

E4191v2

Safety Net Systems for the Poorest (SNSP)

ENVIRONMENTAL MANAGEMENT FRAMEWORK

Draft Report

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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
BPD	Bangladesh Poverty Database
BWDB	Bangladesh Water Development Board
DC	Deputy Commissioner
DDM	Department for Disaster Management
DG	Director General
DMRD	Disaster Management and Relief Division
DOE	Department of Environment
DPD	Deputy Project Director
DLIs	Disbursement Linked Indicators
EA	Environmental Assessment
ECA	Environmental Conservation Acts
ECC	Environmental Clearance Certificate
ECoPs	Environmental Code of Practices
ECR	Environment Conservation Rules
EGPP	Employment Generation program for the Poorest
EIA	Environmental Impact Assessment
EMF	Environmental Management Framework
EMP	Environmental Management Plan
EMRP	Environmental Management Regulatory Procedure
EMS	Environmental Management System
EH&S	Environmental Health & Safety
FFW	Food for Works
FGDs	Focus Group Discussions
FS	Field Supervisor
FY	Fiscal Year
GOB	Government of Bangladesh
GR	Gratuitous Relief
GRC	Grievances Redress Committee
GRO	Grievance Redress Officer
H&S	Health & Safety
ICT	Information and Communication Technology
IDA	International Development Association
IEE	Initial Environmental Examination
IFC	International Finance Corporation
IRC	Independent Review Committee
MODMR	Ministry of Disaster Management and Relief
MOFDM	Ministry of Food and Disaster Management
MOEF	Ministry of Environment and Forest
MIS	Management Information System
MPC	Main Program Component
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
OPD	Office of the Project Director
OSW	Operational Support Window
PAPs	Project Affected Persons
PDO	Project Development Objective
PD	Project Director
PIC	Project Implementation Committee
PIO	Project Implementation Officer
PPE	Personnel Protective Equipment
SNSP	Safety Net Systems for the Poorest
TR	Test Relief
TOR	Terms of Reference
UC	Upazila Committee
UNO	Upazila Nirbahi Officer
UP	Union Parishad
UZ	Upazila
UP-PIC	Union Parishad Project Implementation Committee
VGf	Vulnerable Group Feeding
WARPO	Water Resources Planning Organization
WB	World Bank

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 impact that results 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	Environmental management plan (EMP) is a plan to undertake an array of

Management Plan (EMP)	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 organisation'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 proposal - a baseline census information collected for each of the inventories implemented in relation to a particular infrastructure project.
Screening	The process by which a decision is taken on whether or not EA is required for a particular project
Scoping	Scoping is a process whereby the important environmental components, project

development issues and concerns of local communities are determined.

Significant Impacts

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.

Stakeholders

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.

Sustainable Development

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.

Union

administrative division – subdivision of an upazila

Upazila

administrative division – subdivision of a district

EXECUTIVE SUMMARY

1. INTRODUCTION

The Department for Disaster Management (DDM), under the Ministry of Disaster Management and Relief (MODMR), implements five of the key safety net programs in the country – Employment Generation Program for the Poorest (EGPP), Food for Works (FFW), Test Relief (TR), Gratuitous Relief (GR) and Vulnerable Group Feeding (VGF). Of these, EGPP, FFW and TR are workfare programs and account for approximately 70% of the total safety net allocation to MODMR. The project will finance small-scale community level basic infrastructure (subprojects) to create rural employment during lack period, rainy seasons and lean periods under 3 safety net programs. The environmental impacts from majority of the sub-projects under Safety Nets Systems for the Poorest Project (SNSP) are likely to be minor, local and in most cases temporary.

The Government of Bangladesh (GOB) has requested follow-on support to the US\$150 million EGPP assistance provided by the IDA since 2008 to improve the design and implementation of MODMR's programs. The proposed SNSP will support a systematic approach to implementation of DDM's five programs while financing short-term employment. The MODMR has prepared this Environmental Management Framework (EMF) to deal with potential environmental issues that may arise during implementation of the small scale sub-projects under SNSP. In order to address the potential environmental impacts and improve existing environmental conditions, the World Bank (WB) Policy on Environmental Assessment (OP/BP 4.01) has been triggered for this project. Considering the nature and magnitude of potential environmental impacts and scale of community level infrastructure development, the SNSP is classified as category 'B' as per WB guidelines. According to DOE guidelines, the SNSP is fallen under category "Orange B" project.

Projects and programs financed with IDA resources need to comply with the World Bank Operational Policies and all project components eligible for funding under SNSP will be required to satisfy the World Bank's safeguard policies, in addition to conformity with environmental legislation of the Government of Bangladesh. The EMF provides general policies, guidelines, and procedures to be integrated into the implementation of all sub-projects implemented by DDM under the FFW, TR and EGPP programs. In preparing this document, relevant environment safeguard practices were reviewed, including compliance with the EMF that had been prepared under EGPP. The review included field visits; various levels of consultations; qualitative and quantitative assessment towards understanding implementation processes of environmental safeguard compliance, and assessment of capacity to comply with safeguard policies.

According to the EMF, all subprojects are subjected to an environmental screening. The community under the guidance of the Field Supervisor (FS) and Union Parishad Project Implementation Committee (UP-PIC) will carry out the environmental screening to identify the potential environmental impacts at the subproject planning stage. Instead of preparing environmental management plan, the project will adopt standard Environmental Code of Practices (ECoPs) for each type of subproject. The ECoPs will be part of the project operational manual and project staff will be trained how to apply the ECoPs. These ECoPs will be considered at the planning of the subprojects and mitigation measures will be followed during subproject implementation.

The objective of EMF for the SNPP is to ensure that environmental considerations are appropriately considered and addressed at subproject planning and implementation. The EMF provides general policies, guidelines and procedures to ensure that the project is implemented in an environmentally sustainable manner and in line with the applicable WB safeguard policy. Specifically, the EMF aims to achieve the following: (i) minimize potential negative environmental impacts; (ii) enhance positive environmental impacts; and (iii) develop capacity of DDM to manage environmental impacts in partnership with communities. The EMF details the environmental criteria for community level screening and planning, and subprojects level ECoP to

mitigate possible negative environmental during implementation. Although the environmental impacts are not significant, special attention needs to be provided: (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).

The project will finance small-scale community level basic infrastructure (subprojects) to create rural employment during lack period, rainy seasons and lean periods under 3 safety net programs. The basic rural infrastructure (subprojects) to be funded under the projects are mainly: (i) construction and maintenance to rural roads (mainly earthen roads); (ii) construction and maintenance of river embankments; (iii) excavation or re-excavation of irrigation canals and drains; (iv) land-fill for community institutions like schools, mosque, pagoda, temple, graveyards, prayer grounds 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 helipad; (ix) excavation or re-excavation of water reservoirs; and (x) cleaning ponds and bushes etc. The project activities also include developing Bangladesh Poverty Database (US\$40 million), strengthening Directorate of Disaster Management (DDM) program administration and transparency, 2 safety net programs food grants during a period of distress and following any disaster period.

Three components are proposed for this programmatic operation & these are: Component 1: Main Program Component (MPC) that aims to support a systematic approach to implementation of EGPP, FFW, TR, GR and VGF while financing short-term employment; Component 2: Operational Support Component (OSC-1) for DDM for project implementation and capacity strengthening, and Component 3: Operational Support Component (OSC-2) for the Bangladesh Bureau of Statistics (BBS) to develop the Bangladesh Poverty Database (BPD). In terms of coverage, these three programs are implemented nationwide targeting the poorest upazilas (sub-districts) of Bangladesh. Currently, EGPP allocations at the upazila level is based on the 2005 poverty maps whereby 60% of the program allocations are distributed to upazilas with poverty rates of 35% or higher; 35% of the allocations are made to upazilas with poverty rates between 34 and 21%, and 5% of the allocations are made to upazilas with poverty rates below 20%. The exact locations of sub-projects are identified by the UP-PIC in consultation with community and ward members during program implementation.

The project includes 3 major components. The first 2 components are targeted to (i) develop Bangladesh poverty database and (ii) strengthen DDM program administration and transparency. These 2 components are not expected to have any environmental impact due to the nature of the investment. The component 3 will support the five safety net programs of which Vulnerable VGF and GR include only food grains support during a period of distress and following any disaster. The rest three safety net programs i.e., FFW, TR and EGPP support construction and maintenance of basic rural infrastructure to create rural employment during slack period, rainy season and lean periods. The subprojects under FFW mostly include construction and maintenance of rural roads, river embankments and irrigation channels. TR supports cleaning ponds and bushes, and making minor repair to rural roads, schools, mosques and madrasa. The EGPP has already been supported through the WB program, which mainly supports earthen works.

The following 2 relevant sample subprojects (Subproject No. I & VIII) in Mallikbari & Uthura unions of Bhaluka upazila of Mymensingh district have been chosen from list of sub-projects to be implemented under subproject 1: (a) Maintenance of 1 km long Ramjaner Bari to Shamsuddiner Bari via Paglar Vita Earthen Road, Mallikbari union; (b) Maintenance of 2 km long Birenbabur Bari to Pandit Para Earthen Road, Mallikbari union; and (c) Maintenance of 1.5 km long Nainpur Purba-para to 9 No Pucca Rasta Earthen Road, Mallikbari union and under subproject viii: (a) Development of Chander Market in Uthura union, and (b) Development of Chamiadi Market in Uthura union.

2. ENVIRONMENTAL POLICY, ACTS AND GUIDELINES

Regulatory requirements toward protection and conservation of environment have been enunciated by the GOB and WB pertinent policies and regulations among these requirements are summarized below:

(a) Relevant GOB Policies, Acts, Rules, Strategies and Guidelines: (1) Environmental Conservation Act (ECA), 1995 and Amendments; (2) Environment Conservation Rules (ECR), 1997 and Amendments; (3) Environmental Policy, 1992; (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.

(b) World Bank's Relevant Environmental Safeguard Policy: (1) 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; & (5) WB Group EHS Guidelines.

3. DESCRIPTION OF SAMPLE SUBPROJECTS & BASELINE ENVIRONMENT

The following 2 sample subprojects (Subproject No. I & VIII) in Mallikbari & Uthura unions of Bhaluka upazila, Mymensingh district have been chosen from list of sub-projects to be implemented under subproject 1: (a) Maintenance of 1 km long Ramjaner Bari to Shamsuddiner Bari via Paglar Vita Earthen Road, Mallikbari union; (b) Maintenance of 2 km long Birenbabur Bari to Pandit Para Earthen Road, Mallikbari union; and (c) Maintenance of 1.5 km long Nainpur Purba-para to 9 No Pucca Rasta Earthen Road, Mallikbari union and under subproject viii: (a) Development of Chander Market in Uthura union, and (b) Development of Chamiadi Market in Uthura union. The baseline environment is described for the sample subprojects which are located in Mallikbari & Uthura unions of Bhaluka upazila under Mymensingh district.

Physical Environment: Several climatic zones occur in Bangladesh. The subproject areas fall under the south-central zone where during 2002 to 2010 period monthly maximum & minimum temperature ranges from 10.1 to 32.6 °C, rainfall 0 to 635mm., humidity ranges from 70 to 90 %. The subprojects are located on the flood plain of the old Brahmaputra river. The average ground elevation of the subproject areas is about 14.2 mPWD. Topographically, the subproject areas are almost flat, with many water bodies such as depressions, ponds & canals. The sample subproject areas are located in Zone II and it is the moderately severe and moderate vulnerable to earthquake disaster. Bhaluka UZ is drained by several small rivers such as Sutia, Kaoraid, Lalti and Bajua. The quality of river water as well as pond & canal water is not good due to use of pesticides & fertilizer for agricultural purpose. The ground water table is about 5m below ground level. Iron and iron is the major water quality concern for drinking purposes in UZ: Bhaluka cluster as informed by the local people during site visit. Generally, air pollution sources in the subproject areas mainly consists of road dust, black smoke from diesel engine vehicles, earthwork dust, domestic heating and cooking etc. Low noise generates in the subproject area mainly due to movement of engine boats, community, rice/wheat mills at the bazar areas and road sides and road traffic.

Biological Environment : The ecological settings of the cluster are mostly with wetland, homestead and roadside vegetation etc. A large number of multipurpose trees such as jackfruits, mango, shilkoroi, shimul, shisso, mehegoni, banana, pappya, coconut, bamboo etc are grown in the cluster. Two major types of fauna viz., terrestrial and aquatic fauna available in the cluster. Common birds like crows, sparrows, shaliks, kingfisher and doves are available in the area. The wildlife such as fox, wood cats, snakes, mice, frogs etc. are found in the area. Fresh water fish habitat such as river, pond and ditches exist in the cluster, which

provide shelter for different types of fresh water fish species (such as carp, catfish, mrigel, taki, shoel, tengra, bain, baila, boal etc.). There is no ESA/EPA nearby the subproject areas as reported by the local inhabitants.

Socio-economic Environment: The social & cultural profile of this cluster is similar to other parts of Bangladesh. Muslims represent about 90% of the local population. The hindus & other religion represent about 10%. The population of the Uthura union as per 2011 Census is 28,178 with male 13,888, female 14,290; Muslim (27,134) is the dominant religion and others are hindu (716), Christian (1), Buddhist (4) and Others (323). The major sources of income within the population of this cluster are agriculture, agricultural labor, wage labor, industrial labor, commerce, small shops, small shops in the markets, service, transport, construction, fisheries, hawker, house renting out, land renting out and others. About 70% people live on agriculture, 20% business, 5% services & rest 5% jobless & others, as reported by the local people.

4. POTENTIAL ENVIRONMENTAL IMPACTS

Although most of the subproject impacts of the SNSP are temporary, less significant, 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, consultant's 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. 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 in details in the main report (Chapter 4). The anticipated major common negative impacts due to all subprojects (from i to x) are: (1) Loss of top soil 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 and (8) Public & workers H&S.

5. ENVIRONMENTAL MANAGEMENT PROCESS

As specific sub-projects under the workfare programs are not known at the time of project design, this EMF has been prepared to establish a mechanism to determine and assess potential environmental impacts of sub-projects 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 sub-projects. In addition to complying with the regulatory requirements of GOB and the safeguard policies of the WB, the principles provide a framework to (i) identify, predict, and evaluate beneficial and negative environmental impacts of sub-project activities, (ii) design enhancement measures for beneficial impacts, and (iii) suitable institutional arrangements to implement the environment management measures. In the view of EMF objectives, the planning and implementation of sub-project activities will be based on the principles, most of which are incorporated in the project design and implementation arrangements.

The community level environmental screening will be integral part of the sub-project planning. The environmental screening will be carried out at the community level to understand the possible environmental impacts at subproject planning stage. The purpose of the environmental screening is to identify concerns addressed early on and to ensure that actions to mitigate environmental impacts or enhance environmental opportunities. 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 Field Supervisor (FS) and UP-PIC 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.

In the case of SNSP, screening will be used for taking decision about the inclusion or exclusion of the sub-projects to be funded under the project. The proposed screening criteria have been selected from the experience of other project and typical environmental impacts of the proposed project interventions. The

screening responsibility of the sub-project is on the (UP-PIC) during the selection of sub-projects in consultation with community and ward members. Using the screening form, proposed sub-projects will be screened by respective UP-PICs to identify any potential negative impacts/effects from the sub-project activities. Once impacts are identified, the necessary mitigation measure will then be recommended and the sub-project will be designed to implement these mitigation measures. The Upazila FS (hired on a contractual basis by the Project) will review the environmental screening and suggest appropriate mitigation measures for the impacts as mentioned earlier in chapter 5. The Upazila Field Supervisor will estimate the cost for the environmental mitigation of the sub-projects.

The supervision and monitoring of sub-project implementation in SNSP will be carried out at different levels. The primary responsibility of the supervision of implementation including environmental mitigation measures is assigned to the UP-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 sub-project monitoring. On behalf of the UC, the PIO of each Upazila along with the Upazila FS will monitor the environmental compliance issue. The PIO at Upazila level and the Deputy Project Director (DPD) at DDM will maintain a database for sub-project specific environmental screening and EMP.

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. The monitoring activities of SNSP 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). The project Monitoring & Evaluation (M&E) system will capture the field monitoring information through its Management Information System (MIS).

