusters: i) Institutional Development, ii) Enabling Environment, iii) Main River, iv) Towns and Rural Areas, v) Major Cities; vi) Disaster Management; vii) Agriculture and Water Management, and viii) Environment and Aquatic Resources. Each cluster comprises of a number of individual programs, with overall a total of 84 sub-sectoral programs identified and presented in the investment portfolio. It was planned to implement in three phases. It was approved at the seventh meeting of the National Water Resources Council. It calls for a coordinated approach of concerned ministries and departments to stop waterlogging and to incorporate the issues of arsenic mitigation, river administration, and dredging and fisheries resources. To mitigate the environmental risks of water sector project development, the plan suggested for a holistic view, which includes the environment itself as an important water sector stakeholder with an entire cluster of programs devoted to it. Furthermore, programs within the environment cluster are strategically timed in order that public awareness raising, the establishment and enforcement of regulatory mechanisms and long-term planning are addressed as priority. Water Resources Planning Organization (WARPO) was assigned to monitor the national water management plan.

The National Fisheries Policy, 1999

The National Fisheries Policy, 1999 was formulated following review and intent of the East-Bengal Protection and Conservation of Fish Act 1950, which was updated by the Protection and Conservation of Fish (Amendment) Ordinance 1982 and further refined by the Protection and Conservation of Fish (Amendment) Act 1995. These Acts and ordinance provide provisions for the protection and conservation of fish in fresh water and brackish water bodies.

The Fisheries Policy highlights the need to conserve fish breeding grounds and habitats, especially in the development of water management infrastructure. It intends to promote fisheries development and conservation in all water bodies.

The Project should consider these policies to protect the habitats, migration and connectivity of fish and fisheries resources around the Project area. Measures to reduce any potential negative impacts on local fish populations will be incorporated into all stages of the Project.

The Protection and Conservation of Fish Rules, 1985

The Protection and Conservation of Fish Rules 1985 are a set of rules in line with the overall objectives of the East-Bengal Protection and Fish Conservation Act. The Rules require that “no person shall destroy or make any attempt to destroy any fish by explosives, gun, bow and arrow in inland waters or within coastal waters”. Further, the Rules states “...no person shall destroy or make any attempt to destroy any fish by

poisoning of water or the depletion of fisheries by pollution, by trade effluents or otherwise in inland waters”.

The Project will comply with these rules by enacting appropriate mitigation measures to reduce the potential for pollution of waterways, depletion of fisheries or disturbance of fish populations within the Project area.

National Agricultural Policy, 1999

The overall objective of the National Agriculture Policy is to make the nation self-sufficient in food through increasing production of all crops including cereals and ensure a dependable food security system for all. One of the specific objectives of National Agricultural Policy is to take necessary steps to ensure environmental protection as well as „environment-friendly sustainable agriculture. Through increased use of organic manure and strengthening of the integrated pest management program. The policy also suggests creating awareness so that the chemical fertilizers and pesticides used for increased crop production do not turn out to be responsible for environmental pollution. Water logging and salinity are identified as one of the serious problems in some parts of the country including the coastal areas for agricultural activities and environmental damage. The policy recommends for crop rotation and salt tolerant crop varieties.

The Embankment and Drainage Act, 1952

The *East Bangle Act No. 1*, 1953 was amended in 1953 which has been adapted by the People Republic of Bangladesh, by the Bangladesh Order (adaptation of Existing Laws), 1972 (President’s Order No. 48 of 1972). The Act consolidates the laws relating to embankments and drainage providing provision for the construction, maintenance, management, removal and control of embankments and water courses for the better drainage of lands and for their protection from floods, erosion or other damage by water.

The specific Sections and Articles relevant to the Project are mentioned below:

- Section 4 (1) of the Act states that the embankment, watercourse, and tow-path, earth, pathways, gates, berms and hedges of the embankments shall vest in the Government of the Authority (BWDB).
- Section 56 (1) states that, person will be subject to penalty (500 taka or imprisonment... if he erects, or causes or willfully permits to be erected, any new embankment, or any existing embankment, or obstructs or diverts, or causes or willfully permits to be obstructed or diverted, any water course.
- Section 15 allows for the engineer (engineer in charge of Divisional level BWDB) for constructing new embankment or enlarging, lengthening or repairing existing embankments.
- The other sections of the Act give powers and access to the Government or Authority or Engineers to commence necessary Project activities, for land acquisition (through the Deputy Commissioner), and site clearing activities including removal of trees or houses (if necessary).

