Bangladesh Economic Zones Authority
Support to Capacity Building of Bangladesh Economic Zones Authority Project

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

ESMF OF BEZA

Submitted to:
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# TABLE OF CONTENT

ACRONYMS................................................................................................................................................. 5

PART – A  GENERAL ...................................................................................................................................... 9

1  THE ESMF DOCUMENT .......................................................................................................................... 9
   1.1 OVERVIEW OF ESMF .......................................................................................................................... 9
   1.2 STRUCTURE OF THE DOCUMENT ..................................................................................................... 10
   1.3 METHODOLOGY ................................................................................................................................. 11
   1.4 OBJECTIVE OF ESMF ....................................................................................................................... 13
   1.6 USERS OF ESMF ............................................................................................................................... 14

CHAPTER 2 : ABOUT BEZA .......................................................................................................................... 15

2  BANGLADESH ECONOMIC ZONES AUTHORITY (BEZA)................................................................. 15
   2.1 BACKGROUND OF BEZA .................................................................................................................. 15
   2.2 BEZA ORGANOGRAM: ..................................................................................................................... 16
   2.3 BEZA SERVICES ............................................................................................................................... 17
   2.4 OBJECTIVE OF BEZA ....................................................................................................................... 19
   2.5 ENVIRONMENTAL AND SOCIAL ASSESSMENT PROCESS ............................................................ 19
   2.6 PROJECTS REPORTING UNDER BEZA ........................................................................................... 20
   2.7 ANNUAL REVIEWS FOR BEZA ......................................................................................................... 21

3  CAPACITY BUILDING .............................................................................................................................. 22

3.1 CAPACITY BUILDING, TRAINING ON ESMF .................................................................................. 22
   3.2 INSTITUTIONAL CAPACITY ASSESSMENT ..................................................................................... 22
   3.3 CAPACITY BUILDING ....................................................................................................................... 22
   3.4 TRAINING NEEDS AND PLANS ....................................................................................................... 23
   3.5 TECHNICAL ASSISTANCE FOR CAPACITY BUILDING IMPLEMENTATION .................................. 24

PART – B  ENVIRONMENTAL MANAGEMENT FRAMEWORK .................................................................. 25

4  GENERAL ENVIRONMENTAL MANAGEMENT ................................................................................... 25
   4.1 OVERVIEW ........................................................................................................................................ 25
   4.2 TARGET AREAS OF ENVIRONMENTAL MANAGEMENT .................................................................. 25
       4.2.1 Physiographic and Land Use Pattern ......................................................................................... 25
       4.2.2 Hydrology .................................................................................................................................. 26
       4.2.3 Ground Water ............................................................................................................................ 26
       4.2.4 Ecology ..................................................................................................................................... 27
       4.2.5 Climate ..................................................................................................................................... 27
5 LEGAL AND INSTITUTIONAL FRAMEWORK (ENVIRONMENTAL) ................................................. 31

5.1 OVERVIEW ......................................................................................................................... 31

5.2 ENVIRONMENT RELATED POLICIES IN BANGLADESH ............................................... 31
  5.2.1 National Environmental Policy, 1992 ........................................................................... 32
  5.2.2 National Environmental Management Action Plan, 1995 ............................................. 33
  5.2.3 National Conservation Strategy, 1992 ........................................................................ 33
  5.2.4 National Water Policy, 2000 ..................................................................................... 33
  5.2.5 National Water Management Plan, 2001 .................................................................... 34

5.3 RELEVANT LAWS AND REGULATIONS IN BANGLADESH .......................................... 34

5.4 ENVIRONMENTAL GUIDELINES FOR PROJECTS IN BANGLADESH ......................... 42
  5.4.1 Green Category ........................................................................................................... 42
  5.4.2 Orange A and B Category ......................................................................................... 42
  5.4.3 Red Category ............................................................................................................ 43

5.5 INSTITUTIONAL ORGANIZATIONS ............................................................................... 43
  5.5.1 Department of Environment (DoE) ............................................................................ 43
  5.5.2 Department of Forest ............................................................................................... 44

5.6 DOE REQUIREMENTS ON ENVIRONMENTAL ASPECTS ........................................... 44

5.7 WORLD BANK SAFEGUARD POLICIES ...................................................................... 45

5.8 CATEGORIES OF PROJECTS ACCORDING TO THE WORLD BANK ............................... 48
  5.8.1 Category A: ................................................................................................................. 48
  5.8.2 Category B .................................................................................................................. 48
  5.8.3 Category C .................................................................................................................. 49