The ECoPs have been developed to guide the planning, design, construction and maintenance stages of SNSP in terms of avoidance or mitigation of the negative environmental impacts that may result from the projects. The codes define methods and procedures to be followed by the executing agencies, contractors and other agencies involved in the three project states. The implementation of environmental measures shall be monitored through the environmental audit procedures provided in ECoPs. The Checklist for checking the Detailed Project Report (DPR) preparation and for identifying issues to be addressed in pre-construction, construction and post-construction stages will be as per the ECoPs. A total of 14 ECoPs are: (a) Project Planning & Design Stage, (b) Site Preparation: Borrow Areas; (c) Top-soil Salvag;, (d) Storage and Replacement; (e) Slope Stability and Erosion Control; (f) Waste Management; (g) Water Bodies; (h) Drainage; (i) Worker’s Health and Safety; (j) Environmental Monitoring and Audit; (k) Tree Plantation; (l) Fertilizer Production; (m) Natural Habitants; and (n) Consultations for Environmental Aspects.

6. INSTITUTIONAL ARRANGEMENTS AND CAPACITY BUILDING

The DMRD of the MoFDM will implement the project with the support of a project implementation team [Office of the PD] lead by a full-time PD, not below the rank of Joint Secretary. The institutional framework of the SNSP from the national to grassroots levels will be as under.

At the national level, the oversight and program management will be undertaken by the three major bodies including (i) National Steering Committee (NSC) headed by the Secretary, DMRD – MoFDM; (ii) Technical Project Review (TPR) Committee headed by the Project Director of SNSP; and (iii) Office of the PD also lead by the PD of SNSP.

At the district level, the concerned DC with the support of the District Relief & Rehabilitation Officer (DRRO) will coordinate the program oversight and management. A District/Zila Committee will be set up in each district under the chairpersonship of the concerned DC and the DRRO of the district will act as the Member Secretary of the committee. Upazila will be the focal point for the overall implementation and oversight for the SNSP. In every Upazila, the Upazila Committee (UC) will undertake the oversight and program management of SNSP. The UC will compile and submit (via the UNO) its Upazila Plan to the DC for formal approval. The Upzila Plan will contain union-wise details of planned projects and beneficiaries for each phase of the project. In the event that no comments are received from the DC within 20 days, the UC will assume that its phase-wise plan/budget has been formally approved. At the Union Parishad level, the Union Committee headed by the Chairman of the respective Union Parishad will undertake the oversight and program management. Every Union Committee will have powers to constitute project-wise Project Implementation Committees (PICs) for the effective implementation and supervision of the community sub-projects.

An assessment of the existing institutional capacity to implement the EMF is presented in this section. It assesses, at a minimum, the adequacy of: (1)the institutional structure, and its authorities at all relevant levels, to address environmental management issues; (2)the number and qualifications of staff to carry out their EMF responsibilities; (3)resources to support staff in their work; and (4)knowledge and experience relevant to carrying out environmental analyses and designing mitigation measures for small-scale infrastructure.

The UPs have a very limited the institutional capacity to implement the EMF. Except for a Secretary, who usually keeps track of all activities in a union, the 8 others, including the Chairman, are elected community representatives. It is thus unlikely that much capacity could be built within the UPs. However, as a part of the institutional capacity building for the project as a whole, UC - comprising of professionals of relevant GOB agencies – will be formed and trained in different aspects of the project, including interpretation and implementation of environmental impact management guidelines. As and when required, the UPs can avail the services of the UC. The trained Upazilla level official can be utilized to conduct awareness-building type training for UP members and those who would be involved in selection and implementation process (i.e., subproject committee members and concerned citizens).

The implementing agency and other stakeholders of the project have limited experience on environmental assessment and management under the earlier project EGPP. The component 2 will help strengthening the DDM capacity building to monitor and evaluate its program. It was agreed that environmental management, climate change adaptation and disaster risk reduction will be included in the capacity building program for FS and PIOs. In addition, the project will organize several orientation programs on operations manual including screening and ECoPs.

The implementing agency is mainly responsible to address disaster and emergency situation. Environmental concern has not been integrated with the operation. In addition, the other stakeholders involved in the project have limited or no experience on environmental management. Thus, to ensure that capacity, it is vital that SNSP allocates sufficient resources to training and capacity building especially in the early years. These efforts will not only benefit the SNSP, but will also build local capacity to undertake other development initiatives funded locally or by other donors. The SNSP will help improve the effectiveness of local proponents in the management of environmental and social impacts during planning, implementation and operation of proposed investments. The capacity building will enhance the subprojects' EMF management capacity by allowing real application of the critical practices such as the following: (1)Basic practices: screening impacts, scoping assessments, planning mitigation options, public consultation to assess feasibility and acceptability options; (2)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; (3)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;

The training programs will be coordinated and anchored within the SNSP management. 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. The training on EMF may be integrated with social framework and other related training program for cost effectiveness. Different groups involved in SNSP implementation have different training needs in terms of raised awareness, sensitization to the issues, and detailed technical training.

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 UZ level technical personnel could be such trainers for UP level subproject personnel and concerned people including those from NGOs.

The capacity building and training constitute a separate component of SNSP and adequate resources from this component should be allocated to ensure effective implementation of the EMF. The resources are needed to implement the following items: (1) Institutional development activities; (2) The training program for communities, extension teams and local authorities to implement their EMF responsibilities; (3) Allowances for the preparation of subproject LEAs etc. and (4) Annual reviews and audits.

In order to deal with the grievance and complaints of workers under the SNSP, a Grievance Redress System will be set up at national, district and upazila levels. At the Upazila level, the Upazila Nirbahi Officer (UNO) will be the Grievance Redress Officer (GRO), while at the district level the Deputy Commissioner (DC) will be the GRO. The Deputy Project Director (DPD) at DDM will act as the GRO at the central level. At each level, there will be a Grievance Redress Register, where complaints will be entered and petitioners will be given a receipt. All grievances should ideally be disposed of within 15 days, failing which the petitioner can appeal before the appellate authority. Monitoring and reporting on possible complaints on environment issues from community and affected people in the villages will be one of the responsibilities of the Upazila-level GRO. The DC of respective district will be the appellate authority for the upazila level complaints, while the DPD of the Project will be the appellate authority for the district level complaints. The National Steering Committee (NSC) headed by the Secretary, MODMR, will act as the final appellate authority for grievance redress. DDM will be responsible for developing appropriate formats for complaints and redress as well as disseminating information about the grievance redress system. Complainants can however send letters of complaint to any level and these will be acted upon by the level where they are received.

7. PUBLIC CONSULTATIONS AND DISCLOSURES

The participatory consultation is an essential criteria and important strategy for an integrated environmental and social analysis process, the project design and its implementation. Views of the project affected persons (PAPs) have been fully taken into account during the project preparation and continue to form a basis for further design and implementation of the sub-projects throughout the SNSP implementation period. The purpose of the stakeholder consultation is to identify the views of local communities, major institutional and other stakeholders, and to assess any mitigation measures which may be undertaken to minimize any negative impacts of the proposals under consideration.

The EMF preparation includes 3 field level consultations on 24 March 2013. Among these consultations one was held at Nayanpur village in Mallikbari union under Bhaluka upazila and other two consultations were

held at Bangao Chander Bazar and Chamiadi Bazar in Uthura union under Bhaluka upazila, Mymensingh district. About 87 community representatives were present in these consultations. The participants were overwhelmed to understand that the meeting was to consult them for designing the subprojects under the SNSP. The participants in these consultations were happy to understand that social and environmental impacts will be addressed under the project to maximize project benefits. They did not foresee any major environmental issues from the project activities.

It is intended to layout the way in which information will be provided to the project implementers and beneficiaries and also how consultations will be held during project implementation. Its purpose is to ensure social and environmental issues are effectively addressed by the project and subprojects through a transparent and participatory manner.

For projects such as the SNSP, the WB procedures require that the EMF be prepared and publicly disclosed prior to project appraisal. This allows the public and other stakeholders to comment on the possible environmental and social impacts of the project, and the appraisal team to strengthen the frameworks as necessary, particularly measures and plans to prevent or mitigate any negative environmental and social impacts. Toward this end, this document will be publicly released through the World Bank's Info Shop and in public locations in Bangladesh. The documents should be made available in English and Bengali in compliance with the World Bank's *Public Consultation and Disclosure Policy*.

1 INTRODUCTION

1.1 Background

1. The Department for Disaster Management (DDM), under the Ministry of Disaster Management and Relief (MODMR), implements five of the key safety net programs in the country – Employment Generation Program for the Poorest (EGPP), Food for Works (FFW), Test Relief (TR), Gratuitous Relief (GR) and Vulnerable Group Feeding (VGF). Of these, EGPP, FFW and TR are workfare programs and account for approximately 70 percent of the total safety net allocation to MODMR.

2. The Government of Bangladesh (GOB) has requested follow-on support to the US\$150 million EGPP¹ assistance provided by IDA since 2008 to improve the design and implementation of MODMR's programs. The proposed Safety Nets Systems for the Poorest Project (SNSP) will support a systematic approach to implementation of DDM's five programs while financing short-term employment. The MODMR has prepared this Environmental Management Framework (EMF) to deal with potential environmental issues that may arise during implementation of the small scale sub-projects.

3. The subprojects to be funded under the project are not expected to have significant environmental impacts. However, if the planning and implementation of the physical interventions are not properly carried out, the subprojects may have localized environmental impacts, which will be mostly short-term and reversible. The project will be implemented all over the Bangladesh and site selection is important to avoid any environmentally protective(EPA)/sensitive areas (ESA). 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. Considering the nature and magnitude of potential environmental impacts and scale of community level infrastructure development, the SNSP is classified as category 'B'. According to DOE guidelines, the SNSP is under category "Orange B" project.

1.2 Project Description

4. The proposed project coverage is national with interventions targeted on the basis of poverty Assessment. The project will take the form of "Results-based" investment loan covering the four thematic areas of (i) improved management; (ii) improved equity; (iii) better administrative capacity, and (iii) increased transparency over a period of four years. In recent years the GoB has been allocating about USD 600 million annually to the key safety net programs – EGPP, TR, FFW, GR and VGF - implemented by the DMRD. The proposed project is expected to support about 15 percent of these expenditures over the course of the project period. Thus the total project cost amounts to a Credit of USD 360 million out which it has been proposed that the International Development Association (IDA) will support USD 300 through a Specific Investment Loan (SIL).

1.3 Project Objective(s)

5. The objective of this proposed project is to improve the equity, efficiency, and transparency of key social safety net programs to enable the poorest households to better cope with poverty and vulnerability.

6. To meet its objective the project will focus on the following three results areas:

(i) Better equity by focusing on more effective targeting mechanism. A National Household Poverty Registry (NHPR) will be developed for the delivery of transfers made by DMRD's programs, as well as all other

¹ Employment Generation Program for the Poorest - IDA Credit No. 4833

targeted services provided by other Ministries. In the interim all of DMRD's programs will harmonize their beneficiary identification procedures based on geographical, household and gender level targeting mechanisms.

(ii) Increased administrative efficiency of these programs such that program level implementation is simplified and formalized. This will be done by consolidating and rationalizing operational processes; including adequate field level monitoring personnel; developing clear guidelines for program implementation and a modern record keeping system based on a common IT platform. The use of ICT will be utilized to simplify processes, where applicable such as in the payments and grievance redress mechanisms. These activities will be underpinned by a results-oriented Action Plan for the implementation of DMRD's programs to guide the management of this process.

(iii) Enhanced transparency in the implementation of these programs via the adoption of better accountability measures. Program objectives and rules, particularly payment mechanisms, will be well-publicized. Key stakeholders at the local level such as local government and administration officials will be involved for extensive outreach as well as for facilitating local level implementation. Grievance redress and appeal processes will be included, as well as a framework for strengthening the monitoring and evaluation of the programs, including third party monitoring and robust impact evaluations.

1.4 Project Components

7. Project components: The proposed project would consist of three components with one operating on a results-based financing. The various activities under each of these components amount to approximately US\$ 360 million over four years (FY 14 – FY 18), which would represent about 15 percent of the total GoB allocations of about USD 600 million for these programs annually or USD 2,400 million over four years. The tentative components of the Project follow the design of EGPP in that there are one main program component and two distinct TA components. These are described briefly in the following:

Component 1: Main Program Component: Under this component the project will finance a portion of the consolidated expenditures of the EGPP (from January 2014 – December 2018) to support the innovations to EGPP, FFW, TR, GR and VGF programs through the three results areas based on disbursement linked indicators (DLIs). IDA support will be in the form of financing cash transfers, of which EGPP is the only fully cash-based program.

Component 2: Operational Support Component to DDM: While DDM implements some of the largest safety net programs in the country, it has a very limited budget with which to implement and monitor these programs. The objective of this component is to strengthen DDM's institutional capacity, and thus can be seen as a financing instrument for the inputs needed to meet the DLI targets under component 1. Activities financed under this component include: (i) preparation of the overall Operations Manual based on the revised guidelines for the implementation of the DDM programs (EGPP, FFW, TR, VGF and GR); (ii) development of the specifications for the consolidated program MIS that will include a full set of modules including selection and verification of eligible beneficiaries, registration of selected beneficiaries, payments/transfers, case management, grievances and appeals; (iii) improving program monitoring at the field level; and (iv) strengthen program management with the help of a consolidated program Management Information System (MIS).

Component 3: Operational Support Component – BBS: The objective of this component is to support the Bangladesh Bureau of Statistics in the development of the Bangladesh Poverty Database (BPD) that will be used to better target the poor in DDM programs, and by other key safety net programs implemented by other Government agencies. The BPD consists of a set of uniform, objective and transparent criteria to select the poor, and is likely to reduce the overall costs and errors associated with targeting. This Database -

consisting of roughly 35 million households out of which around 10 million can be expected to be poor - will also help in improving the coordination, efficiency and effectiveness of all social safety nets.

1.5 Subprojects' Activities

8. The project includes 3 major components. The first 2 components are targeted to (i) develop Bangladesh poverty database and (ii) strengthen Directorate of Disaster Management (DDM) program administration and transparency. These 2 components are not expected to have any environmental impact due to the nature of the investment. The component 3 will support the five safety net programs of which Vulnerable Group Feeding (VGF) and Gratuitous Relief (GR) include only food grains support during a period of distress and following any disaster. The rest three safety net programs i.e., Food for Works (FFW), Test Relief (TR) and Employment Generation Program for the Poorest (EGPP) support construction and maintenance of basic rural infrastructure to create rural employment during slack period, rainy season and lean periods. SNPP will fund targeted infrastructure sub-projects. The exact type of the subproject will be chosen by the communities, but possible kind of subprojects includes but not limited to:

- (i) construction and maintenance of rural roads;
- (ii) excavation or re-excavation of irrigation canals and drains;
- (iii) construction and maintenance of earthen embankments;
- (iv) land-fill for community institutions like schools, mosque, pagoda, temple, graveyards, prayer grounds 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 helipad; and
- (ix) excavation or re-excavation of water reservoirs.

1.6 Objectives of the EMF

9. The project will be implemented nationwide, however locations of the sub-projects are not known at this stage. Sub-projects may also have adverse environmental impacts if they are not properly designed or executed, or mitigation measures are not implemented. It is anticipated that, the nature of these the sub-projects may lead to negative environmental impact. However, most of the environmental impacts are expected to be insignificant, localized and reversible. The Environmental Management Framework (EMF) for the SNPP is prepared to ensure that environmental considerations are appropriately considered and addressed at subproject planning and implementation. Since the environmental impacts cannot be precisely identified upfront before sites are selected, the Environmental Framework approach has been adopted for the project. The DDM has updated the existing Environmental Management Framework (EMF) to cover the 3 safety net programs and provided emphasis on environmental issues at the local level planning process. The EMF provides general policies, guidelines and procedures to ensure that the project is implemented in an environmentally sustainable manner and in line with the applicable World Bank safeguard policy. Specifically, the EMF aims to achieve the following: (i) minimize potential negative environmental impacts; (ii) enhance positive environmental impacts; and (iii) develop capacity of DDM to manage environmental impacts in partnership with communities.

10. The EMF establish methodologies for environmental screening and management by the Union Parishad Project Implementation Committee (UP-PIC) sub-project cycle; the application of relevant ECoP to mitigate or avoid the possible negative environmental impact during all stages of the sub-project cycle and the consultation process to Inform project stakeholders of the potential impacts of different anticipated sub projects.

1.7 Lessons Learned From EMF of EGPP

11. The EMF of EGPP has identified some of the major sources or causes of potential impacts due to the implementation of the subprojects of EGPP. Their consequences were assessed and possible measures to mitigate negative impacts and enhance positive impacts were recommended. However, the assessment was not adequate to fulfill the requirement. There were some limitations in the EMF of EGPP which has been improved in the present EMF. Particularly, the subproject location, specific impact identification and their appropriate mitigation measures have been included in the present EMF. According to the impacts and mitigation measures, a detailed Environmental Codes of Practices (ECoPs) and institutional arrangement comparatively to the previous EMF has been developed in the present document. Additionally, an instructive public consultation in the each sample subproject location has been conducted and a public consultation framework for the future has been developed and incorporated to the present EMF. These additional and modified contents have made the present EMF more developed and useful than the previous EMF of EGPP.