Bangladesh Climate Change Strategy and Action Plan

The GOB also prepared the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) in 2008 and revised in 2009. This is a comprehensive strategy to address climate change challenges in Bangladesh. Bangladesh Climate Change Strategy and Action Plan built on and expanded the NAPA. It is built around the following six themes:

- **Food security, social protection and health** to ensure that the poorest and most vulnerable in society, including women and children, are protected from climate change and that all programs focus on the needs of this group for food security, safe housing, employment and access to basic services, including health.
- **Comprehensive disaster management** to further strengthen the country's already proven disaster management systems to deal with increasingly frequent and severe natural calamities.
- **Infrastructure** to ensure that existing assets (e.g., coastal and river embankments) are well maintained and fit for purpose and that urgently needed infrastructure (cyclone shelters and urban drainage) is put in place to deal with the likely impacts of climate change.
- **Research and Knowledge management** to predict that the likely scale and timing of climate change impacts on different sectors of economy and socioeconomic groups; to underpin future investment strategies; and to ensure that Bangladesh is networked into the latest global thinking on climate change.
- **Mitigation and low carbon development** to evolve low carbon development options and implement these as the country's economy grows over the coming decades.
- **Capacity building and Institutional strengthening** to enhance the capacity government ministries, civil society and private sector to meet the challenge of climate change.

Bangladesh Water Act, 2013 and Water Rules 2018

The Act aims for integrated water resources development in the country through the preparation and implementation of a National Water Resources Plan. The National Water Resources Council, which is Chaired by the Prime Minister and has 12 Ministers as members, is mandated to approve and ensure implementation of such plans that cater for "proper use of, safe abstraction of, proper distribution of, proper protection of, and proper conservation of water resources" (Section 5). The Act gives access to potable water as well as water for hygiene and sanitation the highest priority (Section 3, Clause 2). The Government, through the Executive Committee, can issue a "Protection Order" to private landowners to prevent wastage, misuse, protect as well as conservation of water (Section 3, Clause 3). The Water Rules, 2018 were issued by the Government of Bangladesh in exercise of the power conferred under the Water Act of 2013. These Rules defines enforcement mechanisms required for implementation of the Act such as compliance orders, protection orders, removal orders, imprisonment and fines/compensation, the maximum amount of surface water or groundwater that can be withdrawn by individuals or organizations, clearance certificate by Executive Committee in terms of water related projects.

Ecological Critical Area Rules, 2016

The rules provide further regulatory implementation tools for ECA 1995 and ECR 1997 with regards to environmentally vulnerable and sensitive sites. In 1999 the government declared 8 areas as ECAs in Bangladesh, e.g., Cox's Bazar and Teknaf Peninsula, St. Martin's Island, Sonadia Island, Hakaluki Haor, Tanguar Haor and Marjat Baor, Gulshan-Baridhara Lake and Sundarbans. Subsequently in 2009, 4 rivers (Buriganga, Sitalakhya, Balu and Turag) around Dhaka city were declared as ECAs. Although the Department of Environment (DoE) is the statutory body to manage an ECAs, the ECA 2016 rules mandate committee systems for the management of ECAs from the national to village levels. In Districts with ECAs, the Rules mandate the District Committees, which is supposed to meet 3 times in a year, to monitor the sites regularly especially with regards to implementation of development plans and protection measures taken by DoE. The District Committee has to take necessary legal actions against any person or entity that commits, or attempted to commit any prohibited activities in an ECA.

Bangladesh Biodiversity Act, 2017

The Act provides specific directions local bodies to setup biodiversity management and monitoring committees. These committees shall prepare a Register of Biodiversity and include details of different usages of biological materials; support implementation of National Biodiversity Strategy and Action Plan (NBSAP); raise awareness; identify and protect biodiverse hotspots as well as estimate damages caused to biodiversity. Furthermore, the Act stipulates that alternative livelihood arrangements should be arranged at the local level for communities affecting biodiverse resources.

Standing Orders on Disaster 1999

The Standing Orders on Disaster is designed to enhance capacity at all tiers of government administrative and social structures for coping with and recovering from disasters. The document contains guidelines for construction, management, maintenance and use of cyclone shelter. Accordingly, to the guideline, geographical information system (GIS) technology will be applied at the planning stage to select the location of cyclone shelter considering habitation, communication facilities, distance from the nearest cyclone center, etc. The advice of the concerned District Committee is to be obtained before final decision. The cyclone shelters should have easier communication facilities so that in times of distress delay does not occur to go there. For this reason, the road communication from the cyclone shelters should not only link up with city or main road but also with neighboring village areas. Provision of emergency water, food, sanitation and shelter space for livestock during period should also be kept in view for future construction of shelters.

Solid Waste Management Rules, 2021

The Solid Waste Management Rules, 2021 were published in Bangladesh on December 23, 2021, under the Bangladesh Environmental Protection Act, 1995. The Rules define the responsibilities of businesses involved in solid waste management and impose collection, recycling, and disposal obligations according to Extended Producer Responsibility (EPR) on manufacturers of non-biodegradable products such as glass, plastic, and bottles. The Rules also include provisions for the treatment of solid waste such as composting and energy recovery. The main provisions of the Rules are: i. When recovering resources from waste, the

principles of management that consider the waste hierarchy, such as the 3Rs (reduce, reuse and recycle), segregation, and reduction, must be followed at all stages from waste generation to final disposal; ii. Responsibilities of waste generators, consumers, and users: a. Dispose of waste in accordance with the regulations of authorities including local government; b. Dispose of waste separately; c. Do not dump, store, or burn waste outdoors; and iii. Responsibilities of manufacturers and importers of products: a. Collect non-biodegradable products such as glass, plastic, polyethylene, multi-layered packaging, bottles, and cans from consumers and recycle or dispose of them if appropriate; b. Determine work plans and implementation procedures for recycling and disposal; c. Ensure that EPR is properly implemented; d. Submit an annual report to the DoE on the amount of plastic recycled; e. Raise public awareness on proper waste management.