5.9 COMPARISON BETWEEN GOB AND WB GUIDELINES  ............................................. 49

6 ENVIRONMENTAL IMPACT AND MITIGATION MEASURES ........................................ 51

6.1 OVERVIEW ......................................................................................................................... 51

6.2 POTENTIAL IMPACTS ..................................................................................................... 51
  6.2.1 Pre-Construction (Planning and Design) Phase .......................................................... 51
  6.2.2 Construction Phase .................................................................................................... 52
  6.2.3 Operation and Maintenance Phase ............................................................................ 53

6.3 MAJOR ENVIRONMENTAL IMPACTS ............................................................................. 55

6.4 ASSESSMENT OF IMPACTS ............................................................................................ 56
6.4.1 Cumulative Impacts ............................................................................................................ 57
6.5 MITIGATION MEASURES ..................................................................................................... 58

PART – C SOCIAL MANAGEMENT FRAMEWORK ...................................................................... 63

7 LEGAL AND INSTITUTIONAL FRAMEWORK (SOCIAL) .......................................................... 63

7.1 OVERVIEW .......................................................................................................................... 63
7.2 RELEVANT NATIONAL LEGISLATION .............................................................................. 63
7.3 ACQUISITION AND REQUISITION ORDINANCE, 1982 .................................................. 64
7.4 WORLD BANK’S SAFEGUARD POLICIES ......................................................................... 66
   7.4.1 OP 4.12 Requirements (Involuntary Resettlement) ......................................................... 66
   7.4.2 OP 4.10 Requirements (Indigenous Peoples) ................................................................. 67
7.5 COMPARISON OF REQUIREMENTS OF GOB AND WB .................................................. 68
7.6 ADDRESSING WORLD BANK SAFEGUARD POLICIES .................................................... 69

8 SOCIAL MANAGEMENT PROCESS ....................................................................................... 71

8.1 GENERAL ............................................................................................................................. 71
8.2 STAGES IN PROJECT DEVELOPMENT ............................................................................ 71
8.3 FLOWCHART FOR SMF ..................................................................................................... 72
8.4 SOCIAL COMPLIANCE MATRIX ....................................................................................... 73
8.5 SOCIAL SCREENING ........................................................................................................... 76
8.6 PUBLIC INFORMATION CAMPAIGN AND CONSULTATION ............................................. 76
   8.6.1 Involvement of the Host Populations .......................................................................... 77
   8.6.2 Formal Consultation Process ..................................................................................... 77
   8.6.3 Informal Consultation Process ................................................................................... 77
8.7 RECORD OF CONSULTATION ......................................................................................... 77
8.8 SOCIAL IMPACT ASSESSMENT (SIA) ................................................................................ 78
   8.8.1 Identifying Social Impact Assessment Variables ........................................................ 78
   8.8.2 Combining Social Impact Assessment Variables, Project Stage, and Setting ............. 80
   8.8.3 Steps in the Social Impact Assessment Process ......................................................... 80
8.9 IDENTIFICATION OF IMPACT .......................................................................................... 84
8.10 IMPACT MITIGATION ....................................................................................................... 86
8.11 LAND ACQUISITION FOR PROJECTS .............................................................................. 86
   8.11.1 Steps in Land Acquisition ........................................................................................ 88
8.12 RESETTLEMENT ACTION PLAN (RAP) ............................................................................ 88
   8.12.1 Land Acquisition Plan .............................................................................................. 88
   8.12.2 Resettlement Types .................................................................................................. 88
   8.12.3 Resettlement Action Plan (RAP) Preparation ............................................................. 92
   8.12.4 Abbreviated Resettlement Plan ................................................................................. 97
8.13 INDIGENOUS PEOPLES DEVELOPMENT PLAN (IPDP) .................................................... 98
9 OPERATIONAL MANUAL.................................................................................. 100

9.1 SEQUENCE OF TASKS OF THE ESMF IN DIFFERENT PHASES OF BEZA PROJECT ....... 100
  9.1.1 Pre-Construction Phase Activities ................................................................. 102
  9.1.2 Criteria For Site Clearance Of Projects/Industries............................................. 106
  9.1.3 Procedure for Issuing Environmental Clearance Certificate .................................. 107
  9.1.4 Land Acquisition Phase ................................................................................. 107
  9.1.5 Construction Phase ....................................................................................... 108
  9.1.6 Post-Construction Operation Phase .................................................................. 108