2 ENVIRONMENTAL POLICY, ACTS AND GUIDELINES

2.1 Relevant Government Policies, Acts, Rules, Strategies and Guidelines

2.1.1 Environmental Conservation Act (ECA), 1995

12. 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.

13. 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)***

14. 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)***

15. 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)***
16. 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.

2.1.2 Environment Conservation Rules (ECR), 1997 and Amendments

17. 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.

18. 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.

19. 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 Sunderban, Cox's Bazar-Tekhnaf 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.

20. 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.

21. 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.

22. All existing industrial units and projects and 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 issued. A detailed description of those four categories of industries has been given in Schedule-1 of ECR'97. Apart from general requirement, for every Red category proposed industrial unit or project, the application must be accompanied with feasibility report on Initial Environmental Examination, Environmental Impact Assessment based on approved TOR by DOE, Environmental Management Plan EMP etc.

23. The ECR'97 also contains the procedures for obtaining Environmental Clearance Certificates from the Department of Environment for different types of proposed units or projects. Any person or organization wishing to establish an industrial unit or project must obtain ECC from the Director General. The application for such certificate must be in the prescribed form (provided later in this chapter) together with the prescribed fees laid down in Schedule 13, through the deposit of a Treasury Chalan in favor of the Director General. Rule 8 prescribes the duration of validity of such certificate (3 years for green category and 1 year for other categories) and compulsory requirement renewal of certificate at least 30 days before expiry of its validity.

2.1.3 Environmental Policy, 1992

24. 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.

2.1.4 Environmental Action Plan, 1992

25. 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.

2.1.5 National Environmental Management Plan (NEMAP), 1995

26. 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.

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

27. The Bangladesh Wildlife (Preservation) Order makes provisions for the safety of wildlife, particularly those vulnerable to extinction. It has provisions for the establishment of 'wild life 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.

28. 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.

29. One World Heritage Site, the Sundarban (North of Hiron Point) extends into the Western edge of PSC Block 7 area, however is approximately 110 km south west of the proposed Project Location.

30. Another conservation site is Nijhum Dwip located approximately 50 km east of the Project location. The nearest Wildlife Sanctuary is the Char Kukri-Mukri, which is approximately 22 km south-east of the proposed site (MoEF, 2001). Apart from Char Kukri-Mukri, National Park, there are no Environmental Conservation Areas, Reserve Forests, Protected Areas, Game Reserves, Wildlife Sanctuaries, or Wetland Protected Areas located within the wider project area.

Measures to reduce potential negative impacts on local wildlife species and populations will be incorporated into all stages of the Project. Further, due to the distance of reserved areas under the Act from the Project area, the potential for impacts is low.

2.1.7 National Conservation Strategy (NCS), 1992

31. The National Conservation Strategy (NCS) was drafted in late 1991 and submitted to the Government in early 1992. It was approved in principal; however the final approval of the document is yet to be made by the cabinet.

32. For sustainable development in the energy sector, the strategy document offered various recommendations, though there are none specifically relating to exploratory drilling or similar activities.

33. For 'Energy and Minerals' sector, the relevant strategy recommendations include:

- To use the minimum possible area of land in exploration sites;
- To take precautionary measures against Environmental Pollution from liquid effluent, condensate recovery and dehydration plants; and
- To apply technology assessment for selection of appropriate technology.

The Project aims to reduce the land required for the program where possible by implementing measures to reduce pollution risk and using appropriate technology.

2.1.8 Wetland Policy, 1998 (Draft)

34. 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.

2.1.9 National Water Policy, 1999

35. 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.

36. 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 eco-system 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.

2.1.10 National Safe Drinking Water Supply and Sanitation Policy 1998

37. 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 attitude, 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 rain water.

2.1.11 National Water Management Plan, 2001 (Approved in 2004)

38. 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 water-logging 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.

2.1.12 The National Fisheries Policy, 1999

39. 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.

40. 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.

41. 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.

2.1.13 The Protection and Conservation of Fish Rules, 1985

42. 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”.

43. 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.

2.1.14 National Agricultural Policy, 1999

44. 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 problem 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.

2.1.15 The Embankment and Drainage Act, 1952

45. 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.

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

- Section 4 (1) of the Act states that the embankment, water-course, 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).

2.1.16 Bangladesh Climate Change Strategy and Action Plan

47. 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.

2.1.17 Others: Standing Orders on Disaster 1999

48. 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 centre 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.

2.2 Implication of Policies and Legislations with DDM Activities

49. 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 sub-projects, SNSP requires a flexible approach on environmental categorization and clearance.

2.3 World Bank's Relevant Environmental Safeguard Policy

2.3.1 Background

50. 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 4.04 Conservation of Natural Habitats
- OP 4.36 Forestry
- OP 4.37 Safety of Dams

51. The relevant World Bank policy for DDM activities 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. The EA follows a process whose breadth, depth, and type of analysis depend on the nature, scale, and potential environmental impact of the proposed project. 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. 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 trans-boundary 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.

2.3.2 OP/BP 4.01 Environmental Assessment

52. 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.

53. 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.

2.3.3 OP/BP 4.04 Natural Habitats

54. 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.

2.3.4 OP/BP 4.11 Physical Cultural Resources

55. 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 impacts 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.

2.3.5 OP/BP 4.36 Forestry

56. 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.

2.3.6 OP/BP 4.12 Involuntary Resettlement

57. 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.

58. Concerning public consultation, resettlers 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.

2.3.7 WB Group Environmental, Health and Safety Guidelines

59. 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.

2.4 Implication of Policies and Legislations with DDM Activities

60. Some of the DMRD programs (EGPP, TR and FFW) under Component 1 involve earthworks including road construction, landfill for community institutions, etc. and the nature of these the sub-projects may lead to negative environmental impact. Sub-projects 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.

3 DESCRIPTION OF BASELINE ENVIRONMENT

3.1 Sample Location of Subprojects

61. In terms of coverage, these SNSP programs are implemented nationwide targeting the poorest upazilas (sub-districts) of Bangladesh. Currently EGPP allocations at the upazila level is based on the 2005 poverty maps whereby 60 percent of the program allocations are distributed to upazilas with poverty rates of 35 percent or higher; 35 percent of the allocations are made to upazilas with poverty rates between 34 and 21 percent, and 5 percent of the allocations are made to upazilas with poverty rates below 20 percent. The following two relevant sample subprojects, one is located in Mallikbari union & other in Uthura union of Bhaluka upazila, Mymensingh district have been chosen from the list of the subprojects (SL. No i & viii) to be implemented (Figure 3.1).

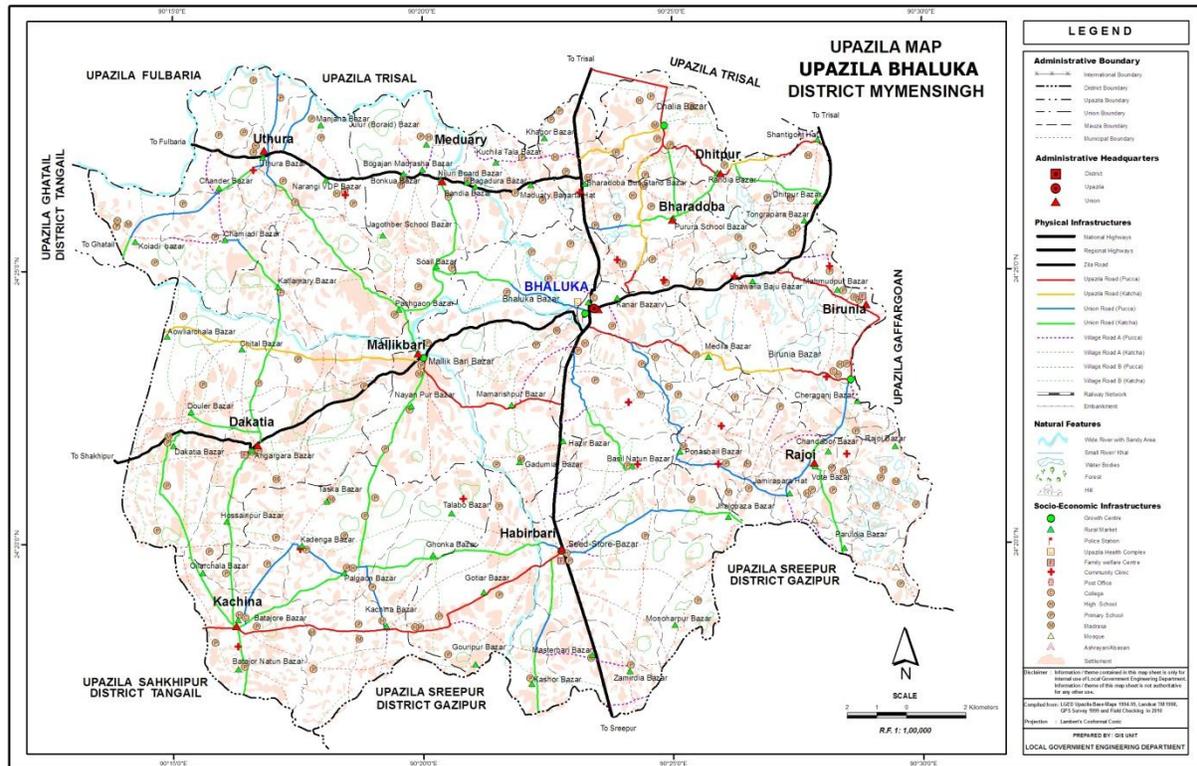


Figure 3.1: Map of Bhaluka Upazila (Source, LGED)

3.1.1 Subproject: Construction and Maintenance of Rural Roads

- Ramjaner Bari to Shamsuddiner Bari via Paglar Vita Earthen Road

62. This subproject is located in Mawarishpur village of Mallikbari union of Bhaluka Upazila. The activities under this subproject (1km long earth road) include earthworks, repairing of side slopes erosion & installation of additional pipe culvert. Existing condition of the road is shown in Photograph 3.1.



Photograph 3.1: Ramjaner Bari to Shamsuddiner Bari via Paglar Vita Road

- **Birenbabur Bari to Pandit Para Earthen Road**

63. This subproject is located in Baha Bhah village of Mallikbari union of Bhaluka Upazila. The activities under this subproject is to repairing of 2 (two) kilometer earthen road (such as side slope repairing, grass turfing & install pipe culvert). Existing condition of the road is shown in Photograph 3.2.



Photograph 3.2: Birenbabur Bari to Pandit Para Road

- **Nainpur Purba-para to 9 No Pucca Rasta Earthen Road**

64. This subproject is located in Nainpur village of Mallikbari union of Bhaluka Upazila. The activities under this subproject is improvement of 1.5km earthen road (such as earth filling etc.). Existing condition of the road is shown in Photograph 3.3.



Photograph 3.3: Nainpur Purba-para to 9 No Pucca Rasta Road

3.1.2 Subproject: Development of Rural Markets /Halipads

- **Chander Market**

65. The market is located in Bangao village of Uthura union of Bhaluka Upazila. The activity under this subproject is further development of existing rural market by boundary side slope repairing by earth filling & grass turfing aswell as tree plantation, installation of drain & toilets. Existing condition of the market is shown in Photograph 3.4.



Photograph 3.4: Chander Bazar Market

- **Chamiadi Market**

66. This subproject is located in Chamiadi village of Uthura union of Bhaluka Upazila. The activity under this subproject is further development of existing rural market by boundary side slope repairing by earth filling & grass turfing as well as tree plantation, installation of drain & toilets. Existing condition of the market is shown in Photograph 3.5.



Photograph 3.5: Chamiadi Bazar Market

3.2 Baseline Environment

67. The sample subprojects such as (No i & viii) are located in Bhaluka upazila of Mymensingh district (Figure 3.1). The baseline environmental condition is almost same for these subprojects. The baseline environment is described for these sample subprojects are located in Mallikbari & Uthura unions of Bhaluka

upazila under Mymensingh district.

68. The baseline data/information on physical, biological, and socio-economic environments of the subproject areas have been 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.

3.2.1 Physical Environment

3.2.1.1 Climate

69. 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).

70. Several climatic zones occur within Bangladesh. The subproject areas fall under the south-central zone Bangladesh Meteorological Department (BMD) climatic station is located closest to the subproject area, which is approximately 37.5km away from subproject locations. The climatic data have been collected for the period of 2005 to 2010 from BMD. For meteorological conditions in and around the proposed subproject areas, four climatic factors were chosen. These are Temperature, Rainfall, Humidity and Wind Speed. Primarily, these four characteristics will reflect the overall climatic condition of the subproject areas. One nearby meteorological substation in Mymensingh has been considered while describing the meteorological condition of the subproject areas (Table 3.1).

Table 3.1: Average Monthly Maximum and Minimum Climate Data of MS: Mymensingh during 2002-2010

Climate Data	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max. Temp. (°C)	23.6	27.3	31.1	31.6	33	32.6	31.8	32.3	31.4	31.3	29	26.2
Min. Temp (°C)	10.1	14.7	18	21.4	23.3	25.2	25.7	25.7	25.3	22.3	16.7	13.9
Max.Rainfall (mm)	6	27	120	260	396	635	791	193	291	487	82	10
Min. Rainfall (mm)	0	1	14	96	145	337	213	124	190	105	0	0
Max. Humadity(%)	83	70	73	79	77	85	89	83	90	86	81	80
Min. Humadity(%)	75	68	68	77	76	83	81	81	82	82	80	80
Wind Speed (Knots)												

Source: Bangladesh Meteorological Department, Dhaka, 2011

3.2.1.2 Topography & Soils

71. The subprojects are located on the flood plain of the old Brahmaputra River. The average ground elevation of the subproject areas is about 14.2 mPWD. Topographically the cluster of subproject locations is almost flat, with many water bodies such as depressions, ponds & canals. The main river flows nearby the subproject areas is the old Brahmaputra River. Main small rivers which flow in UZ: Bhaluka are Sutia, Kaoraid, Lalti and Bajua. The soil of this area is mainly clay silt with sand.

3.2.1.3 Seismology

72. Bangladesh is located in one of the most tectonically active regions in the world. Here three major plates meet (the Indian Plate, the Tibet Sub-Plate, and the Burmese Sub-Plate). The subproject areas are located over the Indian Plate, which is moving north. However due to the location of relevant plates, fault lines and hinge zones, Bangladesh itself is divided into three seismic zones. Zone III is in the most seismically active area with a seismic coefficient on 0.25, and Zone I is the least active with a significantly lower seismic coefficient of 0.075. The sample subproject areas are located in Zone II and it is the moderately severe and moderate vulnerable to earthquake disaster.

3.2.1.4 Surface Water

73. The Old Brahmaputra river basin is located in the North Central “Hydrological Region” of Bangladesh. Besides this river, Bhaluka UZ is drained by several small rivers such as Sutia, Kaoraid, Lalti and Bajua. The hydrology of the old Brahmaputra Flood Plain, like those of similar areas of Bangladesh, is determined principally by the monsoon occurring from June- September followed by a dry period from November-April. During flood period from July-September, both the river banks of all river in the areas submerged about 1m depth. But during dry period the river is dry up at several locations as informed by the local people. The quality of river water as well as pond & canal water is not good mainly due to use of pesticides & fertilizer for agricultural purposes as reported by the local inhabitants during site visits..

3.2.1.5 Ground Water

74. In the sample subproject areas, the ground water level is at or very close (even <2m) to the ground elevation during the monsoon (June-September); whereas, it is at maximum depth (about 5m from the ground elevation) during March- May as reported by the local people. Iron is the major water quality concern for drinking water in the sample subproject areas, as informed by the local people during consultations.

3.2.1.6 Air Pollution

75. During field visit on 24 March 2013, no particular problem with air quality was noticed by the local people. However generally air pollution sources in the subproject areas mainly consists of road dust, black smoke from diesel engine vehicles, earthwork dust, domestic heating and cooking etc. Other contributors to air pollution include engine boat during monsoon period and small industries factories as reported by the local inhabitants.

3.2.1.7 Noise Pollution

76. Noise is another potentially serious threat to the quality of an environment. The background noise level at the subproject areas is low. The low noise generates in the subproject area mainly due to movement of engine boats, community, rice/wheat mills at the bazar areas and road sides and road traffic, as reported by the local inhabitants during site visits.