ANNEX F: Environmental Code of Practices (ECOPs)

ECOP - 1.0: Project Planning & Design

General

This code of practice details the factors to be considered during project preparation to avoid/address environmental concerns through modifications in project design and incorporation of mitigation measures.

Finalization of Alignment/Project Location

- Adequate consultations with the communities to identify the concerns and preferences need to be taken up during selection of the alignment.
- Alignment shall conform to the natural topography as far as possible to avoid excessive cut and fill.
- Special care should be taken to align the roads along the hill side which is stable and where cutting on hill side causes least disturbance.
- Consultations with the local communities are to be conducted to obtain their suggestions and incorporate their concerns to address the potential environmental impacts.
- In case of flood prone areas and/or areas with very flat slopes, hydrological surveys have to be conducted before alignment finalization.

Environmental Considerations

Environmental considerations for various activities and sub-activities in the project are

- i. Trees
- ii. Forests
- iii. Natural Habitats/Biodiversity
- iv. Topsoil
- v. Borrow areas
- vi. Drainage lines/Rivers/water crossings
- vii. Agriculture lands
- viii. Flood prone areas
- ix. Irrigation water courses
- x. Water bodies
- xi. Grazing lands
- xii. Cultural properties
- xiii. Community facilities
- xiv. Dust pollution
- xv. Water pollution
- xvi. Waste pollution, etc.

Environmental concerns of the community shall be incorporated to the extent possible in the project preparation and in the subsequent stages of the project.

Compliance to Legal Requirements

The document shall include the various applicable clearances pertaining to environmental management and shall contain the necessary procedures for compliance of the same.

ECoP - 2.0: Site Preparation

General

The preparation of site for construction involves:

- i. Marking and clearance of the required project area of all encroachments by the PIU prior to mobilization of Contractor;
- ii. Informing the local community about construction schedule and
- iii. Site preparation by the contractor prior to commencement of construction. Scope of this ECoP includes only the measures to address environmental concerns expected during the site preparation.

Site Preparation Activities by the PIO/SAE

- Informing the community and local village councils about the likely schedule of construction
- After obtaining the consent of the community the PIO/SAE shall be responsible to stake out the subproject locations.

Site Preparation Activities by the Contractor

- The contractor shall submit the schedules and methods of operations for various items during the construction operations to the PIO/SAE for approval.
- The clearance of site shall involve the removal of all materials such as trees, bushes, shrubs, stumps, roots, grass, weeds, part of topsoil and rubbish. Towards this end, the Contractor shall adopt the following measures:
 - i. Limiting the surface area of erodible earth material exposed by clearing and grubbing
 - ii. Conservation of topsoil and stock piling as per the provisions of specifications or ECoP-4.0, "Topsoil Salvage, Storage and Replacement" and
 - iii. Carry out necessary backfilling of pits resulting from uprooting of trees and stumps with excavated or approved materials to the required compaction conforming to the surrounding area.
- To minimize the adverse impact on flora and vegetation, only ground cover/shrubs that impinge directly on the permanent works shall be removed.
- In locations where erosion or sedimentation is likely to be a problem, clearing and grubbing operations should be so scheduled and performed that grading operations and permanent erosion and sedimentation control features can follow immediately, if the project conditions permit.
- The disposal of wastes shall be in accordance with the provisions of ECoP-6.0, "Waste management". The following precautions shall be adopted:
 - i. The waste generated shall not be disposed off in watercourses, to avoid hindrance to the flow, and
 - ii. All necessary measures shall be taken while working close to cross drainage channels

- All regulatory clearances shall be obtained before actual start of work

ECoP - 3.0: Borrow Areas

General

Embankment or filling material is to be procured from borrow areas designated for the purpose. The scope of this ECoP extends to measures that need to be incorporated during borrow area identification, material extraction and rehabilitation with regard to environment management.

Pre-construction Stage

The contractor shall identify the borrow area locations in consultation with the owners, after assessing the suitability of the material. The suitable sites shall be selected and finalized in consultation with the PIO/SAE.

Construction Stage

The contractor should adopt the following precautionary measures to minimize any adverse impacts on the environment:

- Borrow pits situated less than 0.8 km (if unavoidable) from villages and settlements should not be dug for more than 30 cm after removing 15cm of topsoil and should be drained.
- The Contractor shall maintain erosion and drainage control in the vicinity of all borrow pits and make sure that surface drains do not affect the adjacent land or future reclamation.
- In case the borrow pit is on agricultural land, the depth of borrow pits shall not exceed 45 cm and may be dug out to a depth of not more than 30 cm after stripping the 15 cm topsoil aside.
- In case of riverside, borrow pit should be located not less than 15m from the toe of the bank, distance depending on the magnitude and duration of flood to be withstood.