9.2 INSTITUTIONAL FRAMEWORK FOR ESMF IMPLEMENTATION .................................. 108
  9.2.1 Environment and Social Cell (ESC) of BEZA ..................................................... 108
  9.2.2 The Project Management Unit (PMU) in Sub-project .......................................... 108
  9.2.3 Project Environmental and Social Cell (PESC) under sub-project ....................... 109
  9.2.4 Resettlement Unit (RU) under PESC ............................................................... 110

9.3 ESMF IMPLEMENTATION BUDGET ................................................................. 110

9.4 MONITORING OF ESMF .................................................................................. 110
  9.4.1 Construction Phase Monitoring ......................................................................... 111
  9.4.2 Operational Phase Monitoring .......................................................................... 111
  9.4.3 Monitoring Plan ............................................................................................... 112

9.5 ESMF AUDITING FRAMEWORK ...................................................................... 112

9.6 PERIODIC REPORTING ON ESMF .................................................................... 113

ANNEXURE

Annexure – 1 : Environmental Sensitive Areas

Annexure – 2 : A Sample Table of Content for Resettlement Action Plan

Annexure -3 : Sample Environmental Management Plan (EMP)
### ACRONYMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AB</td>
<td>Acquiring Body</td>
</tr>
<tr>
<td>AH</td>
<td>Affected household</td>
</tr>
<tr>
<td>APO</td>
<td>Annual Plan Operation</td>
</tr>
<tr>
<td>BEZA</td>
<td>Bangladesh Economic Zones Authority</td>
</tr>
<tr>
<td>BECA</td>
<td>Bangladesh Environment Conservation Act</td>
</tr>
<tr>
<td>BMP</td>
<td>Best Management Practices</td>
</tr>
<tr>
<td>BP</td>
<td>Bank Procedures</td>
</tr>
<tr>
<td>CCL</td>
<td>Cash Compensation under Law</td>
</tr>
<tr>
<td>CPR</td>
<td>Common Property Resources</td>
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<tr>
<td>CO</td>
<td>Carbon Monoxide</td>
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<tr>
<td>CUL</td>
<td>Compensation under Law</td>
</tr>
<tr>
<td>DCs</td>
<td>District Commissioners</td>
</tr>
<tr>
<td>DLAC</td>
<td>District Land Acquisition Committee</td>
</tr>
<tr>
<td>DoE</td>
<td>Department of Environment</td>
</tr>
<tr>
<td>EA</td>
<td>Executing Agency</td>
</tr>
<tr>
<td>EA</td>
<td>Environmental Assessment</td>
</tr>
<tr>
<td>ECA</td>
<td>Environment Conservation Act, 1995</td>
</tr>
<tr>
<td>ECC</td>
<td>Environmental Clearance Certificate</td>
</tr>
<tr>
<td>ECR</td>
<td>Environment Conservation Rules, 1997</td>
</tr>
<tr>
<td>EIA</td>
<td>Environmental Impact Assessment</td>
</tr>
<tr>
<td>EMP</td>
<td>Environmental Management Plan</td>
</tr>
<tr>
<td>EMMP</td>
<td>Environmental Mitigation and Management Plan</td>
</tr>
<tr>
<td>EP</td>
<td>Entitled Person</td>
</tr>
<tr>
<td>ERD</td>
<td>Economic Relations Division</td>
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<tr>
<td>ESA</td>
<td>Environmental and Social Assessment</td>
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<tr>
<td>ESMF</td>
<td>Environmental and Social Management Framework</td>
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<tr>
<td>ESMP</td>
<td>Environmental and Social Management Plan</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
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<td>--------------</td>
<td>--------------------------------------------------</td>
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<tr>
<td>RDP</td>
<td>Regional Development Plan</td>
</tr>
<tr>
<td>SES</td>
<td>Socioeconomic Survey</td>
</tr>
<tr>
<td>SCC</td>
<td>Site Clearance Certificate</td>
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<tr>
<td>SIA</td>
<td>Social Impact Assessment</td>
</tr>
<tr>
<td>SMP</td>
<td>Social Management Plan</td>
</tr>
<tr>
<td>SOx</td>
<td>Oxides of Sulphur</td>
</tr>
<tr>
<td>TA</td>
<td>Technical Assistance</td>
</tr>
<tr>
<td>WB</td>
<td>World Bank</td>
</tr>
<tr>
<td>WARPO</td>
<td>Water Resources Planning Organization</td>
</tr>
<tr>
<td>WQS</td>
<td>Water Quality Standard</td>
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Draft Environmental and Social Management Framework (ESMF) of BEZA
PART – A GENERAL