3.2.2 Biological Environment

3.2.2.1 Flora

77. The surrounding area of the subprojects is medium highland with mixed vegetation and crops. Crops cultivated in the surrounding land mainly include rice, jute, pulses, wheat, mustard and homestead vegetables. A sizeable number of fruit trees with economic value have been observed in the area. The fruit trees include mainly jackfruit, papaya, blackberry, banana and mangoes. The wood trees include shilkoroi, akasia, shisso, meheguni and shegun. The medicine trees include mainly neem.

3.2.2.2 Fauna

78. Fresh water fish habitat such as river, pond and ditches exist around the subproject areas, which provide shelter for different types of fresh water fish species (such as carp, catfish, mrigel, taki, shoel, tengra, bain, boal etc.). Due to pollution of river water fish resources are being reduced, as reported by the local people during site visit. Common birds like crows, sparrows, kingfishers, shliks and doves are available in this area. The terrestrial wildlife such as fox and wood cats as well as aquatic wildlife such as snakes, frogs & leaches are also found in the area as mentioned by the local people during site visits.

3.2.2.3 Environmental Sensitive Areas (ESA)/ Protected Areas (EPA)

79. The list of ESA/EPA is presented in the below Table 3.1. According to the list, there is no ESA/EPA in or nearby (within about 10km) the subproject area.

Table 3.1: Protected Areas under the Bangladesh Wildlife Preservation (Amendment) Act, 1973

Sl. No.	Name of the Protected Area	Location (district)	Year notified
National Parks			
1.	Bhawal	Gazipur	1982
2.	Madhupur	Tangail/Mymensingh	1982
3.	Ramsagar	Dinajpur	2001
4.	Himchari	Cox's Bazar	1980
5.	Lawachera	Moulvibazar	1996
6.	Kaptai	Chittagong Hill Tracts	1999
7.	Nijhum Dweep	Noakhali	2001
8.	Medhakachapia	Cox's Bazar	2008
9.	Satchari	Habiganj	2005
10.	Khadinagar	Sylhet	2006
11.	Bariyadhala	Chittagong	2010
12.	Kuakata	Patuakhali	2010
13.	Nobabganj	Dinajpur	2010
14.	Shingra	Dinajpur	2010
15.	Kadigarh	Mymensingh	2010
Wildlife Sanctuary			
1.	Rema-Kalenga	Habiganj	1996
2..	Char Kukri-Mukri	Bhola	1981
3.	Sundarbans East	Bagerhat	1996
4.	Sundarbans West	Satkhira	1996
5.	Sundarbans South	Khulna	1996
6.	Pablakhali	Chittagong Hill Tracts	1983
7.	Chunati	Chittagong	1986

Sl. No.	Name of the Protected Area	Location (district)	Year notified
8.	Fashiakhali	Cox's Bazar	2007
9.	Dudh-Pukuria Dupachari	Chittagong	2010
10.	Hazarikhil	Chittagong	2010
11.	Sangu	Bandarban	2010
12.	Teknaf	Cox's Bazar	2010
13.	Tengragiri	Barguna	2010

80. GOB has also declared five conservation sites as listed below from forests conservation prospective, which are managed by Forests Department. None of these sites falls in the project area.

1. National Botanic Garden, Dhaka City
2. Balda Garden, Dhaka City
3. Madhakunda Eco-Park, Moulvibazar district
4. Sitakunda Botanical garden and Eco-Park
5. Dulahazara Safari Park

81. GOB has also announced Ecologically Critical Areas (ECA) where activity/project or practices harmful for the biodiversity and water of the river (ECA), shall not be allowed. 12 such ECAs have been declared so far as listed below. None of these ECA falls within project area.

1. Hakaluki Haor, Moulvibazar/Sylhet
2. Sonadia Island, Cox's Bazar
3. St. Martin's Island, Cox's Bazar
4. Teknaf-Peninsula (Cox's Bazar Sea Beach), Cox's Bazar
5. Tanguar Haor, Sunamganj
6. Morjat Baor, Jhenaidaha
7. Outside Sundarbans Reserved Forests (10Km extent towards sea)
8. Gulshan-Baridhara lake
9. Buriganga river surrounding the Dhaka City
10. Sitalakhaya river surrounding the Dhaka City
11. Turag river surrounding the Dhaka City
12. Balu river surrounding the Dhaka City

82. According to the above secondary data and information from local inhabitants there is protected or sensitive area in the sample subproject locations. Additionally, there was no such category of place has been identified in the subproject buffer zone during the site visit.

3.2.3 Socio-economic Environment

3.2.3.1 Population and Community Characteristics

83. The social & cultural profile of this cluster is similar to other parts of Bangladesh. Muslims represent about 90% of the local population. The hindus & other religion represent about 10%. Muslims observe big festivals such as End-all Azha & Eid-ul Fitre and hindus observe Durga Puja, Kali Puja etc. The population of the Uthura union as per 2011 Census is 28,178 with male 13,888, female 14,290; Muslim (27,134) is the dominant religion and others are hindu (716), Christian (1), Buddhist (4) and Others (323). Ethnic nationals are Barmon and others.

3.2.3.2 Socio-Economic Conditions

84. The major sources of income within the population of this cluster are agriculture, agricultural labor, wage labor, industrial labor, commerce, small shops, small shops in the markets, service, transport,

construction, fisheries, hawker, house renting out, land renting out and others. Overall economic condition of the local people is good. About 70% populations in these 2 unions are involved with agriculture, 20% business, 5% services & rest 5% jobless & others.

4 POTENTIAL ENVIRONMENTAL IMPACTS FOR EACH SUBPROJECT

4.1 General

85. This chapter deals with the main potential environmental concerns likely to arise from the various sub-project interventions proposed under SNSP. Although the project 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.

86. Although most of the project 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, consultant's 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.

4.2 Impacts

87. As described earlier the possible sub projects 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 helipad; (ix) excavation or re-excavation of water reservoirs; (x) cleaning ponds and bushes etc.

88. 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.

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

4.2.1 Specific Impacts for the sub projects (i) and (ii)

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

- Erosion of lands, landslides, slips or slumps from roadbed or in borrow areas
- Creation of stagnant pools of water in left borrow pits
- Increased sediments into streams, ponds and rivers due to erosion from road sides.
- Decline in water quality due to high silt load
- Increased flooding conditions at one side of the road or embankment due to improper drainage structure
- increased risks of logging and poaching
- Disruption of wildlife
- Loss of natural vegetation during construction
- Disturbance of historical or culturally important sites e.g. graveyards, monuments

4.2.2 Specific Impacts for the sub projects (iii), (vi) (ix) and (x)

91. 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 water reservoirs and cleaning ponds and bushes etc. are given below

- Increase in soil erosion
- Soil water logging due to improper proper design of canals or ponds
- Increased salinization
- Clogging of canals from weeds
- Inefficient water flows due to siltation
- Disturbance to flow regimes as the Irrigation Master Plans not followed
- Disturbance of natural habitats
- Algal blooms, proliferation of aquatic weeds
- Risk of waterborne diseases from artificial water flows

4.2.3 Specific Impacts for the sub-project (vii)

92. 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

4.2.4 Specific Impacts for the sub project (iv), (v) and (viii)

93. The anticipated impacts due to subprojects for land-fill for community institutions, earthen shelters to protect animals against and further development of rural markets or 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 helipad area.
- Vulnerable (causes cracking, rutting) to weather conditions for improper selection of soil and compaction

4.2.5 Common Impacts for all Subprojects

94. 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**

95. 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**

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

- **Surface Water Pollution**

97. Although the subprojects' interventions do not expect any major waste generation, improper disposal of solid and liquid wastes from the people working in the sites may pollute the nearby water bodies. In addition, if the rainwater reservoir is constructed for drinking purpose, proper care including disinfection is required to ensure the water quality.

- **Waste Disposal**

98. Solid waste generated during construction would include mainly vegetation during preconstruction, & construction waste such concrete, RCC, wood, bags, containers, earth materials etc.. 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 localized pooling and flooding. 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**

99. Once the sub-project 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, the operation of various equipment and machinery 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.

5 ENVIRONMENTAL MANAGEMENT PROCESS

5.1 Introduction

100. The specific sub-projects under the workfare programs are not known at the time of project design, this EMF has been prepared to establish a mechanism to determine and assess potential environmental impacts of identified sub-projects. This chapter discusses the steps involved in the environmental assessment process and procedure leading towards the review and approval of subprojects under SNSP. The chapter gives an explicit description of roles, reporting and advice mechanisms during implementation of the project.

5.2 Principles in implementing their workfare programs

101. The DDM will follow a set of principles in implementing their workfare programs to ensure environmental sustainability of the sub-projects. In the view of EMF objectives, the planning and implementation of sub-project activities will be based on the following principles, most of which are incorporated in the project design and implementation arrangements.

- The Project Director (PD) or his/her assigned official at DDM will be overall responsible for environmental compliance in SNSP.
- All the sub-projects to be funded under SNSP will be subject to an environmental screening in order to prevent execution of projects with significant negative environmental impacts.
- The project will support mainly earthworks which will have minor significant environmental impact.
- The project will not support any activities which may have significant environmental impacts.
- Prior to selection of specific sub-projects, the UP-PIC will undertake community consultation regarding their objectives, scope and environmental safeguard implications.
- The DDM will ensure that the relevant government rules (laws, ordinance, acts, etc.) and WB Operational Policies and guidelines are followed in sub-project selection and implementation. The EMF will serve as the basis for ensuring the compliance.
- The Project Implementation Officer (PIO) of each upazila will be responsible for obtaining and ensuring clearance required from local government agencies, as necessary.
- No project activities will be carried out in disputed lands or lands restricted for development or ESA/EPA.
- Climate resilient and flood proofing considerations will be integrated in designing relevant sub-projects.

5.3 Environmental Screening and Implementation of ECoP

102. The Sub project will be identified by the Union Parishad Project Implementation Committee (UP-PIC) and the targeted beneficiaries. After selection of a subproject, the community level environmental screening will be integral part of the sub-project 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 Field Supervisor (FS) and UP-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 sub-projects. The participation and consultations with local communities are important to identify the potential impacts of the project interventions. In the case of SNSP, screening will be used for taking decision about the inclusion or exclusion of the sub-projects to be funded under the project. . A sample screening format for all subprojects is attached in **Annex A** and filled up one for the visited subproject is given in **Annex B**. The Bangla form will be used for the screening

purposes at field level. The proposed screening format have been developed from the public consultation during the base line survey of sample sub-project, experience of other project and the typical environmental impacts of the proposed project interventions.

103. The screening will help in determining whether a proposed subproject should be subjected to follow the Environmental Code of Practices (ECoP) for 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.

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

5.4 Environmental Codes of Practice

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

106. 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.

107. Once impacts are identified, the necessary mitigation measure will then be recommended and the sub-project will be designed to implement these mitigation measures. The Upazila Field Supervisor (hired on a contractual basis by the Project) will review the environmental screening and suggest appropriate mitigation measures. If required, Upazila Field Supervisor will prepare a simple EMP for the subproject. A sample EMP format is attached in **Annex C** and a typical environmental mitigation measures for sample subproject have been suggested in **Annex D**.

108. The Upazila Field Supervisor will estimate the cost for the environmental mitigation of the sub-projects. For example, if the sub-project requires plantation to compensate the tress lost due to construction/extension of roads/embankments, the cost of plantation of local suitable species must be considered in subproject design.

5.5 List of ECoPs

109. Checklist for checking the Detailed Project Report (DPR) preparation and for identifying issues to be addressed in pre-construction, construction and post-construction stages will be as per the ECoPs. The list of ECoPs prepared and their coverage is presented in below list.

5.5.1 ECoP - 1.0: Project Planning & Design

5.5.1.1 General

110. 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.

5.5.1.2 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.

5.5.1.3 Environmental Considerations

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

- i. Trees
- ii. Forests
- iii. Natural Habitats/Bio-diversity
- iv. Top soil
- 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.

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

5.5.1.4 Compliance to Legal Requirements

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

5.5.2 ECoP - 2.0: Site Preparation:

5.5.2.1 General

114. 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.

5.5.2.2 Site Preparation Activities by the PIO/FS

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

5.5.2.3 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/FS 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 erodable earth material exposed by clearing and grubbing
 - ii. Conservation of top soil 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

5.5.3 ECoP - 3.0: Borrow Areas

5.5.3.1 General

115. 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.

5.5.3.2 Pre-construction Stage

116. 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/FS.

5.5.3.3 Construction Stage

117. The contractor should adopt the following precautionary measures to minimise any adverse impacts on the environment:

- i. 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.
- ii. 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.
- iii. 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 top soil aside.
- iv. 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.

5.5.3.4 Post Construction Stage

118. 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.

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

5.5.4.1 General

119. Loss of topsoil is a long term impact along SNSP subprojects due to
- i. Site clearance and excavation for road, markets, embankment and other infrastructures
 - ii. Development of borrow areas
 - iii. Temporary construction activities as material storage locations, diversion routes etc.

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

5.5.4.2 Pre-construction Stage

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

5.5.4.3 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 stabilisation 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

5.5.4.4 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.

5.5.5 ECoP - 5.0: Slope Stability and Erosion Control

5.5.5.1 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.

5.5.5.2 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.

5.5.5.3 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

5.5.5.4 Post Construction Stage

121. 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.

5.5.6 ECoP - 6.0: Waste Management

5.5.6.1 General

122. 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.

5.5.6.2 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.

5.5.6.3 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 re-use shall be disposed off safely by the contractor.
- The waste management practices adopted by the Contractor shall be reviewed by the PIO/FS during the progress of construction.

5.5.6.4 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/FS.
- 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”.

5.5.7 ECoP - 7.0: Water Bodies

5.5.7.1 General

123. 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

5.5.7.2 Pre-Construction Stage

124. 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 exiting 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.

5.5.7.3 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/FS 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.

5.5.7.4 Post Construction Stage

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

5.5.8 ECoP – 8.0: Water Quality

5.5.8.1 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.

5.5.8.2 Pre-Construction Stage

125. 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.

5.5.8.3 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.
- Waste water 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 silt screen or bubble curtains or other barriers.

5.5.8.4 Post Construction

- Inspection of water quality shall be done regularly.

5.5.9 ECoP - 9.0: Drainage

5.5.9.1 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.

5.5.9.2 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/FS.
 - 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.

5.5.9.3 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 devises and flood warning signs to be erected while working over streams and canals.

5.5.9.4 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.

5.5.10 ECoP - 10.0: Public and Worker's Health and Safety

5.5.10.1 General

126. 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.

5.5.10.2 Pre-construction Stage

- In order to incorporate public health and safety concerns, the PIO/FS 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 labours in the road construction
 - vi. Health issues - exposure to dust, communicable diseases etc.
- The Contractor must bring awareness to the workers to undertake the health and safety precautions. Through regular meetings, as may be necessary, contractor shall generate awareness amongst the workers.

5.5.10.3 Construction Stage

- Provide personal safety equipments (such as footwear, gloves and eye protection devices etc.) for the workers.
- 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 labour during particular periods
- The PIO/FS shall carry out periodic inspections in order to ensure that all the measures are being undertaken as per this ECoP.

5.5.10.4 Post-construction Stage

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

5.5.11 ECoP – 11.0: Fertilizer Production

5.5.11.1 General

128. 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.

129. 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’.

130. 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 programme; and
- to facilitate co-ordination of all IPM activities in Bangladesh.

131. 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 programme
- Developing human resources as the core of IPM
- Conducting research on IPM

132. 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.

133. The objectives are:

- to provide a simple yet effective process for nutrient management,
- to promote practices that ensure sustainable and economically viable use of fertiliser, 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.

5.5.11.2 Fertilizer Handling

134. 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.

5.5.11.3 Fertilizer Storage

135. 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 minimise 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.

136. Fertilizer buildings shall be constructed so that stored fertilizer remains in a useable condition. In particular, 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.

5.5.11.4 Potential Impacts

137. 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.

138. 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

5.5.11.5 Mitigation Measures

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

- Requirement for fertilizer plans.
- 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.
- Prediction evaluation, and monitoring of impacts
- Inclusion of appropriate engineering, monitoring and management controls.
- Siting process
- Application of EMS
- Proper handling, management of hazardous material,
- Use of cleaner production.

5.5.12 ECoP - 12.0: Tree Plantation

5.5.12.1 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.

5.5.12.2 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.

5.5.12.3 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) or the agency designated by it.

5.5.13 ECoP - 13.0: Environmental Monitoring and Audit

5.5.13.1 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/FS 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.