Post Construction Stage

It needs to be ensured that all reclamation has been carried out in accordance with the redevelopment plan. Certificate of Completion of Reclamation is to be obtained by the Contractor from the landowner that "the land is restored to his satisfaction". The final payment shall be made after the verification by PIO.

ECoP - 4.0: Top-soil Salvage, Storage and Replacement

General

Loss of topsoil is a long-term impact along EGPP+ subprojects due to

- Site clearance and excavation for road, markets, embankment and other infrastructures
- Development of borrow areas
- Temporary construction activities as material storage locations, diversion routes etc.

Scope of this ECoP includes removal, conservation and replacement of topsoil.

Pre-construction Stage

The arrangements for temporary usage of land, borrowing of earth and materials by the Contractor with the landowner shall include the conservation/preservation of topsoil.

Construction Stage

- The stockpiles for storing the topsoil shall be designed such that the slope does not exceed 1:2 (vertical to horizontal), and the height of the pile is restricted to 2m.
- In cases where the topsoil has to be preserved for more than a month, the stockpile is to be stabilized within 7 days. The stabilization shall be carried out through temporary seeding. It consists of planting rapid-growing annual grasses or small grains, to provide initial, temporary cover for erosion control.
- After spreading the topsoil on disturbed areas, it must be ensured that topsoil is seeded, and mulched within 30 days of final grading.
- During construction, if erosion occurs from stockpiles due to their location in small drainage paths, the sediment-laden runoff should be prevented from entering nearby watercourses.
- The Contractor shall preserve the stockpile material for later use on slopes or shoulders

Post Construction Stage

- The topsoil shall be re-laid on the area after taking the borrow earth to maintain fertility of the agricultural field, finishing it to the required levels and satisfaction of the farmer.
- All temporary arrangements made for stockpile preservation and erosion control are to be removed after reusing the stockpile material.

ECoP - 5.0: Slope Stability and Erosion Control

General

- Stability of slopes is a major concern in hill areas and locations of high embankment.
- Soil erosion is consequent to high runoff on hill slopes, high wind velocities cause erosion of embankments made up of cohesion-less sandy soils.
- Embankments made up of silty and sandy soils are eroded, in the absence of vegetative cover, when the slopes are steep, say more than 20 degrees.
- Erosion control is provided to prevent soil damage done by moving water.
- The scope of this ECOP includes measures to minimize the adverse environmental impacts on slope stability and soil erosion due to the construction of embankments. The adverse environmental impact can be:
 - i. damage to adjacent land,
 - ii. silting of ponds and lakes disturbing the aquatic habitat
 - iii. erosion of rich and top fertile top layer of soil
 - iv. contamination of surface water bodies and
 - v. reduction in road formation width due to erosion of shoulders/berms.

Pre-construction Stage

- Interceptor ditches are constructed in hill areas to protect the road bench and hillside slope from erosion due to heavy rainfall and runoff.
- Interceptor ditches are very effective in the areas of high intensity rainfall and where the slopes are exposed.

Construction Stage

- The vegetative cover should be planted in the region where the soil has the capacity to support the plantation and at locations where meteorological conditions favours vegetative growth.
- On side slopes in hills, immediately after cutting is completed and debris is removed, vegetative growth has to be initiated by planting fast growing species of grass.
- In regions of intensive rainfall, locations of steep slopes, regions of high soil erosion potential and regions of short growing seasons, erosion control matting should be provided.
- Adequacy of drainage for erosion control

Post Construction Stage

All the exposed slopes shall preferably be covered with vegetation using grasses, brushes etc. Locally available species possessing the properties of (i) good growth (ii) dense ground cover and (iii) deep root shall be used for stabilization.

ECOP - 6.0: Waste Management

General

This code of practice describes procedures for handling, reuse and disposal of waste materials during construction. The waste materials generated can be classified into

- i. Construction Waste and
- ii. Domestic waste.

Pre-construction Stage

- The contractor shall identify the activities during construction that have the potential to generate waste and work out measures for the same in the construction schedule.
- The Contractor shall educate his workforce on issues related to disposal of waste, the location of disposal site as well as the specific requirement for the management of these sites.

Construction Stage

- The contractor shall either re-use or dispose the waste generated during construction depending upon the nature of waste.
- Wastes that could not be re-used shall be disposed safely by the contractor.
- The waste management practices adopted by the Contractor shall be reviewed by the PIO/SAE during the progress of construction.

Post Construction Stage

- After decommissioning of construction sites, the Contractor shall hand over the site after clearing the site of all debris/wastes to the PIO/SAE.
- In case of disposal of wastes on private land, certificate of Completion of Reclamation is to be obtained by the Contractor from the landowner that “the land is restored to his satisfaction”.