1 THE ESMF DOCUMENT

1.1 OVERVIEW OF ESMF

Environmental and Social Management Framework (ESMF) is a safeguard instrument which establishes a mechanism to determine and assess future potential environmental and social impacts of different projects and other activities associated with the projects regardless of funding agency. The framework sets out mitigation, monitoring and institutional measures to be taken during design, implementation and operation of the project activities to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels. This instrument has been prepared as a separate and stand-alone document to be used for BEZA project. This framework is a diagnostic tool to support decision-making but is not a substitute for decision making either at the strategic or detailed implementation levels.

It is important to recognize that the World Bank Operational Policies require that the Environmental and Social Assessments (ESA) of private sector projects, financed by IDA/Financial Intermediary Loan (FIL) institutions undergo the same rigorous treatment, as in case of regular public sector investment projects. However, it is practically unachievable. In public sector projects, the Bank is involved from the inception of the project and goes along in all the stages from project identification, feasibility study, tendering, evaluation, award of contract, financing and construction (from Stages 0 to 6, in the continuum of project development stages, as given in Bangladesh Private Sector Investment Guidelines, BPSIG 2004). But in Private Public Partnership (PPP) projects, the Bank comes in the project scene only at the time of financing (Stage 5). The Bank enters in the project life when much of the Environmental and Social Assessment (ESA) activities have been completed. As such it cannot control these activities and can only make a due diligence in the past activities, to ensure compliance.

For projects in which the World Bank/DFID finances are involved since the inception, all the WB requirements for environmental and social issues are to be followed. But in case where the sponsor purchases the land for the project through voluntary negotiations or the land has been acquired by the government earlier, all the Bank guidelines for land acquisition and
resettlement issues cannot be followed. In such cases the BEZA will take appropriate measure that may be possible at that stage. This matter has been discussed in detail, in the Operational Manual of this document.

1.2 STRUCTURE OF THE DOCUMENT

The ESMF is a large and an important document. It has been divided into four parts with total ten chapters for the convenience of the users of this document. Here, the ‘Environmental Management Framework’ and the ‘Social Management Framework’ are dealt separately, so that users can easily go through the both frameworks without any perplexity.

The four parts are named as,

1. Part A: General includes chapters 1, 2, 3 and 4.
2. Part B: Environmental Management Framework includes chapters 5, 6 and 7.
3. Part C: Social Management Framework includes chapters 8 and 9
4. Part D: Operational Manual includes chapter 10

The contents of these ten chapters are stated below.

i) Chapter One gives an overview of ESMF including its purpose, users and environmental and social assessment process.

ii) Chapter Two gives a brief idea on the BEZA including its objective, nature, components and the project cycle.

iii) Chapter Three gives a brief idea on BEZA projects management and its monitoring and auditing framework.

iv) Chapter Four discusses the capacity building and training needs and plans of the ESMF. This chapter also discusses the technical assistance required for capacity building implementation and ESMF implementation budget.

v) Chapter Five describes the relevant available environmental resources of Bangladesh, which are important for environmental management.

vi) Chapter Six provides the legal and institutional basis for establishing the environmental standards/guidelines for BEZA projects. It also includes the World Bank guidelines and the comparison between GoB and WB guidelines.

vii) Chapter Seven outlines the possible environmental impacts and their mitigation measures during pre-construction, construction and operation phases of the sub-projects.

viii) Chapter Eight provides the legal and institutional basis for establishing the social standards/guidelines for BEZA sub-projects. It also includes the World Bank
...guidelines and the comparison between GoB and WB guideline

ix) Chapter Nine gives a brief idea on social management process, relating their risk to their management, and impact identification and mitigation measures, including land acquisition and resettlement issues for BEZA sub-projects.

x) Chapter Ten gives an operational manual including sub project implementation arrangements; and management plans.

1.3 METHODOLOGY

The following steps were followed in the methodology for preparation of this ESMF document. The whole report preparation consists of following seven steps.