5.5.13.2 Monitoring Procedure

- PIO/Individual Environmental Specialist 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 Individual Environmental Specialist.
- Environmental audit shall be as per the Checklists provided in the Annex A1 to A10. Audit for project preparation, pre-construction and post-construction stages shall be one time, while for

construction stage, quarterly monitoring shall be undertaken. Audit shall be conducted by the Individual Environmental Specialist consultant. The audit findings shall be reported to the PD/WB.

5.5.14 ECoP - 14.0: Natural Habitats

5.5.14.1 General

- This code of practice envisages measures to be undertaken during implementation of SNSP 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.

5.5.14.2 Pre-construction Stage

140. 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.

5.5.14.3 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.

5.5.14.4 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/FS must ensure maintenance of drainage structure as per ECoP-9.0, "Drainage".

5.5.15 ECoP - 15.0: Consultations for Environmental Aspects

5.5.15.1 General

141. 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.

5.5.15.2 Pre-Construction Stage

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

5.5.15.3 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-8.

- The PIU shall consult the community in identifying people working for subprojects.

5.5.15.4 Post-Construction Stage

143. The PIO/FS 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.

5.6 Public Consultation

144. 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.

145. 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, SNSP with guidance and assistance from the World Bank will facilitate (public and focused group) consultations/workshop plan for each subproject that 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

146. To ensure that consultations are useful to the affected groups, the client and the agency conducting it, in this case the environmental consultants, the consultants will ensure an environment where participants, irrespective of social status, would be able to express their opinions and preferences freely. The consultants will provide relevant material in a timely manner prior to the consultations in a form and language that are comprehensible and accessible to the groups that are participating in the consultations.

147. Over-all, 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

5.7 Environmental Monitoring

148. The supervision and monitoring of sub-project implementation in SNSP will be carried out at different levels. The primary responsibility of the supervision of implementation including environmental mitigation measures is assigned to the UP-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 sub-project monitoring. On behalf of the UC, the PIO of each Upazila along with the Upazila Field Supervisor will

monitor the environmental compliance issue. The PIO at Upazila level and the Deputy Project Director (DPD) at DDM will maintain a database for sub-project specific environmental screening and EMP.

149. 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. The monitoring activities of SNSP 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. The project Monitoring & Evaluation (M&E) system will capture the field monitoring information through its MIS.

Table 5.1: Sample Monitoring Plan for SNSP 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/Regional Level Environment Specialist	
	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/Regional Level Environment Specialist	
	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/Regional Level Environment Specialist	
	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/Regional Level Environment Specialist	
Construction Phase	Damage to vegetation	Surrounding areas and at the site	Visual and by comparison with pre-construction photo survey	Monthly throughout construction period;	Field Officer/Upazila Level officer/Regional Level Environment Specialist	
	Loss of fertile topsoil and soil erosion	Soil storage sites	Visual	Weekly during site preparation	Field Officer/Upazila Level officer/Regional	

				and construction period	Level Environment Specialist	
	Waste disposal	All active construction sites	Visual	During construction	Field Officer/Upazila Level officer/Regional Level Environment Specialist	
	Air pollution by dust	All active construction sites	Visual	During construction	Field Officer/Upazila Level officer/Regional Level Environment Specialist	
	Noise from construction works	All active construction sites	Measurements by a licensed organization using certified measurement devices	During construction	Field Officer/Upazila Level officer/Regional Level Environment Specialist	
	Health & safety	All active construction sites	Visual	During construction	Field Officer/Upazila Level officer/Regional Level Environment Specialist	
Operation and Maintenance Phase	Dust Pollution	Surrounding area of the site	Visual	During dry season	Upazila Level officer/Regional Level Environment Specialist	
	Soil erosion	The site area	Visual	Annually	Upazila Level officer/Regional Level Environment Specialist	
	Drainage Congestion	Surrounding area	Visual and Consultation	During rainy season	Upazila Level officer/Regional Level Environment Specialist	
	Availability of fish	Surrounding area	Consultation	Annually	Upazila Level officer/Regional Level Environment Specialist	
Total Cost for all Phases					Estimated Cost	

150. It may be noted that the Project will assist DDM in refining their monitoring strategy for SNSP and will provide support to develop the monitoring capacity at the Upazila level. The Project will support the development of monitoring reports and will provide financing for critical staff at the central and local levels and investments in ICT. The existing monitoring forms and reports will be re-designed to facilitate monitoring on inputs, outputs, intermediate outcomes and compliance with program guidelines. It has been decided that the environmental issues will be integrated with the new M&E system.

151. In addition, the Project will support an independent assessment for SNSP, which would aim to provide information on program implementation including environmental safeguards, the effectiveness of targeting and the impact of the program on household net incomes and coping strategies in response to shocks. This monitoring will take place on a 'spot check' basis as it will be impossible to monitor all the sub-projects to be financed under the Project. The spot checks consist of controlling the establishment of mitigation measures. A local consultant will be hired to conduct this independent assessment or third party monitoring after every year of the project implementation. The scope of environmental independent monitoring and the required qualifications of environmental specialist are attached in **Annex E**. The Environment Specialist along with short-term consultant(s) will carry out an annual review of the project based on random field visit, review of the independent environmental audit report, project MIS data analysis. The annual review will be carried out instead of participation in the 2 regular implementation support missions of the WB. This will be mainly due to potential environmental impacts are likely to be insignificant, local and in most cases temporary; and on the other hand, the project will be implemented all over the Bangladesh. The sample size of the field visit should be representative to comment on the environmental performance of the project. The institutional framework of the SNSP is shown in Figure 6.1.

6 INSTITUTIONAL ARRANGEMENTS AND CAPACITY BUILDING

6.1 Overall Institutional and Management Structure

152. The Disaster Management and Relief Division (DMRD) of the Ministry of Food and Disaster Management (MoFDM) will implement the project with the support of a project implementation team [Office of the PD] lead by a full-time PD, not below the rank of Joint Secretary. The institutional framework of the SNSP from the national to grassroots levels will be as under (Figure 6.1):

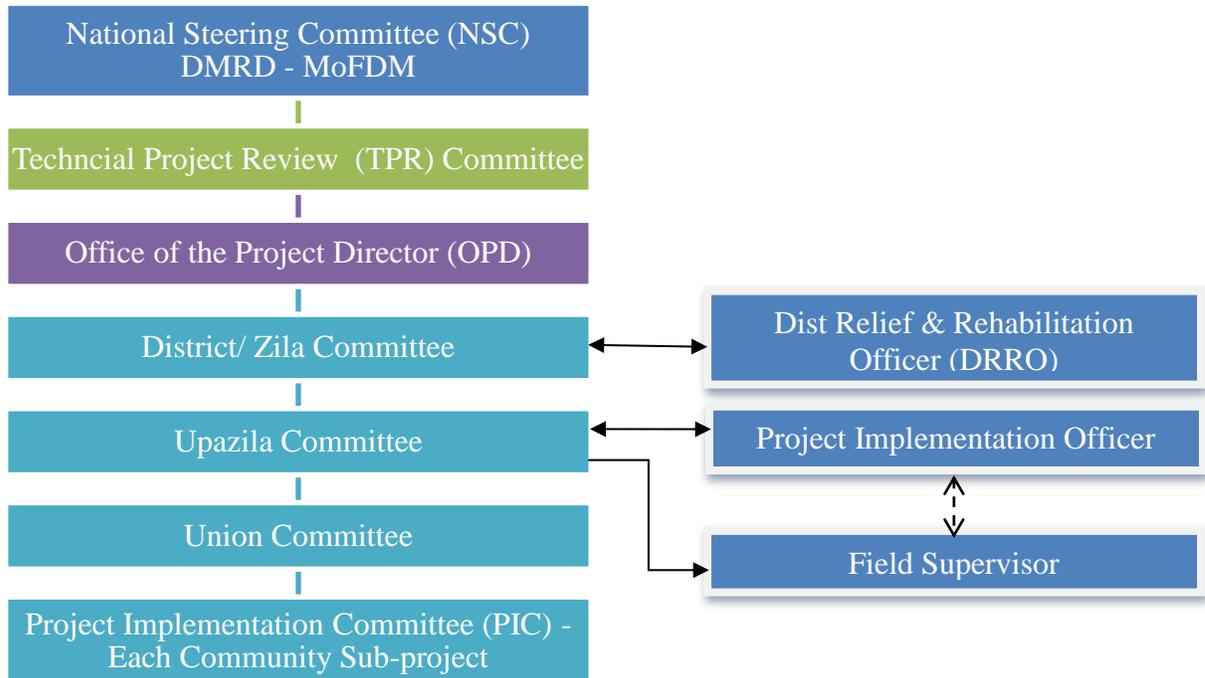


Figure 6.1: Institutional Framework

6.2 Institutional & Management Structure at Central Level

153. At the national level, the oversight and program management will be undertaken by the three major bodies including (i) National Steering Committee (NSC) headed by the Secretary, DMRD – MoFDM; (ii) Technical Project Review (TPR) Committee headed by the Project Director of SNSP; and (iii) Office of the PD also lead by the PD of SNSP.

6.3 Institutional & Management Structure at District Level

154. At the district level, the concerned DC with the support of the District Relief & Rehabilitation Officer (DRRO) will coordinate the program oversight and management. A District/Zila Committee will be set up in each district under the chairpersonship of the concerned DC and the DRRO of the district will act as the Member Secretary of the committee.

6.4 Institutional & Management Structure at Upazila Level

155. Upazila will be the focal point for the overall implementation and oversight for the SNSP. In every Upazila, the Upazila Committee (UC) will undertake the oversight and program management of SNSP. The roles and responsibilities and composition of the Upazila Committee will be as follows:

6.4.1 Upazila Committee

156. The Upazila Committee (UC) in every Upazila will function under the chairpersonship of the concerned Upazila Nirbahi Officer (UNO) and the PIO of the respective Upazila will act as the Member Secretary to the UC. The Upazila Committee will be responsible for:

- Finalization and approval of the Union Plans containing projects and list of beneficiaries submitted by the Union Committees;
- Selection of a Bank at Upazilla level to open Upazila “Mother Account” and Union level self-collection Bank Account “Child Account” for facilitating beneficiary payments;
- Supervise the process of beneficiary account opening in the selected Banks;
- Overall program implementation and supervision & monitoring of all community sub-projects within stipulated time;
- Review technical issues during the implementation of the program and ensure the proper utilization of fund;
- Liaison with the Office of the PD (OPD), District and Union Committees;
- Liaison with line departments and other public institution and offices at the upazila/union levels for sending work proposal concerning their institutions/offices;
- Support PIO and Union Committee with necessary technical inputs;
- Timely transfer of funds from the Upazila level joint bank account “Mother Account” to the union level self-collection account “Child Account” for ensuring timely wage payments to the beneficiaries;
- Prepare and forward Upazila level monthly progress reports to DC and OPD, during the working seasons;
- Ensure public disclosure of adopted projects by take steps to publish and disseminate a brief list of adopted projects at Zilla and Upazilla level;
- Review and examine recommendations of the Union Parishads/concerned government officers and take necessary action;
- Register and deal with all complaints/grievances within stipulated time;
- Any other tasks assigned by Zilla Committee and OPD from time to time.

157. The UC will compile and submit (via the UNO) its Upazila Plan to the DC for formal approval. The Upzila Plan will contain union-wise details of planned projects and beneficiaries for each phase of the project. In the event that no comments are received from the DC within 20 days, the UC will assume that its phase-wise plan/budget has been formally approved.

158. Broadly, the composition of the Upazila Committee (UC) will be as per the Table 6.1 given below. However, with the aim to facilitate regular meetings a decision making, a quorum of ten members will be mandatory including the Chairman and the Member Secretary of the Committee. Besides, the UC will have powers to co-opt more members from the Upazila, if necessary.

Table 6.1: Composition of the Upazila Committee (UC)

1.	Member of Parliament (MP) of respective parliamentary constituency	Chief Advisor
2.	Upazila Chairman	Advisor

3.	Upazila Nirbahi Officer (UNO)	Chairman
4.	Upazila Vice Chairman (all)	Member
5.	Chairmen of all Union Parishads (UPs) of the respective Upazila	Member
6.	Upazila Health and Family Planning Officer	Member
7.	Upazila Engineer LGED	Member
8.	Upazila Women Affairs Officer	Member
9.	Upazila Education Officer	Member
10.	Upazila Agricultural Officer	Member
11.	Upazila Cooperative Officer	Member
12.	Upazila Livestock Officer	Member
13.	Upazila Fisheries Officer	Member
14.	Upazila Social Welfare Officer	Member
15.	Ansar and VDP officer	Member
16.	Upazila BRDB Officer	Member
17.	Eminent persons of the Upazila (Nominated by the UNO)	Member
18.	One teacher (Nominated by the UNO)	Member
19.	One representative from the voluntary organization (Selected by UNO)	Member
20.	UP level Bank Manager related (all)	Member
21.	Field Supervisor	Member
22.	Project Implementation Officer (PIO)	Member Secretary

6.4.2 Roles & Responsibilities of Upazila Level Key Officials

- i. **Upazila Nirbahi Officer (UNO):** The UNO of all concerned upazilas will be the nodal officer responsible for the overall implementation, supervision and monitoring of the SNSP in their respective Upazila. Specifically, each UNO will be responsible for the following task with the assistance of the PIO and the Field Supervisor:
 - Facilitate the overall implementation and supervision of the program at the upazila level;
 - Act as the Chairman of the Upazila Committee;
 - Ensure timely transfer of funds to the Union Committees (Child Account) through Upazila level Bank Account “Mother Account” jointly operated with the PIO;
 - Act as Grievance Redress Officer at the Upazila level;
 - Liaison with the DC and the Office of the Project Director (OPD) on all relevant matters concerning SNSP;
 - Facilitate inter-departmental coordination and convergence at the Upazila level for efficient execution of program;
 - Any other relevant tasks assigned by the DC and OPD.

- ii. **Project Implementation Officer (PIO):** On behalf of the DMRD–MOFDM, the PIO of every Upazila will be the main responsible officer for the implementation of the project at the Upazila level along with the Field Supervisor appointed by the Project. In particular, PIO will be responsible for:
 - Facilitating the overall implementation of the program at the upazila level;
 - Supporting upazila and union-level public administration in efficiently executing the program;
 - Coordinating regularly with the head of local administration and relevant government officials at the Upazila and Union levels;
 - Liaising with all the Union Committees under the respective Upazila for effective implementation of the program;
 - Ensuring timely transfer of funds to the Union level “Child Account” from the Upazila level “Mother Account”;

- Participating in local-level meetings where program matters are discussed;
 - Reviewing the environmental and social screening, suggest any required mitigation measures and prevent activities with significant negative impact from being included in the Union/Upazila Plan;
 - Monitoring and supervising SNSP and public workfare schemes implemented by DMRD–MoFDM at the Upazila level;
 - Preparing and submitting all assigned reports from the local-level on a regular basis;
 - Acting as the Member Secretary to the Upazila Committee as well as maintaining all records of proceedings of the Upazila Committee; and
 - Assisting the Upazila Nirbahi Officer (UNO) with all tasks related to the program.
- iii. **Field Supervisors (FS):** The Field Supervisor will be the focal point of SNSP at upazilla level. S/He will work closely with the PIO of the respective Upazila and will be responsible for:
- Supporting in regularly coordination with the Chairperson/Member Secretary of the Union Committees and relevant government officials in every Union Parishad;
 - Conducting and facilitating the targeting and enrolment processes in the assigned location;
 - Participating in the preparation of Union Plan and co-signing the same with the Chairperson of the Union Committee;
 - Facilitating environmental and social screening of community sub-projects by supporting the Union Committees of the Upazila;
 - Preparing project of wage and non-wage cost as per project proforma and submitting it to the UC for approval;
 - Ensuring that job cards of every enrolled beneficiary is prepared and distributed before the commencement of work on a fix date in every union;
 - Carrying out periodic monitoring visits to all the Community Sub-projects in the Upazila to:
 - Verify regular maintenance of worksite register and job cards for ensuring coherence between the two documents;
 - Countersign the job cards (in specific column made for FS) against the worker’s attendance and his / her entitlements;
 - Review the progress of respective sub-projects and submit a report to the UNO.
 - Assisting in other public workfare schemes at the Upazila level;
 - Maintaining and updating Union–wise/Upazila level muster roll of all the selected beneficiaries on regular basis;
 - Supporting compilation of reports from the local-level on a regular basis and support preparation of Union/Upazila level periodic reports; and
 - Conducting pre and post work estimation/measurement of each sub-project;
 - Authorizing wage payments to workers by co-signing the Muster Roll;
 - Preparing and submitting all assigned reports and return from local level through PIO and UNO on a regular basis;
 - Maintaining all records wage and non-wage cost allocation, administrative cost allocation and files of accounts for SNSP office contingency and field supervisors pay and allowances accounts operated by UNO.
 - Assisting PIO in all other project of DMRD as and where required.