ECoP - 7.0: Water Bodies

General

Water bodies may be impacted when the subproject activities are adjacent to it or the runoff to the water body is affected by change of drainage pattern due to construction of embankment. The following activities are likely to have an adverse impact on the ecology of the area:

- i. Earth moving
- ii. Removal of vegetation
- iii. Waste disposal from construction works

Pre-Construction Stage

When there is interruption to regular activities of villagers near water body due to construction or rehabilitation work, following are the Contractor's responsibilities:

- i. Restriction on use of water during construction, if any, should be intimated to the community in advance.
- ii. Alternate access to the water body is to be provided in case there is interruption to use of existing access.
- iii. If the water body affected is a drinking water source for a habitation, alternate sources of water are to be provided to the users during the period for which its use is affected.

Construction Stage

- It should be ensured by the contractor that the runoff from construction site entering the water body is generally free from sediments.
- Silt/sediment should be collected and stockpiled for possible reuse as surfacing of slopes where they have to be re-vegetated.
- Cutting of embankment reduces the water retention capacity and also weakens it, hence:
 - i. The contractor should ensure that the decrease in water retention should not lead to flooding of the construction site and surroundings causing submergence and interruption to construction activities.
 - ii. Any perceived risks of embankment failure and consequent loss/damage to the property shall be assessed and the contractor should undertake necessary precautions as provision of toe protection, erosion protection, sealing of cracks in embankments. Failure to do so and consequences arising out of embankment failure shall be the responsibility of the contractor. The PIO/SAE shall monitor regularly whether safe construction practices near water bodies are being followed.
- Alternate drain inlets and outlets shall be provided in the event of closure of existing drainage channels of the water body.
- Movement of workforce shall be restricted around the water body, and no waste from construction sites shall be disposed into it.

Post Construction Stage

- The precincts of the water body have to be left clean and tidy with the completion of construction.
- PIO/SAE will check if drainage channels of adequate capacity have been provided for the impacted water body.

ECoP – 8.0: Water Quality

General

- Small-scale road construction, irrigation, small scale drainage, and small scale embankment construction may affect the aquatic environment, by lowering or raising water levels, and decreasing water quality.
- Deterioration of water quality and disturbance of aquatic environment by lowering or raising of water levels.

Pre-Construction Stage

Following measures are to be undertaken by the contractor prior to the commencement of construction:

- Base line data of the water quality is necessary.
- In addition, the availability of enough water during the lean season needs to be assessed as part of the baseline data collection.

Construction Phase

- Improper disposal of solid and liquid waste including excreta generate from sites will pollute the water quality and proper prevention measure should be taken.
- Wastewater disposal, sanitation/latrines may have positive cumulative effects on human health, but if not improperly implemented may affect ground and surface and ground water quality; the contractor should give proper attention on it during construction stage.
- Protect water bodies from sediment loads by locally made silt screens e.g. with jute netting/matting or other barriers.

Post Construction

- Inspection of water quality shall be done regularly.

ECoP - 9.0: Drainage

General

- Drainage is designed for and installed on roads to direct surface or subsurface flow away to a safe outfall without damage to the structure, adjoining property or agricultural fields.
- A road with good drainage is a good road. Inadequate and faulty drainage arrangements result in obstruction to natural drainage pattern. Provision of cross-drainage and longitudinal drainage increases the life of the road and consequently reduces water logging and related environmental impacts.
- The present code seeks to address the environmental concerns related to drainage aspects during different stages of the project execution.

Pre-Construction Stage

- Following measures are to be undertaken by the contractor prior to the commencement of construction:
 - i. The downstream as well as upstream user shall be informed one month in advance
 - ii. The contractor shall schedule the activities based on the nature of flow in the stream.
 - iii. The contractor should inform the concerned departments about the scheduling of work. This shall form part of the overall scheduling of the civil works to be approved by PIO/SAE.
 - iv. Erosion and sediment control devices if site conditions so warrant, are to be installed prior to the start of the civil works.
 - v. All the safety/warning signs are to be installed by the contractor before start of construction
- In case of utilization of water from the stream, for the construction, the contractor has to take the consent from the concerned department.

Construction Phase

- Drainage structures at construction site shall be provided at the earliest to ensure proper compaction
- In hill areas sub-surface drains, if required, shall be provided immediately after cutting the slopes and forming the roadbed (sub grade).
- Safety devices and flood warning signs to be erected while working over streams and canals.

Post Construction

- Inspection and cleaning of drain shall be done regularly to remove any debris or vegetative growth that may interrupt the flow.
- Temporary structures constructed during construction shall be removed before handing over to ensure free flow through the channels.

ECOP - 10.0: Public and Worker's Health and Safety (H&S)

General

The safety and health of the workers and the public is impacted due to the hazards created during the construction period. This code of practice describes the measures that need to be taken to mitigate the impacts.

Pre-construction Stage

- In order to incorporate public health and safety concerns, the PIO/SAE and the Contractor shall disseminate the following information to the community:
 - i. Location of subproject activities,
 - ii. Borrow areas,
 - iii. Extent of work
 - iv. Time of construction
 - v. Involvement of local labors in the road construction
 - vi. Health issues - exposure to dust, communicable diseases, etc.