1. Review the Existing Laws, Rules and Guideline
2. Secondary Literature review
3. Selection of stakeholders
4. Consultation with experts and stakeholders
5. Compilation and analysis of information
6. Preparation of Draft Final Report
7. Preparation of the Final Report incorporating the comments of concerned agencies on Draft Final Report

These steps are detailed in the Flowchart shown on the following page.
Before preparing ESMF it is necessary to go through the existing laws, Rules and Guidelines carefully.

A number of ESMF documents of different organizations both local and international are studied for clear understanding on ESMF. Policy guidelines of World Bank are also studied.

As ESMF is prepared for Bangladesh context, both Social and Environmental Specialist and stakeholders are selected for their valuable advices.

After that, a consultation is held with the selected experts and stakeholders.

As information is collected from both primary and secondary sources, all information is organized for further analysis.

After all the above stages, a draft report is prepared and is sent to World Bank and BEZA for their comments.

After considering all the comments of World Bank and BEZA, a final report was prepared.

Fig 1. 1 : Methodology of Preparing ESMF
1.4 OBJECTIVE OF ESMF

The objective of this Environmental and Social Management Framework (ESMF) is to ensure that adverse environmental and social impacts are avoided or appropriately mitigated and compensated for. The ESMF is based on the World Bank’s environmental and social safeguard policies as well as GOB policies. A key principle is to prevent and mitigate any harm to the environment and to people by incorporating environmental and social concerns as an intrinsic part of project cycle management. Environmental and social issues will be tracked during all stages of the sub-project cycle to ensure that supported activities comply with the policies and guidelines laid out in the ESMF.

More specifically the objectives of the ESMF are:

- To outline a framework for environmental and social screening/assessment procedures and methodologies for the projects to be financed under the project in accordance to the GOB and World Bank Safeguard policies/rules;
- To specify appropriate roles and responsibilities to carryout environmental and social screening/assessment, monitoring and reporting related to projects;

This will also cover institutional/ organizational needs of BEZA to implement the recommendations to mitigate any possible environmental negative impacts and social conflicts.

1.5 PURPOSE ESMF

The Environment and Social Management Framework (ESMF) details the agreed policies, guidelines, and procedures to be integrated into the implementation of BEZA projects. The main purposes of the ESMF are,

- To understand the process of undertaking ESAs for BEZA projects, which are usually PPP projects
- To establish clear procedures and methodologies for the environmental and social assessment, review, approval and implementation of investments to be financed under the project;
- To specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to project investments;
- To determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF;
- To provide practical information, resources for implementing the ESMF.
As a detailed guide on principles and procedures for incorporating environmental and social issues into project preparation, the ESMF would be a useful reference to potential project sponsors and other financing agencies likely to participate in future stage of an BEZA projects.

1.6 USERS OF ESMF

As a core policy and procedural document for the BEZA projects, the ESMF is designed for use by the following actors:

- **BEZA/BEZA Project Staff**: As a document enshrining operating principles and guidelines to ensure that projects are adequately assessed to ensure compliance with environmental and social standards.

- **Project Sponsor**: As a document that spells out requirements with respect to environmental and social issues that need to be met, for obtaining finances for BEZA project.

- **Project Associates** (PMO, BEZA, ERD, other shareholders, consultants, Developer, etc.): As a document that explains the compliance requirements for environmental and social requirements for projects that receive financing for BEZA projects.

- **Other relevant government agencies, including DOE, for reference.**
CHAPTER 2 : ABOUT BEZA

2 BANGLADESH ECONOMIC ZONES AUTHORITY (BEZA)

2.1 BACKGROUND OF BEZA

Even after the global financial crisis and global food price shock, Bangladesh achieved sustained annual GDP growth of approximately 6.3% during Financial Year 2009-2013 period. This growth was underpinned by stable macro-economic and prudent monetary policies, rising industry and service outputs and continued high level of remittance. Going forward, the objective of the Government of Bangladesh (GoB) is to develop a growth trajectory that will support an overall increase in the real GDP growth to 8% per annum and reduce poverty from 26% to 15% by 2021.

The uninterrupted growth in Bangladesh’s labour force of nearly 2 million a year is an asset that nevertheless increases the country’s vulnerability. Creating productive employment will largely depend on creating an environment conducive to private sector investment, particularly for establishing labour-intensive manufacturing and service industries.