159. In the Upazila where the post of Field Supervisor (FS) is vacant, the PIO will be responsible for managing both sets of tasks until the FS appointed by the Government and where PIO is unavailable FS will be responsible for managing the responsibilities of PIO

6.5 Institutional and Management Structure at Union and Project levels

160. At the Union Parishad level, the Union Committee headed by the Chairman of the respective Union Parishad will undertake the oversight and program management. Every Union Committee will have powers to constitute project-wise Project Implementation Committees (PICs) for the effective implementation and supervision of the community sub-projects. The roles and responsibilities and composition of the Union committee and PICs will be as follows:

- i. **Union Committee:** Each Union will have a Union Committee headed by the Chairman of the Union Parishad (UP) and the UP Secretary will act as its Member Secretary. The Union Committee will be responsible for:
 - Selection of all projects and beneficiaries in consultation with the community and the ward members on the basis of the eligibility criteria and policy directions communicated by the Upazila Committee;
 - Preparation of a Union Plan on the basis of final list of the selected community sub-projects and beneficiaries and send the same to the Upazila Committee for the approval;
 - Ensure opening of a beneficiary Bank Account for selected laborers in a scheduled government bank situated in Union/Upazilla level and ensure wage payment to each beneficiaries through the bank accounts;
 - Maintenance of the approved beneficiary list;
 - Preparation and regular updating of the beneficiary muster roll;
 - Conducting environmental and social assessment of projects;
 - Undertake periodic supervision of projects;
 - Liaison with the Upazila Committee;
 - Maintenance of all necessary records including site registers, registration/ job cards, receipts & payment, etc. with the help of the PICs;
 - Coordinate with the PICs for ensuring timely reporting including data collection and preparation of activity/progress reports; and
 - Any other tasks assigned by the Upazilla/Zilla Committee from time to time.

161. The Union Committee will compile its Union Plan on the basis of list of projects and beneficiaries received from each greater ward and submit the same to the Upazila Committee (UC) for approval and necessary action. The Union Plan will contain ward-wise details of planned projects and beneficiaries for each phase of the project. Broadly, the composition of the Union Committee will be as per the table given below. Besides, the Union Committee will have powers to co-opt more members from the Union Parishad, if necessary. The Composition of the Union Committee (UC) is given in Table 6.2.

Table 6.2: Composition of the Union Committee (UC)

1.	UP Chairman	Chairman
2.	All members of the UP	Member
3.	Sub-assistant Agricultural Officer (Block Supervisor)	Member
4.	Concerned Bank Manager	Member
5.	Field Assistant, BRDB	Member
6.	One eminent person from each ward of the union (Selected by UNO)	Member
7.	One teacher from the union (Selected by UNO)	Member
8.	One women representative from the union (Selected by UNO)	Member
9.	UP Secretary	Member Secretary

- ii. **Project Implementation Committee (PIC):** Every Union Committee will form Project Implementation Committees (PICs) consisting of 5-7 members for each project. Each PIC will be responsible for:

- Ensuring day to day implementation of the projects in close collaboration with the Union Committee;
- Ensuring regular attendance of beneficiaries in work site and timely payment to the beneficiaries in consultation with the Union Committee and concerned scheduled bank;
- Liaisoning with the Union Committee;
- Maintaining of all necessary records including attendance registers, registration/ job cards, receipts & payment, etc.;
- Ensuring day to day reporting including data collection;
- Preparing and submitting the payment requisition in prescribed form to the PIO/Field supervisor;
- Ensuring fixing of sign board/bill board with appropriate information at sub-project worksites; and
- Preparing activity/progress reports of the concerned project and submitting the same to the Union Committee.

162. The PIC will be formed in a community meeting in the presence of UP Chairman, UP members and with community participation from all wards organized by Union Parishad. The members of the PIC should be residents of the Ward (or village) that benefits most directly from the proposed project. The following principles will be respected in the process of selection and functioning:

- A person will not hold the position of the Chair in more than one PIC;
- Ideally, 30% of the members of PIC may be women.

163. A concerned ward member or women ward member will be selected as the Chairperson of PIC by majority vote during this meeting. Other members of the PIC will be nominated by the community at ward level open meeting organized by the ward members. One school teacher and an eminent person from the locality shall be the committee members in addition to the local ward members. One member nominated by the committee will act as the Member-Secretary.

6.6 Institutional Capacity Assessment

164. An assessment of the existing institutional capacity to implement the EMF is presented in this section. It assesses, at a minimum, the adequacy of:

- the institutional **structure**, and its authorities at all relevant levels, to address environmental management issues;
- the number and qualifications of staff to carry out their EMF responsibilities;
- **resources** to support staff in their work; and
- **knowledge and experience** relevant to carrying out environmental analyses and designing mitigation measures for small-scale infrastructure.

165. The UPs have a very limited the institutional capacity to implement the EMF. Except for a Secretary, who usually keeps track of all activities in a union, the 8 others, including the Chairman, are elected community representatives. It is thus unlikely that much capacity could be built within the UPs. However, as a part of the institutional capacity building for the project as a whole, Upazila Committee (UC) - comprising of professionals of relevant GOB agencies – will be formed and trained in different aspects of the project, including interpretation and implementation of environmental impact management guidelines. As and when required, the UPs can avail the services of the UC. The trained Upazilla level official can be utilized to conduct awareness-building type training for UP members and those who would be involved in selection and implementation process (i.e., subproject committee members and concerned citizens).

6.7 Capacity Building

166. The implementing agency and other stakeholders of the project have limited experience on environmental assessment and management under the earlier project EGPP. The component 2 will help strengthening the DDM capacity building to monitor and evaluate its program. It was agreed that environmental management, climate change adaptation and disaster risk reduction will be included in the capacity building program for FS and PIOs. In addition, the project will organize several orientation programs on operations manual including screening and ECoPs.

167. The implementing agency is mainly responsible to address disaster and emergency situation. Environmental concern has not been integrated with the operation. In addition, the other stakeholders involved in the project have limited or no experience on environmental management. Thus, to ensure that capacity, it is vital that SNSP allocates sufficient resources to training and capacity building especially in the early years. These efforts will not only benefit the SNSP, but will also build local capacity to undertake other development initiatives funded locally or by other donors.

168. The SNSP will help improve the effectiveness of local proponents in the management of environmental and social impacts during planning, implementation and operation of proposed investments. Proposed criteria for capacity building are shown in Table 6.3, which will be used as modules in capacity building at all levels.

Table 6.3: Capacity Building Criteria for Managing Subprojects

Issue	Concern	Eligibility Criteria
1. Environmentally sound sub projects, complying with agreed EMF policy	<ul style="list-style-type: none"> Realistic environmental standards for planning and implementation. 	<ul style="list-style-type: none"> Proponents 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 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"> Proponents 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, contractors, NGOs, independent consultants, proponents, 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"> • Sub-project prioritization is based on adequate consultation. 	<ul style="list-style-type: none"> • Resolution of the proponents 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 proponents performance to citizens;

169. Capacity building will enhance the subprojects’ EMF 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;

6.8 Training Needs and Plans

170. The training programs will be coordinated and anchored within the SNSP management. 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.

171. The section describes the training needs and plan for the various participants involved in implementing the EMF based, in part, on the institutional assessment described above. The training on EMF may be integrated with social framework and other related training program for cost effectiveness. The objectives of the training under the EMF 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 **NGOs and other stakeholders** which may be involved in the public participation in preparing and implementation of subprojects.

172. Different groups involved in SNSP 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.

173. The different training needs that are generally associated with the subprojects are given in Table 6.4. Based on these needs, a training plan has to be worked out for the life time 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 6.4: Outline of Different Training Needs

Group	Participants	Resource persons	Duration	Frequency
Local government approval authorities	UNOs	Experts/ Consultants	2- day workshop	Year 1 of the Project
			1-day refresher workshop	After Year 1 as needed
UZ Resource Team	UZ Officials from Govt. Departments/ Line Ministries	Experts/ Consultants	6-day workshop	Year1 of the Project
			2-day EMF review workshop	Annually after Year 1 and Annual Reviews
Community Leaders/Workers	UP-PIC/UP Chairmen, Members, Secretary	UZ resource Team Members	3-day workshop	As needed throughout the project
Stakeholders	NGO workers, Concerned individuals	UZ resource Team Members	3-day workshop per community	As needed throughout the

174. 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 UZ level technical personnel could be such trainers for UP level subproject personnel and concerned people including those from NGOs.

6.9 Resources for Capacity Building

175. The capacity building and training constitute a separate component of SNSP and adequate resources from this component should be allocated to ensure effective implementation of the EMF. The resources are needed to implement the following items.

- Institutional development activities
- The training program for communities, extension teams and local authorities to implement their EMF 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

6.10 Grievance Redress System

176. In order to deal with the grievance and complaints of workers under the SNSP, a Grievance Redress System will be set up at national, district and upazila levels. At the Upazila level, the Upazila Nirbahi Officer (UNO) will be the Grievance Redress Officer (GRO), while at the district level the Deputy Commissioner (DC) will be the GRO. The Deputy Project Director (DPD) at DDM will act as the GRO at the central level. At each level, there will be a Grievance Redress Register, where complaints will be entered and petitioners will be given a receipt. All grievances should ideally be disposed of within 15 days, failing which the petitioner can appeal before the appellate authority. Monitoring and reporting on possible complaints on environment issues from community and affected people in the villages will be one of the responsibilities of the Upazila-level GRO. The DC of respective district will be the appellate authority for the upazila level complaints, while the DPD of the Project will be the appellate authority for the district level complaints. The National Steering Committee (NSC) headed by the Secretary, MODMR, will act as the final appellate authority for grievance redress. DDM will be responsible for developing appropriate formats for complaints and redress as well as disseminating information about the grievance redress system. Complainants can however send letters of complaint to any level and these will be acted upon by the level where they are received.

177. The following major steps will broadly guide the Grievance Redress System under SNSP:

- i. The first point of acceptance of complaints will be the upazila since this is the level of the project closest to the community that is not directly involved in beneficiary selection or wage payments - two common sources of grievances. However, complaints can be accepted at any of the three levels – upazila, district or the Ministry. Complainants can also send letters of complaint to any level and these will be acted upon by the level where they are received.
- ii. At the upazila level, the UNO will be the Grievance Redress Officer (GRO), while at the district level the Deputy Commissioner (DC) will be the GRO. At the central level, the Deputy Project Director (DPD) in the office of the Project Director will act as the GRO.
- iii. With the aim to put in place a system of appeal to deal with grievances at each level, the DC of respective district will be designated as the appellate authority for the upazila level complaints, while the DPD of the project will be the appellate authority for the district level complaints. The National Steering Committee (NSC) headed by the Secretary, DMRD will act as the final appellate authority for grievance redress.
- iv. A petitioner may choose to submit his /her complaints either in writing (on a plain paper) or orally by presenting himself before the concerned GRO. Complaint boxes at conspicuous places in the offices of the Union Parishad, UNO and PIO must be installed to facilitate submission of complaints.
- v. At each level, there will be a Grievance Redress Register (sample format at **Annex-F**), where nature and date of complaints along with the name and address of the petitioner will be entered.

- vi. The person registering the grievance will be given a receipt (sample format at **Annex-G**) with number and date so that s/he can follow up the status of disposal of his/her grievance from the office of UNO and PIO.
- vii. All grievances registered at the upazila level should ideally be disposed within 15 days, failing which the petitioner can appeal before the appellate authority, i.e., the Deputy Commissioner of the district.
- viii. OPD will also provide a dedicated phone number for strengthening the grievance redress mechanism and this number along with contact details of the OPD will be prominently displayed at all sign-boards at the Union Parishad office as well as at the community sub-project work-sites.
- ix. OPD will ensure wide publicity of the grievance redress system at all levels.
- x. Once a grievance has been disposed of, the date and nature of disposal will be communicated to the petitioner by the concerned PIO who will also share all the related information with the petitioner, as per his / her requirement.
- xi. Data generated by classifying petitions will be analyzed each month for the district and type of complaints so that it becomes a tool for identifying areas that require senior management attention and redesigning of systems.
- xii. Monitoring of disposal of the complaint will be done at the next higher level every month and the Upazila Committee will be responsible for the monthly disclosure of complaints in local newspapers
- xiii. Every Upazila Committee will prepare and send monthly reports on complaints received and disposed to the higher appellate authority, i.e., Deputy Commissioner of the concerned district and the OPD.

7 PUBLIC CONSULTATION AND DISCLOSURE

7.1 Introduction

178. The participatory consultation is an essential criteria and important strategy for an integrated environmental and social analysis process, the project design and its implementation. Views of the project affected persons (PAPs) have been fully taken into account during the project preparation and continue to form a basis for further design and implementation of the sub-projects throughout the SNSP implementation period. The purpose of the stakeholder consultation is to identify the views of local communities, major institutional and other stakeholders, and to assess any mitigation measures which may be undertaken to minimize any negative impacts of the proposals under consideration.

7.2 Consultation Summary

179. The EMF preparation includes 3 field level consultations on 24 March 2013. Among these consultations one was held at Nayanpur village in Mallikbari union under Bhaluka upazila and other two consultations were held at Bangao Chander Bazar and Chamiadi Bazar in Uthura union under Bhaluka upazila, Mymensingh district (Photographs 7.1 to 7.2). About 87 community representatives were present in these consultations (**Annex H**). The schedules, venues and the major feedbacks or queries from the participants for (i) rural road improvements; and (ii) growth center markets are summarized in **Annex H (H1 to H3)**. The participants were overwhelmed to understand that the meeting was to consult them for designing the subprojects under the SNSP. The local people were yelling for long to get their road improved. They assured that if any additional strip of land is required for the improvement work, they are ready to organize by themselves. The participants in these consultations were happy to understand that social and environmental impacts will be addressed under the project to maximize project benefits. They did not foresee any major environmental issues from the project activities. In addition, meetings were held with PIO on 24 March 2013 in the sample subproject sites.

Suggestions from the Participants

For Markets:

- Due to lack of toilets, drinking water & drainage facilities public Health hazards are occurred. Toilet, drinking water and drainage facilities would be required for market development works.
- If any shop keepers and small businessmen are evacuated by the subproject they require convenient resettlement and appropriate compensation.
- There should be effective mitigation measures in order to reduce noise and dust pollution.
- Tree plantation should be done on the market boundary side slopes.

For Rural Roads:

- Due to inadequate drainage facilities, drainage/local flood is occurred. So drainage facilities should be improved by providing additional pipe culvert.
- Fertile top soils should not be used for subproject.
- There should be effective mitigation measures in order to reduce noise and dust pollution.
- Tree plantation should be done on the road side slopes



Photo 7.1: Consultation with village women community at Nayanpur, Mollikbari union.



Photo 7.2: PC at Chamiadi Bazar.

7.3 Modes of Future Consultations

180. A range of formal and informal consultative methods will be carried out for all subprojects including, but not limited to: focus group discussions, public meetings, community discussions, and in depth and key informant interviews; in addition to the censuses and socio-economic surveys. Encouraging public participation in consultations informs the public and serves as a venue for the public to express their opinion on priorities which the project should address.

181. The key stakeholders to be consulted during sub-project preparation and program implementation includes:

- all PAPs, including vulnerable households;
- project beneficiaries;
- host populations in resettlement sites (if any);
- political party representatives, community leaders, and representatives of community based organizations;
- local NGOs; and
- officials of municipalities and relevant government agency representatives.

182. The consultations with PAPs during project preparation will ensure that views of PAPs on compensation assistance measures are fully incorporated while consultations conducted during compensation implementation will identify necessary assistance required by the PAPs during rehabilitation. The union parishad with support and guidance from the PIO/FS will ensure that PAPs and other stakeholders are informed and consulted about the subproject, its impact, their entitlements and options, and allowed to participate actively in the development of the sub-project. This will be done particularly in the case of vulnerable PAPs, who will be encouraged to choose options that entail the lowest risk. This exercise will be conducted throughout the subproject during preparation, implementation, and monitoring of subproject results and impacts.

7.4 The Information and Consultation Framework

183. It is intended to layout the way in which information will be provided to the project implementers and beneficiaries and also how consultations will be held during project implementation. Its purpose is to ensure social and environmental issues are effectively addressed by the project and subprojects through a transparent and participatory manner (Table 7.1).