- The Contractor must raise awareness to the workers to undertake health and safety precautions. Through regular meetings, as may be necessary, contractor shall generate awareness amongst the workers.

Traffic safety implies the reduction of risk of accidents at the work site, this may be achieved through strict rules and procedures for the execution of specific tasks, enforcement of the rules, and discipline amongst workers, maintenance of machineries used and by providing all necessary gear or equipment that may enhance the safety of the workers. The following guidelines should be followed to maintain the safety of the workers:

- workers have to be well informed about the possible damage or hazards related to their respective jobs
- if pedestrian, traffic or plant movements at or near the site are affected by construction works, the person with control of the construction project must ensure that these movements are safely managed so as to eliminate or otherwise to control any associated health and safety risks
- must ensure sufficient lighting in the area where a person performs construction work or may be required to pass through, including access ways and emergency exit or passage without risk to health and safety
- subproject site needs to provide safe access to and egress from all places where they may be required to work or pass through. This includes the provision of emergency access and egress route that must be free from obstructions
- Install red flag/suitable sign boards to make people aware about potential hazard at working site especially in in areas of heavy traffic
- subproject site should be kept orderly and tidy. Access ways should be kept clear of materials and debris and maintained in a non-slippery condition. Materials should be stored in an orderly manner so that it does not pose any risk to the health or safety of any person
- arrangements of first aid facility should me made accessible when construction work is being undertaken
- emergency contact information will be provided to supervisor and all workers.

Construction Stage

- The Contractor shall schedule the construction activities taking into consideration factors such as:
 - i. Sowing of crops
 - ii. Harvesting
 - iii. Local hindrances such as festivals etc.
 - iv. Availability of labor during particular periods
- The PIO/SAE shall carry out periodic inspections in order to ensure that all the measures are being undertaken as per this ECoP.

Post-construction Stage

The construction site shall be cleaned of all debris, scrap materials and machinery on completion of construction for the safety of public and users.

ECOP – 11.0: Fertilizer Production

General

In the past, pesticides were considered as the ‘panacea’ for the control of agricultural pests. Although pesticides may provide temporary relief, it is now widely accepted that indiscriminate and excessive use of pesticides and the long-term dependency on them threaten the sustainability of agricultural production. In this context Bangladesh Government has developed Integrated Pest management (IPM) which includes elements contributing to an effective, safe, sustainable and economically sound crop protection system. It is not limited to pest management system alone.

The objective of the IPM policy is:

‘To enable farmers to grow healthy crops in an increased manner and thereby increase their income on a sustainable basis while improving the environment and community health’.

To achieve the above-mentioned objective, IPM Policy will pursue the following strategies:

- to expand IPM on a sustainable basis by establishing a national IPM program; and
- to facilitate co-ordination of all IPM activities in Bangladesh.

In order to protect the environment from the adverse effects of fertilizers and to enhance the sensible use of pesticides the national IMP policy has the following components.

- Maintaining ecological balance
- Executing appropriate actions on pesticides
- Operating an effective system for implementing the national IPM program
- Developing human resources as the core of IPM
- Conducting research on IPM

In particular, the code aims to ensure that such fertilizers are used according to the national IMP objectives/policy/components and safely, responsibly and effectively, while avoiding or minimizing adverse environmental effects.

The objectives are:

- to provide a simple yet effective process for nutrient management,
- to promote practices that ensure sustainable and economically viable use of fertilizer, and
- to provide users with information on sustainable nutrient management.
- to help support business owners (farmers and growers) to achieve their production and environmental goals for nutrient management.

Fertilizer Handling

Fertilizer handling, transport, or storage should aim for containment of the product until it is applied. This means that no fertilizer should be lost to the environment during transport, storage and any other handling operations, thus avoiding any possible adverse environmental effects. Contamination arising from handling, transport, or storage problems is a point source (i.e. highly localized) contamination, which can be effectively managed and contained if appropriate actions are taken immediately.

Fertilizer Storage

Storage conditions shall ensure that fertilizer is never contaminated with other chemicals or chemical products, and that fertilizer does not escape from the storage facility. Some stores may also need to

provide appropriate signage. Fertilizer storage buildings shall be sited to minimize any risk of environmental contamination. In particular, storage sites must not present a risk of direct water contact with stored fertilizer. This includes the entry of storm water or runoff from surrounding areas.

Fertilizer should stay dry and free from contamination by other fertilizer types. The fertilizer shall be stored on an impermeable surface to prevent leaching to groundwater and to prevent the localized accumulation of contaminants in the soil.

Potential Impacts

The nutrients contained in fertilizers will not only promote the growth of crops but also of wild plants, weeds as well as algal and aquatic plants in rivers, lakes and the ponds. The general levels of nutrients in excess of those normally present in natural ecosystems will result in considerable disturbance to plant and animal communities, and these may be undesirable from the viewpoint of conservation, aesthetics, or recreation. Damage usually results from nitrogen and phosphorus in excess.