The Government of Bangladesh (GoB) has successfully provided tailored infrastructure services and a business environment through the operation of the Export Processing Zones (EPZs). The Bangladesh Export Processing Zone Authority (BEPZA) was established in 1980. The EPZ Program was the first systematic initiative to provide fully-serviced land and a better business environment for investors, targeting establishment of large-scale export-oriented manufacturing industries in the country.

But, the hard fact remains that, Bangladesh’s EPZ Model has its limitations, both in terms of generating cumulative positive impact and in terms of creating spill-over to the domestic economy. As an exporting enclave, EPZs have provided little in the way of creating linkage effects in the domestic economy, both up-stream and down-stream, resulting in low technology and spill-over, which accompany foreign investment. Investments in other sectors beyond the low capital investment – oriented RMG segment have also not materialized.
The Government’s objective is, therefore, to maximize potential direct and indirect impacts through a more modern, generalized regime for Economic Zones (EZs). The Government has launched an effort to establish a new EZ paradigm for Bangladesh drawing vastly on successful examples from around the world, as well as Bangladesh’s positive experience with the EPZ model. The expectation is that, more spill-over will be harnessed by local firms from foreign direct investment and as such, additional investment will be encouraged within value chains, more local products will be procured and better linkages will be established between firms and educational institutions. A faster adaptation to international environmental and social practises in the private sector would also be encouraged through the new EZ policy.

The new EZ regime provides for a new approach, both in management and in investment. The policy allows the Government to develop and pilot an approach that is less reliant on Government subsidies, while leveraging comparative advantages and private sector capability wherever possible.

The Economic Zone Act was passed in the Parliament in August 2010, providing the overall framework for establishing EZs all over Bangladesh.

2.2 BEZA ORGANOGRAM:
Bangladesh Economic Zones Authority (BEZA) has been emerged by the Bangladesh Economic Zones Act, 2010, the Bangladesh Economic Zones Authority (BEZA) was officially instituted by the government on 9 November 2010.

BEZA aims to establish economic zones in all potential areas in Bangladesh including backward and underdeveloped regions with a view to encouraging rapid economic development through increase and diversification of industry, employment, production and export’.

BEZA is attached with the Prime Minister’s Office (PMO) and is mandated to establish, license, operate, manage and control economic zones in Bangladesh.

BEZA is governed by a 3-level management structure:

- Governing Board
- Executive Board
- BEZA office/Secretariat
The Governing Board is the highest body that undertakes overall policy decisions. It is headed by the Honorable Prime Minister with top-level representations from Ministries or Divisions of Industries, Commerce, Finance, Planning, Science and Information and Communication Technology, Power, Energy and Mineral Resources, Communications, Labour and Employment, Environment and Forests, Agriculture, Posts and Telecommunications, Foreign Affairs, Home, Shipping, and the Prime Minister's Office including the apex chambers and private sector.

The Executive Board consisting of an Executive Chairman (as Chief Executive) and 3 Executive members to oversee day to day operation of BEZA. The Executive Board exercises all powers and performs all functions as may be exercised and performed by the Authority.

The BEZA Office/Secretariat performs all day to day activities as guided by the Executive Board. BEZA has an approved staff strength of 72 officers and staff.

2.3 BEZA SERVICES

BEZA is mandated to establish, license, operate, manage and control economic zones in Bangladesh.

- EZ Development License
- EZ Operation License
- EZ Investor License
- EZ one window services

General duties and functions of BEZA as per Bangladesh Economic Zones Act, 2010 (Section 19) are as below:

1. to **identify and select** sites for industrial or similar sectors on availability of local resources including infrastructure, roads and communications, travel and banking facilities and skilled man-power for ensuring efficient utilization of land in the light of clustering principles;

2. to **acquire land for economic zones** identified by own initiative or public-private partnership and take possession of the acquired land on behalf of the Government;

3. to **appoint economic zone developer** on competitive basis to develop and manage the acquired land and different type of infrastructure thereof;
4. to **prepare infrastructure development plans** of economic zones for implementation and management of own establishment and submit it to the Governing Board for approval;

5. to **allot or lease or rent of land, building or site**, on competitive commercial basis in prescribed manner, to investors applied for establishing industrial units, businesses and service providers in economic zones for implementation and management of their establishment;

6. to **ensure infrastructure development of economic zones** within specified period through monitoring of activities of its own and of economic zone developers;

7. to **create opportunities for employment** through establishing backward linkage industries within or outside economic zones by promoting local and foreign investment including development of skilled labour force;