Table 7.1: Information and Consultation Framework

Stages of a Subproject	Consultation and Information Steps
Pre-project planning stage	<p>STEP 1: Proposal and Feasibility (Information Role)</p> <p>Once a project is identified the SNSP should undertake a feasibility study determining the feasibility of the project in view of the adverse environmental impacts it may pose. This study is an important source of information to the executing and implementing agencies and also to the community for whom the project has been proposed. The feasibility study should address the following:</p> <ul style="list-style-type: none"> • Are the proposed goals of the sub-project valid? • Who is the public for whose benefit the subproject is being introduced? • How is the sub-project going to serve them and is it in their interests? • The alternatives to the sub-project and whether the alternatives are cost affective? • Will there be any negative environment impacts due to the implementation of the subproject? • What would be the implementation strategy of the subproject?. <p>The information will be provided to stakeholders through both print and electronic media.</p> <p>STEP 2: Initial Public Consultation (Consultation Role)</p> <p>The findings of the project feasibility, its benefits and impacts need to be discussed with the community for whom the project is proposed. This would help the implementing agency in taking the opinion of people, make them understand the pros and cons of the project, alternatives examined and the project finalized.</p>
Planning and grounding stage	<p>STEP 3: Environmental Review, Assessment (Information and Consultation Roles)</p> <p>In this stage, it is important to ensure that there are no negative environmental impacts of the project. The project may be passed if it has no impacts and implementation can be initiated, Category A type projects are not entitled for support. However, if the project triggers any environmental impacts then such requirements shall be meet. Such requirements and study objectives, methodologies shall be discussed with stakeholders. This environmental studies/assessment shall be carried along with project feasibility study and completed prior detailed project report (DPR). The environmental findings shall be part of DPR. All the EAs shall be completed and included as integral to DPR.</p> <p>STEP 4: Detailed Project Report (Information Role)</p> <p>Initial consultations, feasibility and EAs on the project will pave the way for the preparation of the DPR. The DPR should constitute information on various components for successful project implementation. The DPR will constitute:</p> <ul style="list-style-type: none"> • A final design of the proposed project after examining the various

Stages of a Subproject	Consultation and Information Steps
	<p>alternatives to reduce the environmental impact on the people.</p> <ul style="list-style-type: none"> • EA report . • The cost of the project construction. • The time frame the completion of the project. • The institutional arrangements for implementing the project. • Plans and proposals covering R&R issues. • Design to ensure community participation in the sub-project (Beneficiaries, PAPs, NGOs, community organizations). • Plan for external help wherever needed (Experts, Advisors, Consultants). and • Grievance redress mechanisms (GRM). <p>STEP 5: Preparing for project implementation and sharing information (Information and Consultation Role)</p> <p>Once all the documents like prepared list of PAPS affected, the type of entitlements, plans for reconstruction of public utility infrastructures, etc., steps have to be taken to disseminate the information among the PAPs and prepare agencies for project implementation. Following tasks will be carried out in this step:</p> <ul style="list-style-type: none"> • Announcement of the project. • Displaying the layout of the project affected area. • Disclosure of EMF. • Consultations with the affected people and public hearing. • Involving NGOs/community in EMF implementation.
Implementation stage	<p>STEP 6: Addressing issues that arise during implementation (Consultation Role)</p> <p>In this stage there may be many issues that the project-implementing agency may face during the implementation of the project such as:</p> <ul style="list-style-type: none"> • Ensuring EMF compliance during implementation. • Problems pertaining to compensations & allowances. • Unexpected reactions from the PAPs with regard to the entitlements. • Conflicts between the displaced community and the host community etc.. <p>To overcome these problems, the SNSP would adopt a consensual approach and address the grievances and queries of the people affected.</p>
Monitoring and evaluation stage	<p>STEP 7: Monitoring Process through participation (Information and consultation Roles)</p> <p>The process of participatory M&E is the logical extension of the activities. The beneficiary committees can be formed for monitoring and supervision of the project works. The process should also ensure that the project benefits have properly reached the affected people and the execution of the project sticks its original designs so that social compliance is achieved. Following tasks are essential in this stages:</p> <ul style="list-style-type: none"> • Ensuring the implementation of the EMF and timely delivery of entitlements (Consultation Role): Ensuring that the EMF is

Stages of a Subproject	Consultation and Information Steps
	<p>implemented according to a designed plan. and</p> <ul style="list-style-type: none"> • Reporting (Information Role): Reporting is an important aspect of the M&E process. Periodical reporting is important to generate information on the progress of the work undertaken. The status of the implementation of the EMF and progress has to be documented.

7.5 Proposed Disclosure Plan

184. For projects such as the SNSP, the WB procedures require that the EMF be prepared and publicly disclosed prior to project appraisal. This allows the public and other stakeholders to comment on the possible environmental and social impacts of the project, and the appraisal team to strengthen the frameworks as necessary, particularly measures and plans to prevent or mitigate any negative environmental and social impacts.

185. Toward this end, this document will be publicly released through the World Bank's Info Shop and in public locations in Bangladesh. The documents should be made available in English and Bengali in compliance with the World Bank's *Public Consultation and Disclosure Policy*.

ANNEX A: 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:
 -
 -

- ii. Sub project components:
 -
 -
 -

- iii. Subproject activities
 -
 -
 -
 -

9. Baseline Description of affected Environment

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

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

- 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 ²
			High	Medium	Low	
• loss of top soil?	<input type="checkbox"/>					
• negative effects on species of flora or fauna or their habitat?	<input type="checkbox"/>					
• negative effects on designated wetlands?	<input type="checkbox"/>					
• negative effects on vegetation?	<input type="checkbox"/>					
• destruction of trees and vegetation?	<input type="checkbox"/>					
• impact on fish migration and navigation?	<input type="checkbox"/>					
• drainage congestion in the project area?	<input type="checkbox"/>					
• water logging in the project areas?	<input type="checkbox"/>					
• negative effects on surface water quality, quantities or flow?	<input type="checkbox"/>					
• negative impact on soil stability and compactness?	<input type="checkbox"/>					
• negative impacts on irrigation and canals	<input type="checkbox"/>					
• increased noise due to day-to-day construction activities?	<input type="checkbox"/>					
• increased wind-blown dust from material (e.g. fine aggregate) storage areas?	<input type="checkbox"/>					
• degradation or disturbance of historical or culturally important sites (mosque, graveyards, monuments etc.)?	<input type="checkbox"/>					

11. Possible environmental impacts of the subproject

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**)

<p>4. Recommendations:</p>

² Note: Please add any other screening questions relevant to the demonstration. Also provide additional comments and/or positive impacts in 'remarks' column.

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 B: ENVIRONMENTAL SCREENING FORMAT - Sample Subproject (Work done example)

1. **Sub project Name:** Ramjaner Bari to Shamsuddiner Bari via Paglar Vita Road
2. **Location (Village, Ward, District, Union):**Mawarishpur, Mallickbari, Bhaluka, Mymensingh
3. **Type of sub project:** Construction and maintenance of rural roads by filling earthen materials
4. **Size of the subproject:** 01km earthen road
5. **Number of people benefiting the sub project:** 3 villages and around 1200 peoples
6. **Contact person:** Mr. Farhat, Field Supervisor and Mr. Md. Mubunur Rahman, PIO, Bhaluka
7. **Telephone:** Mr. Farhat – 01716205849 and Mr. Md. Mubunur Rahman- 01714046435
8. **General Description of the sub project:-**

- i. **Sub project objectives:** to improve the equity, efficiency, and transparency of key social safety net programs, and to finance short term employment to enable poorest households to better cope with poverty and vulnerability.
- ii. **Sub project components:** Supporting DDM’s safety net programs (FFW, TR, GR and VGF) by financing a portion of program costs (cash payments) in line with progress against a set of disbursement linked indicators (DLIs).
- iii. **Subproject activities:** The working activities under this subproject is road repairing of 1 (one) kilometer earthen road. The construction worker has been worked total 40 days for money.

9. Baseline Description of affected Environment

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

The subproject area is located within the soil classification of Madhupur Tract. There is no designated wetland in the subproject area. However, there are many ponds and natural depressions are available within 5km buffer zone.

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

There is no protected area in the subproject area. Usually homestead forest and government forest area available within 5km buffer zone. Moreover, no wildlife sanctuary but many wild animals and birds are found 5km buffer zone.

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

The majority people in the subproject area are farmer and low to middle income. Some of them have taken fisheries as their livelihood. The subproject area has well aesthetic view and no major historical sites. There are schools, mosques and other important infrastructures also in the subproject area.

10. Identification of Negative Environmental Impacts

Aspects	Yes	No	Scale of Impact			Remarks ³
			High	Medium	Low	
• loss of top soil?	✓	□	□	□	✓	As the filling materials are collected

³Note: Please add any other screening questions relevant to the demonstration. Also provide additional comments and/or positive impacts in ‘remarks’ column.

Aspects	Yes	No	Scale of Impact			Remarks ³
			High	Medium	Low	
						from the near agricultural land so the selected lands are losing top soil.
• negative effects on species of flora or fauna or their habitat?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The subproject will not cause any negative effects on species of flora or fauna or their habitat.
• negative effects on designated wetlands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is no designated wetland in the subproject area.
• negative effects on vegetation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project activity will cause minor negative impact to the vegetation.
• destruction of trees and vegetation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project activity mainly causes loss of saplings and a few numbers of small trees.
• impact on fish migration and navigation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• drainage congestion in the project area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Usually the drainage system is not good in the subproject area. In this condition the activity regarding the project might accelerate water logging problem if this problem will not be handled carefully.
• water logging in the project areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	There has problem of water logging during the monsoon season.
• negative effects on surface water quality, quantities or flow?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	As there have no adequate drainage system thus the further development/improvement will also cause negative effects on surface water flows in this area.
• negative impact on soil stability and compactness?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• negative impacts on irrigation and canals	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
• increased noise due to day-to-day construction activities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No intolerable noise pollution in the area..
• increased wind-blown dust from material (e.g. fine aggregate) storage areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Minor impact of dust from the dry soil of road embankment.
• degradation or disturbance of historical or culturally important sites (mosque, graveyards, monuments etc.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

11. Possible environmental impacts of the subproject

Environmental impacts	Mitigation measures (Identify the relevant ECoP)	Project Categorization (Low/Medium/High)
Loss of top soil	ECoP 4.0	Medium
Soil erosion	ECoP5.0	Low
Drainage congestion	ECoP9.0	Medium
Worker’s health impact	ECoP10.0	Medium
Loss of vegetation	ECoP11.0	Low

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

<p>Recommendations: The subproject activity mainly should focus the below recommendations in the construction period:</p> <ol style="list-style-type: none"> i. Ensure proper drainage system in the subproject area. ii. Take proper initiative to conserve the top soil and recover it after collecting the material from the agricultural land. iii. The road embankment should be covered with turfing to prevent soil erosion and dust pollution. iv. Worker should use PPEs during the work period.

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: TYPICAL ENVIRONMENTAL MANAGEMENT PLAN

Activity/Issue	Potential Environmental Impacts	Proposed Measures	Mitigation	Responsible Parties	Estimated Cost

ANNEX D: ENVIRONMENTAL MITIGATION PLAN FOR THE SAMPLE SUBPROJECTS

Impact	Mitigation Measures	Project Stage	Implemented by	Monitoring /Supervising by
Loss of Fertile Top Soil of Agricultural Land	<ul style="list-style-type: none"> ▪ Try to avoid fertile top soil from agricultural land to use as fill materials for the subprojects. ▪ Strip off top soils (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 trees 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
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

▪ Subproject-wise Specific Impacts & Mitigations

Subprojects	Environmental Issues/Potential Impacts	Stage	Implemented by	Monitoring /Supervising by
For Roads:				

Drainage Congestion :	Consider the drainage structure (pipe culvert) in subproject design & implement accordingly during construction.	Preconstruction/ Construction	Contractor	DDM
Erosion and Siltation:	<ul style="list-style-type: none"> ▪ Destabilization is mostly related to road embankment if not properly compacted ▪ Dense and well rooted growth of permanent grass and trees should be planted at embankment and road sides for protection the slopes. 	Construction	Contractor	DDM
Markets	<ul style="list-style-type: none"> ▪ Drainage Congestion: Due to lack of drain in the markets, drainage congestion is occurred during monsoon. ▪ Public H&S: Due to lack of toilets & quality drinking water facilities, public H&S hazards are occurred. 	Preconstruction /Construction	Contractor	DDM

ANNEX E: TOR FOR SELECTION OF AN ENVIRONMENT SPECIALIST UNDER INDEPENDENT ASSESSMENT/THIRD PARTY MONITORING

1. Name of the project: SNSP

2. Scope of Works

- Develop a systematic approach to identify the representative sample size considering the types of subprojects;
- Review the adequacy of the environmental screening, environmental management plan and implementation of the environmental mitigation activities;
- Assess the institutional mechanism for integration, management and monitoring of environmental issues in subproject planning, implementation and operation & maintenance (O&M);
- Examine the knowledge and awareness of the field level staffs on management of environmental issues;
- Recommend specific suggestions to improve the environmental management of the subproject design, implementation and O&M in next year; and
- In order to carry out the above tasks, the consultant will review the list of the subprojects, identify category subprojects, conduct FGD and interviews of the beneficiaries, other local community people, NGOs and field level staffs.

3. Educational Qualification of the Environmental Specialist

- At least Master's Degree in environmental science /engineering.

4. Experience of the Environmental Specialist

- Minimum 10 years of relevant experience.
- Experience in community-driven development approach.
- Ability to lead, organize and co-ordinate.
- Good verbal and written communication skills in both English and Bangla.
- Demonstrated interpersonal skills, and proven ability to work in a different multicultural context.

5. Age Limit

Age should not be more than 40 years.

ANNEX F: GRIEVANCE REDRESS REGISTER

Government of the People's Republic of Bangladesh

Safety Net Systems for the Poorest (SNSP)

GRIEVANCE REDRESS REGISTER

(To be maintained at the office of UNO and/or the Deputy Commissioner for all grievances reported/registered at their levels)

Union: _____ Upazila: _____ District: _____

Sl. No.	Details of Complaint Received			Name of the Complainant	Complete Address	Nature of Complaint	Name of the concerned UP / PIC	Action Taken	Date of Final Disposal
	Date	Compliant Number	Form of Complaint						

ANNEX-G: GRIEVANCE REGISTRATION RECEIPT

Government of the People’s Republic of Bangladesh

Safety Net Systems for the Poorest (SNSP)

GRIEVANCE REGISTRATION RECEIPT

(To be issued by the UNO at Upazila level, Deputy Commissioner at District level and the Deputy Project Director at the OPD)

This is to acknowledge the receipt of complaint dated (dd/mm/yyyy) from Mr./Ms./Mrs. _____ S/o / D/o / W/o _____ resident of Ward No. _____, Union Parishad _____, Zila _____. The complaint number is _____.

Your grievances registered with us will be disposed off within 15 working days starting the date of receipt of complaint, i.e., _____ and you will be intimated about its status within this period, failing which you are entitled to appeal before the appellate authority, i.e., the Deputy Commissioner of the district or the Deputy Project Director in the Office of Project Director of the Safety Net System for the Poorest (Contact details of DC & OPD is given behind this form).

(Signature & seal of the UNO / Deputy Commissioner / Dy. Project Director, OPD)

Text to be printed behind the Grievance Registration Receipt with all necessary details given below:

In case your complaint has not been addressed / disposed off at the Upazila level within 15 days from the date of complaint or if you are not satisfied with the steps taken for the disposal of the complaint at the Upazila level, you have a right to appeal before the following appellate authority:

Mr. / Ms _____ Deputy Commission, District _____ Address: _____ Phone: _____ Fax: _____	Mr. _____ Deputy Project Director, Safety Net Systems for the Poorest (SNSP) Address: _____ Phone: _____ Fax: _____
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ANNEX-H: PUBLIC CONSULTATIONS FINDINGS FOR SNSP

Annex H1: Public Consultations Findings for Nayanpur Purba Para to 9 No. Pucca Rasta Road Repairing

Public Consultation No. 1

Site: Nayanpur Village

Road: Nayanpur purba para to 9 no. pucca rasta, Mallikbari, Bhaluka, Mymensingh.

Date: 24 March 2013

Time: 12.15 pm to 13.45 pm.