The anticipated impacts due to subprojects for the organic fertilizer production and uses are given below

- Generation of odor from fertilizer production
- Under fertilization, results in soil nutrient depletion and soil erosion,
- Over application, increases levels of nitrate in ground and high ammonia emissions from agriculture,
- Leaching due to choice of fertilizer type, increases the optimum rate, improper timing and method of application

Mitigation Measures

There are a number of mitigation and management options that can be implemented. Some key considerations are given below.

- Using environmentally sound fertilizers sourced from Dept. of Agriculture Extension, Bangladesh Agriculture Development Corporation or other sources.
- Preventing the leaching of nutrients after the growing season by increasing the area under green cover, and by sowing crops with elevated nitrogen demand
- Promoting and subsidizing better application methods, developing new, environmentally sound fertilizers, and promoting soil testing.
- Severely limiting the use of fertilizers in for example, water extraction areas and nature protection areas.
- Take appropriate pollution prevention and control measures.
- Inclusion of appropriate engineering, monitoring and management controls.
- Proper handling, management of hazardous material,
- Use of cleaner agricultural production.

ECOP - 12.0: Tree Plantation

General

Besides improving aesthetics and ecology of the area, the trees provide fuel wood, act as noise barriers, provide visual screen for sensitive areas and also generate revenue by sale of its produce.

This code of practice elaborates on the approach towards planting trees. Emphasis has been laid on a greater involvement of communities in planting and maintenance of trees.

Project Planning and Design Stage

- Tree felling, if unavoidable, shall be done only after compensatory plantation of at least three saplings for every tree cut is done.
- The species shall be identified in consultation with officials of Forest Department/local community, giving due importance to local flora. It is recommended to plant mixed species in case of both avenue or cluster plantation.
- The plantation strategy shall suggest the planting of fruit bearing trees and other suitable trees.

Post-construction Stage

- The project proponents would take up the planting of fruit bearing and other suitable trees, on both sides of the roads or other subprojects location from their own funds.
- Watering of trees during the initial period of two to three years shall be the responsibility of the Union Parishad (UP) designated by it.

ECoP - 13.0: Environmental Monitoring

General

Environmental Monitoring provides a systematic review of planning, designing, construction practice and operation activities that may have adverse impact on the surrounding environment. Environmental monitoring enables identification of:

- i. Degradation/improvement of surrounding ecology
 - ii. Damage to surrounding habitation and
 - iii. Extent of compliance with ECoPs and other regulatory provisions
- PIO/SAE should assess whether construction activities comply with environmental standards and other regulatory requirements, by monitoring and conducting an Environmental Audit. These need to be carried out on a periodic basis.

Monitoring Procedure

- PIO shall be responsible for conduct of the periodical environmental monitoring. It will be conducted in phases corresponding to the phases of the project such as
 - Pre-Construction
 - Construction and
 - Post Construction.
- Concurrent audit can be undertaken along with quality assurance checks that need to be conducted by the PIO.

ECoP - 14.0: Natural Habitats

General

This code of practice envisages measures to be undertaken during implementation of EGPP+ subprojects near natural habitats. These measures shall be undertaken in addition to the measures laid down in the other ECoPs.

As per the World Bank OP 4.04, the conservation of natural habitats, like other measures that protect and enhance the environment, is essential for long-term sustainable development. A precautionary approach to natural resource management to ensure opportunities for environmentally sustainable development has been adopted for the project.

Pre-construction Stage

Contractor in consultation with forest ranger or any other concerned authority shall prepare a schedule of construction within the natural habitat. Due consideration shall be given to the time of migration, time of crossing, breeding habits and any other special phenomena taking place in the area for the concerned flora or fauna.

Construction Stage

- Collection of any kind of construction material from within the natural habitat shall be strictly prohibited.
- Disposal of construction waste within the natural habitat shall be strictly prohibited.

Post Construction Stage

- The subprojects near the natural habitat shall be declared as a silence zone.
- Compensatory tree plantation within the project area shall be done.
- The PIO/SAE must ensure maintenance of drainage structure as per ECoP-9.0, "Drainage".

ECoP - 15.0: Consultations for Environmental Aspects

General

All stages of project planning, preparation and implementation will involve interaction with the community. Consultations with community or other stakeholders are an integral part of the project activities. This ECoP is intended to provide guidelines for the contractor for conducting the consultations.

Pre-Construction Stage

Consultations during this stage will be towards seeking consent of landowners for excavation.

Construction Stage

- The grievance committee will settle any grievances raised by the community during this stage. If grievances remain unaddressed, they shall be referred to the concerned authority and shall be addressed as per the Grievance Redressed Mechanism devised in Chapter-7.
- The PIC shall consult the community in identifying people working for subprojects.

Post-Construction Stage

The PIO/SAE shall conduct consultation with the community on induced development aspects within the subprojects. Awareness on impacts likely due to induced development will be generated during the

consultations. Measures to be undertaken for its control and avoid encroachments shall be discussed and necessary arrangements shall be undertaken.