8. to **ensure efficient use of land** in the light of clustering principles by dividing the land based on infrastructure and on availability of local resources to provide a conducive environment and facilities within economic zones;

9. to **encourage more efficient management** and monitor programs for implementing commitments on environment and other matters;

10. to **take steps to establish backward linkage industries** in economic zones to meet the requirements of local economy;

11. to **encourage business organizations to relocate polluting and unplanned industries** from metropolitan cities through establishing separate economic zones for different industries;

12. to **encourage public-private partnership** in the development and operation of economic zones;

13. to take necessary steps to **implement social and economic commitments**;

14. to **establish the due rights of workers**, to ensure their welfare and to establish conducive relationships between owners and workers;

15. to take appropriate **steps to implement poverty reduction program**;

16. to **expedite implementation of industrial policy** of the country by promoting planned industrialization of the thrust manufacturing and service sectors; and

17. to **convert** the areas declared as **economic zones into economic centers** by developing industrial cities, agro-based industrial zones, trade zones and tourism zones through investment of banking sectors and to facilitate availability of skilled labour and efficient service provisions.
2.4 OBJECTIVE OF BEZA
Against the backdrop of the above scenario, the objective of the Project is to attract and leverage private investment in the development of the Economic Zones. These investors will act as the Zone developers or operators and in the provision of tailored infrastructure services, such as private provision of power, effluent treatment, etc. selected on a Public-Private Partnership (PPP) basis.

2.5 ENVIRONMENTAL AND SOCIAL ASSESSMENT PROCESS
The ESMF will establish a unified process for addressing all the environmental and social safeguard issues. It will help to systematically identify, predict, and evaluate beneficial and adverse environmental and social impacts of development activities, designing enhancement measures for beneficial impacts, and implement mitigation measures for the adverse impacts. Tab 1.1 describes the steps in environmental and social assessment process at different stages of a project cycle.

2.6 Table 3. 1: Steps in the Environmental and Social Assessment Process

<table>
<thead>
<tr>
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<th>EIA and SIA Steps in indifferent Stages of Project Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Project Identification &amp; Pre-Feasibility Studies (Pre-Construction) Phase</td>
</tr>
<tr>
<td>1.</td>
<td>Environmental and Social screening</td>
</tr>
<tr>
<td>2.</td>
<td>Social performance frameworks for projects not requiring specific resettlement and land acquisition studies</td>
</tr>
<tr>
<td>B</td>
<td>Project Design Phase</td>
</tr>
<tr>
<td>3.</td>
<td>Initial Environmental Examination (IEE): assess environmental impacts to determine if EIA is required; its recommendations are incorporated into the project design.</td>
</tr>
<tr>
<td>4.</td>
<td>Scoping: identify significant potential impacts and project alternatives, and propose terms of reference for the EIA and SIA.</td>
</tr>
<tr>
<td>5.</td>
<td>Baseline Data Collection, as part of SIA: identify current environmental and socio-economic conditions without the project and update it during the project in accordance with changes in the project.</td>
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<tr>
<td>6.</td>
<td>Public consultation and participation of stakeholders of different level at various stages in the assessment process to ensure quality, comprehensiveness and effectiveness, and that stakeholders’ views are adequately addressed.</td>
</tr>
<tr>
<td>7.</td>
<td>Prepare EIA Report and SIA Report: summarizes all information obtained, analyzed and interpreted in a report form; should contain a non-technical summary including methods used, results, interpretations and conclusions. The report should also include recommendations for mitigation of negative impacts, enhanced opportunities and relevant policy and regulatory actions. The report should be shared with stakeholders participating in the consultation process and affected by the recommendations and time for feedback should be allowed.</td>
</tr>
<tr>
<td>8.</td>
<td>Prepare Environmental and Social Management Plan (ESMF) of the project to determine specific actions to be taken during the designing of the project that</td>
</tr>
</tbody>
</table>
## EIA and SIA Steps in indifferent Stages of Project Cycle

<table>
<thead>
<tr>
<th>EIA and SIA Steps in Project Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>includes plans for land acquisition, engineering design and construction stages to minimize or mitigate adverse environmental and social impacts.</td>
</tr>
<tr>
<td>9. Preparation of Resettlement Action Plan (RAP) and Indigenous People’s Development Plan (IPDP) on the basis of SIA and update them in accordance with changes in the project requiring land acquisition.</td>
</tr>
<tr>
<td>10. Design mitigation measures: to avoid, reduce and minimize adverse environmental and social impacts and enhance beneficial impacts.</td>
</tr>
</tbody>
</table>