A consultation meeting was held from 12:15 PM to 13:45 PM on 24 March 2013 at Nayanpur Village. Most of the participants were people inhabiting in and around the project area. Total 46 people participated in the meeting. In consultation meeting, environmental and social issues were discussed. The main focus was to dig out information on how does indiscriminate use of natural resources cause poverty and environmental degradation by declining the homestead forests, depleting biodiversity and decreasing livelihood of people. The issue on potential impact of construction works has also been raised.

During the consultation, the participants appreciated the road improvement project explaining their desires and expectations. The subproject will increase and improve the quality of their life. Currently, the main medium of transport is foot and some people use motor cycle and cycle for long distance travel. The subproject will ease their turmoil and reduce their commuting time. Moreover, barrier for transporting goods and products will be removed.

From the consultation meeting, it is evident that not much people have knowledge and idea about noise pollution. Most of them are willing to tolerate noise pollution to some extent. Another problem they raised is air/dust pollution during the construction activities specially earth works. Some of them suggested that spraying of water can minimize the dust pollution. For minimize the water pollution they expect necessary measure will be taken during construction activities.



Photograph H.1: Public Consultation at Nayanpur on Road Repairing Subproject

Suggestions:

- Effective measure should be taken to minimize the negative impact of construction activities.
- Workers are not using PPEs due to shortage of budget and this problem should be solved.

- There should be effective mitigation measures in order to reduce noise and dust pollutions, soil erosion and drainage congestion. Tree plantation was also suggested from the participants.

Table H.1: List of Participants during Consultation at Nayanpur

Safety Net System for the Poorest (SNSP) Project - এর
 পরিবেশগত এবং সামাজিক প্রভাব নিরূপণ ও প্রতিকার ব্যবস্থার উপর জনমত যাচাই সভায় উপস্থিত ব্যক্তি বর্গের নাম
(Attendance Sheet)

সময়ঃ 12:15তারিখঃ 24/03/2013
 সভার স্থানঃ নয়নপুরইউনিয়নঃ ৭নং মাল্লিক বারী
থানাঃ জালুকা

ক্রম নং SI No.	নামঃ Name:	পিতার নামঃ Father's Name:	ঠিকানাঃ Address:	মোবাইল নম্বরঃ Mobile No.	স্বাক্ষরঃ Signature:
01	বিনয়	শ্রী: মোস্তফা	নয়নপুর		বিনয়
02	জসজ	নওশ	"		জসজ
03	মুস্তাফা	শারীফ চন্দ্র বর্মণ	"		
04	বাবু	জেন চন্দ্র বর্মণ	"		বাবু
05	বিনয়	শ্রী: আমিন চন্দ্র	"		বিনয়
06	জসজ	জসজ চন্দ্র	"		জসজ
07	বাবু	মুস্তাফা চন্দ্র বর্মণ	"		
08	বিনয়	বজ্র চন্দ্র	"		বিনয়
09	বিনয়	মুস্তাফা চন্দ্র	"		বিনয়
10	মুস্তাফা	জসজ চন্দ্র	"		
11	শাহজাদ	শ্রী: আব্দুল আলী	"		শাহজাদ
12	মুস্তাফা	শ্রী: জামাল আলী	"		মুস্তাফা
13	মুস্তাফা	শ্রী: জামাল	"		মুস্তাফা
14	মুস্তাফা	শ্রী: জামাল আলী	"		মুস্তাফা
15	মুস্তাফা	শ্রী: আব্দুল আলী	"		মুস্তাফা
16	মুস্তাফা	শ্রী: আমিন	"		মুস্তাফা
17	মুস্তাফা	শ্রী: আমিন আলী	"		মুস্তাফা
18	মুস্তাফা	শ্রী: আমিন আলী	"		মুস্তাফা
19	শ্রী: আব্দুল আলী	শ্রী: আব্দুল আলী	"	01747263071	শ্রী: আব্দুল আলী
20	মুস্তাফা	শ্রী: আমিন	"		মুস্তাফা

Safety Net System for the Poorest (SNSP) Project - এর

পরিবেশগত এবং সামাজিক প্রভাব নিরূপন ও প্রতিষ্ঠার ব্যবস্থার উপর জনমত যাচাই সভায় উপস্থিত ব্যক্তি বর্ণের নাম
(Attendance Sheet)

সময়ঃ ১২: ১৫

তারিখঃ ২৪.০৩.২০১৩

সভার স্থানঃ নতুন খুব

ইউনিয়নঃ ৭ নং মালিক বারী

থানাঃ ডালুকা

ক্রম নং Sl No.	নামঃ Name:	পিতার নামঃ Father's Name:	ঠিকানাঃ Address:	মোবাইল নম্বরঃ Mobile No.	স্বাক্ষরঃ Signature:
২১	মো: বজ্রাক	মু: প্রমোদ আলী			
২২	মো: খন্দু মিছা	মু: আহম্মদ		০১৩৬৪৩২২৩৭৭	খন্দু মিছা
২৩	দয়ান বর্মণ	জনরত চন্দ্র বর্মণ			দয়ান
২৪	শ্রীমান মন্ডল	মু: কামারী মন্ডল			গোপাল
২৫	মো: আহিয়া	মো: গ্রাম মুল			আহিয়া
২৬	আনোয়া কোম	আকবর আলী			আনোয়া কোম
২৭	বসু কোম	মো: দুলাল			বসু
২৮	বর্জী	নাম মন্ডল বর্মণ		০১৬৮৬০৮৩৪৩৪	বর্জী
২৯	শোফা আলী	লাবেল বর্মণ			শোফা আলী
৩০	নিখা আলী	মুখিম চন্দ্র বর্মণ			নিখা
৩১	আরা কোম	মো: আমাম			আরা কোম
৩২	বাবি আলী	মুন্ডল চন্দ্র বর্মণ			বাবি আলী
৩৩	মিকনা আলী	ইন্সজিত চন্দ্র			মিকনা
৩৪	বাসু আলী	মু: কিকা চন্দ্র			
৩৫	জিন্দু আলী	দিব্রু চন্দ্র বর্মণ			জিন্দু আলী
৩৬	বসু আলী	মুখিম চন্দ্র			
৩৭	বিশু	বিনয় চন্দ্র			বিশু
৩৮	মুখম আলী	জিব্রু চন্দ্র			মুখম
৩৯	মো: কামাল	ইমান আলী			কামাল
৪০	মো: নাসরুল	মো: মুল্লু		০১২৫৬ ১০ ৩৩৪৫	নাসরুল

Annex H2: Public Consultations Findings Bangaon Chander Bazaar Market Development Repairing

Public Consultation No. 1

Site: Bangaon Chander Bazar, UZ: Bhaluka, Mymensingh.

Date: 24 March 2013

Time: 03.15 pm to 04.15 pm.

A consultation meeting was held during 03.15 PM to 04:15 PM on 24 March 2013 at Bangaon Chander Bazaar in Uthura, Bhaluka. The meeting was with the people inhabiting in and around the concerned Bangaon Chander Bazaar Market Development, market staffs and small and medium vendors and as well as few other local individuals. Total 20 people participated in the meeting. In consultation meeting; environmental and social issues were examined. The main focus was to dig out information on how does indiscriminate use of natural resources cause poverty and environmental degradation by decreasing livelihood of people. The issue on potential impact of construction works has also been raised.



Photograph H.2: Public Consultation at Bangaon Chander Bazar

Suggestions:

- There should be an effective and acceptable mitigation measure for the people doing business in the Bangaon Chander Bazaar who will be impacted by the project.
- Toilet and drainage facilities would be required for market development works.
- If any shop keepers and small businessmen are evacuated by the subproject they require convenient resettlement and appropriate compensation.
- The everyday wage (175Tk) is not enough and more local employment need to be created during the construction phase.
- There should be effective mitigation measures in order to reduce noise and dust pollution.
- Mosque road and mosque development earth filling also should be done by this scheme.

Table H.2: List of Participants during Consultation at Bangaon Chander Bazar

Safety Net System for the Poorest (SNSP) Project - এর

পরিবেশগত এবং সামাজিক প্রভাব নিরূপন ও প্রতিকার ব্যবস্থার উপর জনমত যাচাই সভায় উপস্থিত ব্যক্তি বর্গের নাম

(Attendance Sheet)

সময়ঃ ৩.৩০ ঘটঃ

তারিখঃ ২৫/০৩/২০১৩

সভার স্থানঃ হাতিবেড় কনসার্ট হাউস, ইউনিয়নঃ ১নং উলুয়া ইউনিয়ন
বঙ্গাও

থানাঃ ব্রাহ্মণ

ক্রম নং SI No.	নামঃ Name:	পিতার নামঃ Father's Name:	ঠিকানাঃ Address:	মোবাইল নম্বরঃ Mobile No.	স্বাক্ষরঃ Signature:
০১	শ্রীঃ কাহারু হোসেন	শ্রীঃ হুমায়ূন হোসেন	বঙ্গাও	০১৭৪-২১১৬২৭	কাহারু হোসেন
০২	শ্রীঃ আবুল কালাম হোসেন	শ্রীঃ হুমায়ূন হোসেন	হৈমাবাদী	০১৭২৫২০০৭২৬	হুমায়ূন
০৬	শ্রীঃ জাহাঙ্গীর	শ্রীঃ হুমায়ূন হোসেন	কনসার্ট	০১৭০৮-৬-০২৪৪২	জাহাঙ্গীর
০৪	শ্রীঃ হুমায়ূন হোসেন	শ্রীঃ হুমায়ূন হোসেন	"	০১৭১০২৫২২২২	হুমায়ূন
০৩	শ্রীঃ জাহাঙ্গীর হোসেন	শ্রীঃ হুমায়ূন হোসেন	"	০১৭২২-৭-০৭৪৪৭	জাহাঙ্গীর
০৫	শ্রীঃ জাহাঙ্গীর হোসেন	শ্রীঃ হুমায়ূন হোসেন	"		জাহাঙ্গীর
০৭	শ্রীঃ জাহাঙ্গীর হোসেন	শ্রীঃ হুমায়ূন হোসেন	"		জাহাঙ্গীর
০৮	শ্রীঃ জাহাঙ্গীর হোসেন	শ্রীঃ জাহাঙ্গীর হোসেন	"		জাহাঙ্গীর
০৯	শ্রীঃ জাহাঙ্গীর হোসেন	শ্রীঃ জাহাঙ্গীর হোসেন	"	০২৯২০৫৭৫১০১	জাহাঙ্গীর
১০	শ্রীঃ জাহাঙ্গীর হোসেন	শ্রীঃ জাহাঙ্গীর হোসেন	"		জাহাঙ্গীর
১১	শ্রীঃ জাহাঙ্গীর হোসেন	শ্রীঃ জাহাঙ্গীর হোসেন	"		জাহাঙ্গীর
১২	শ্রীঃ জাহাঙ্গীর হোসেন	শ্রীঃ জাহাঙ্গীর হোসেন	"		জাহাঙ্গীর
১৬	শ্রীঃ জাহাঙ্গীর হোসেন	শ্রীঃ জাহাঙ্গীর হোসেন	হাতিবেড়		জাহাঙ্গীর
১৭	শ্রীঃ জাহাঙ্গীর হোসেন	শ্রীঃ জাহাঙ্গীর হোসেন	"		জাহাঙ্গীর
১৮	শ্রীঃ জাহাঙ্গীর হোসেন	শ্রীঃ জাহাঙ্গীর হোসেন	"		জাহাঙ্গীর
১৯	শ্রীঃ জাহাঙ্গীর হোসেন	শ্রীঃ জাহাঙ্গীর হোসেন	"		জাহাঙ্গীর
২০	শ্রীঃ জাহাঙ্গীর হোসেন	শ্রীঃ জাহাঙ্গীর হোসেন	"		জাহাঙ্গীর

Annex H3: Public Consultations Findings Chamiadi Bazar Market Development

Public Consultation No. 3

Site: Chamiadi Market

Subproject: Chamiadi Market Development

Date: 24 March 2013

Time: 04:30 pm to 05:30 pm

A consultation meeting was held during 04.30 PM to 05:30 PM on 24 March 2013 at Chamiadi Bazaar in Uthura, Bhaluka. The meeting was with the people inhabiting in and around the concerned Chamiadi Bazaar Market Development, market staffs and small and medium vendors and as well as few other local individuals. Total 21 people participated in the meeting. In consultation meeting; environmental and social issues were examined. The main focus was to dig out information on how does indiscriminate use of natural resources cause poverty and environmental degradation by decreasing livelihood of people. The issue on potential impact of construction works has also been raised.



Photograph H.3: Public Consultation at Chamiadi Bazar

Suggestions:

- There should be an effective and acceptable mitigation measure for the people doing business in the Chamiadi Bazar who will be impacted by the project.
- Present drainage facility is not enough and should be improved.
- Sanitation, drinking water facilities and toilet provision are needed.
- This place was lowland area where water stagnated all the time. Hence, the construction work should be done very carefully.
- Waste management is not available and proper initiative should be taken during market development.

Table H.3: List of Participants during Consultation at Chamiadi Bazar

Safety Net System for the Poorest (SNSP) Project - এর
 পরিবেশগত এবং সামাজিক প্রভাব নিরূপন ও প্রতিষ্ঠার ব্যবস্থার উপর জনমত যাচাই সভায় উপস্থিত ব্যক্তি বর্ণের নাম
(Attendance Sheet)

সময়ঃ ৪:৩০ তারিখঃ ২৪.০৩.২০১৩
 সভার স্থানঃ মামিয়ার্দী বাজার ইউনিয়নঃ হেয়া থানাঃ ভানুকা

ক্রম নং SI No.	নামঃ Name:	পিতার নামঃ Father's Name:	ঠিকানাঃ Address:	মোবাইল নম্বরঃ Mobile No.	স্বাক্ষরঃ Signature:
	মোঃ শাহ আলম	মোঃ আতিকুল হুমান	চামিয়ার্দী		মোঃ শাহ আলম
	মোঃ হাফিজ উদ্দিন	মুঃ মাহেদ আলী	"		মোঃ হাফিজ উদ্দিন
	মোঃ নজরুল ইসলাম	মোঃ রুম্ম আলী	"		মোঃ নজরুল ইসলাম
	মোঃ শামিম	মোঃ মান্নান	"		মোঃ শামিম
	মোঃ হাফিজ	মোঃ কব আলী	"		
	মোঃ হেলাল	মুঃ নিয়ত আলী	মামিয়ার্দী	০১৭৩ ৩২১২৫৩৩	মোঃ হেলাল
	মোঃ জঃ রহিম	মোঃ আঃ গনিলা	কালমাড়ি, অজাতি	০১৭৩১ ৪২৪০৬৫	মোঃ জঃ রহিম
	মোঃ আদম আলী	মুঃ রুহ আলী	মামিয়ার্দী		-
	মোঃ হাফিজ আলী	মোঃ আব্দুল কায়েম	"	০১৭৪৪৭৬৪২৫৪	মোঃ হাফিজ আলী
	মোঃ মঈনুদ্দিন হাফিজ	মুঃ মাহেদ আলী	"	০১৭৬০ ২৬৪৬৪৩	মোঃ মঈনুদ্দিন হাফিজ
	মোঃ আফসান আলী	মুঃ নঈম উদ্দিন	"	০১৭৩৪০২৪০৭৪	মোঃ আফসান আলী
	মোঃ অঃ মঈনুদ্দিন	মুঃ দুলাহ আলী	"		মোঃ অঃ মঈনুদ্দিন
	মোঃ কামাল হাফিজ	মোঃ আব্দুর আলী	"	০১৭২৬৬২১৫৪০	মোঃ কামাল হাফিজ
	মোঃ দুলাহ হাফিজ	মোঃ আব্দুল কাদের শেখ	"	০১৭২১ ৭১০৫৬৩	মোঃ দুলাহ হাফিজ
	মোঃ আলম	মুঃ হুদ আলী	"	০১৭২৬ ১৭৭২৬৫	মোঃ আলম
	মোঃ আব্দুর রহিম	মোঃ হুদ আলী	"	০১৭১৫ ৫৪৭৬৬৭	মোঃ আব্দুর রহিম
	মোঃ আব্দুল মাহেদ	মুঃ আব্দুর আলী	"	০১৪১১ ০১৩৭২৩	মোঃ আব্দুল মাহেদ
	মোঃ হাফিজ মিয়া	মুঃ আব্দু মিয়া	"		
	আফসান আলী	মাহেদ আলী	"	০১৭৫ ২২৪৩০৩৬	আফসান আলী
	মোঃ মঈনুদ্দিন হুমান	মুঃ মঈনুদ্দিন	"	০১৭৩ ৪২৭৭১৩৫	মোঃ মঈনুদ্দিন হুমান