ECOP - 16.0: Minimizing Human Elephant Conflicts

General

Since the influx of DRP, the chances of Human Elephant Conflicts (HECs) have risen in the Cox's Bazar area. IUCN in conjunction with UNHCR have undertaken initiatives to minimize the risks of HEC⁹. This ECoP is intended to provide guidelines for the contractor to minimize HEC at their work sites.

Pre-Construction Stage

Consultations should be held with the local communities during this stage to understand if there have been any HEC or elephant sightings in the past 30 days.

Construction Stage

- If an elephant has been sighted at or near (within 200m) of the work site, then IUCN representative in Cox's Bazar should be alerted.
- Local Elephant Response Team (ERT) should be alerted.
- Workers should be instructed not to approach or interact with the elephant(s).

Post-Construction Stage

Work areas should be cleared to ensure that there are no chances of equipment or waste materials that can harm elephants.

ECOP - 17.0: Dust and Air Quality Management

General

Air quality can be adversely affected by vehicle movement on unpaved roads, windblown dust and emissions from vehicle exhausts or generators.

Pre-Construction Stage

Any stockpiles should be covered or sprayed with water to prevent dust impacts on air quality. Any machinery (that uses fuel) brought to site should be well-maintained.

Construction Stage

- Water will be sprayed on bare soils, unpaved roads and stock piles to prevent dust impacts on air quality.
- Covering of stored materials (especially gravel and sand) at all times.
- Increase watering frequency during periods of high risk (e.g. high winds).
- Machinery causing excess pollution (e.g. visible smoke) will be banned from construction sites

⁹ <https://www.iucn.org/news/bangladesh/201803/unhcr-iucn-launch-plan-prevent-human-elephant-conflict-bangladesh-refugee-settlement>

- Restore disturbed areas as soon as practicable by vegetation/grass-turfing

Post-Construction Stage

Work areas should be cleared to ensure that there are no chances of dust being generated. Bare soils should be vegetated as much as possible.

ECoP - 18.0: Noise Management

General

Noise impacts can be a nuisance to surrounding people and animals (wildlife, livestock, etc.). Noise can be caused by machinery and vehicles movement.

Pre-Construction Stage

Organize the loading and unloading of materials so that noise in and around the work site is minimized. Arrange for the use of quietest available equipment. Restrict use of horns in/around site.

Construction Stage

- Appropriately plan and site all noise generating activities to avoid noise pollution to local residents
- Maintain all equipment in order to keep it in good working order to avoid unnecessary noise
- Restrict use of horns in/around site.
- Notify affected people if major noisy activities will be undertaken
- Avoid undertaking the noisiest activities, where possible, when working at night near the residential areas
- Monitor any complaints and implement corrective actions where practical.

Post-Construction Stage

Ensure all equipment removed from site with minimal noise impacts.

COVID protocol

Follow GOB COVID 19 protocols.

- Train workers and staff on site on the signs and symptoms of COVID-19.
- Ensure provision and use of masks for all crews.
- Ensure they maintain at least three feet of distance from each other while working.
- Place the disposable items in a designated place after wrapping with paper/putting inside a plastic bag.
- Hand and reusable items must be cleaned with soap regularly.

INSTANCES OR SPREAD OF THE VIRUS

WHO provides detailed advice on what should be done to treat a person who becomes sick or displays symptoms that could be associated with the COVID-19 virus suspect. The project should set out risk-based procedures to be followed, with differentiated approaches based on case severity (mild,

moderate, severe, critical) and risk factors (such as age, hypertension, diabetes) (for further information see WHO interim guidance on operational considerations for case management of COVID-19 in health facility and community). These may include the following:

- If a worker has symptoms of COVID-19 (e.g., fever, dry cough, fatigue) the worker should be removed immediately from work activities and isolated on site.
- If testing is available on site, the worker should be tested on site. If a test is not available at site, the worker should be transported to the local health facilities to be tested (if testing is available).
- If the test is positive for COVID-19 or no testing is available, the worker should continue to be isolated. This will either be at the work site or at home. If at home, the worker should be transported to their home in transportation provided by the project.
- Extensive cleaning procedures with high-alcohol content disinfectant should be undertaken in the area where the worker was present, prior to any further work being undertaken in that area. Tools used by the worker should be cleaned using disinfectant and PPE disposed of.
- Co-workers (i.e., workers with whom the sick worker was in close contact) should be required to stop work, and be required to quarantine themselves for 14 days, even if they have no symptoms.
- Family and other close contacts of the worker should be required to quarantine themselves for 14 days, even if they have no symptoms.
- If a case of COVID-19 is confirmed in a worker on the site, visitors should be restricted from entering the site and worker groups should be isolated from each other as much as possible.
- If workers live at home and has a family member who has a confirmed or suspected case of COVID19, the worker should quarantine themselves and not be allowed on the project site for 14 days, even if they have no symptoms.