### C Project Appraisal/Approval (Financing) Phase

<table>
<thead>
<tr>
<th>Project Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Review and Approval of EIA and SIA Report: review report to assess if all issues have been adequately addressed and to facilitate the decision-making process; decide if project should proceed, or if further alternatives must be examined.</td>
</tr>
</tbody>
</table>

### D Construction Phase

<table>
<thead>
<tr>
<th>Construction Phase Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Implementation of Environmental Management Plan (EMP) and RAP to address adverse environmental and social impacts and update it in accordance with changes in the project</td>
</tr>
<tr>
<td>13. Environmental and Social Monitoring: determines compliance with ESMF</td>
</tr>
<tr>
<td>14. Mid-term independent evaluation to assess the continued relevance of the mitigation plans and need for any alterations based on actual developments during the construction phase</td>
</tr>
</tbody>
</table>

### E Post-Construction Phase

<table>
<thead>
<tr>
<th>Post-Construction Phase Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. Environmental and social Audit: As per the recommendations of EIA and SIA study.</td>
</tr>
<tr>
<td>16. Regular monitoring arrangements to record and evaluate progress against initial plans and potential new challenges and opportunities.</td>
</tr>
</tbody>
</table>

## 2.6 PROJECTS REPORTING UNDER BEZA

BEZA will maintain a computerized financial management, accounting, disbursement and reporting system for the project in accordance with generally accepted accounting principles and practices. The accounts and records will be capable of disclosing a true and fair view of the financial position and of facilitating progress monitoring. BEZA will prepare quarterly and annual accounts and generate quarterly reports, to ensure consistency with World Bank’s requirements under OP/BO 10.02.

Annual financial statements will be audited by Foreign Aided Project Audit Directorate. Internal controls will include a separate Project Audit Committee, proper segregation of functional responsibilities, signing of checks, verification of procurement proposals, monthly reconciliation of bank accounts, and regular detailed reporting. Assess whether procurement have been made as per procurement plan.
2.7 ANNUAL REVIEWS FOR BEZA

The scope of work and its procedures for implementation of the subprojects will be reviewed periodically (annual/ every two years). It is expected that these reviews will be carried out by an authorized person or a group of persons not involved in the subproject implementation. The purpose of the reviews is two-fold:

- to assess compliance with ESMF procedures, learn lessons, and improve future ESMF performance; and
- to assess the occurrence of, and potential for, cumulative impacts due to project-funded and other development activities.

The third-party annual reviews will be a principal source of information to project management for improving performance, and to the World Bank supervision missions. Thus, they should be undertaken after the annual report has been prepared and should be available for Bank supervision of the Project.
3 CAPACITY BUILDING

3.1 CAPACITY BUILDING, TRAINING ON ESMF
The environmental sustainability of the BEZA that involve funding of multiple, small-scale subprojects is highly dependent on the capacity of implementing agencies to carry out the associated design, planning, approval and implementation work. Thus, to ensure that capacity, it is vital that that BEZA allocates sufficient resources to training and capacity building.

3.2 INSTITUTIONAL CAPACITY ASSESSMENT
An understanding of the institutional needs for implementing the ESMF includes a review of the authority and capability of institutions at different levels, and their capacity to manage and monitor ESMF implementation. The capacity building assessment and the plan should include:

- 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 ESMF responsibilities;
- resources to support staff in their work; and
- knowledge and experience relevant to carrying out environmental analyses and designing mitigation measures for infrastructure.

The BEZA has limited institutional capacity to implement the ESMF. The expert personnel/consultant may be utilized to conduct awareness-building type training for BEZA and private investors those who would be involved in the implementation process. Although general awareness on environmental issues exists among BEZA staff, focused training and capacity building would enhance the ESMF implementation capacity substantially on their part.

3.3 CAPACITY BUILDING
All environmental assessments (EAs) that will be carried out (and cleared by the Bank) for all projects in the BEZA pipeline (e.g. Development project, Zones, renewable energy and energy savings investments, bridges, ports, Power, container terminals, water treatment plants, and waste disposal projects) along with detailed surveys and designs must be in accordance with the ESMF. Internal capacity in the BEZA is limited in respect of the management of environmental and social issues. As such a program of capacity building for BEZA will be put in place to ensure that, over time, capacity to conduct due diligence on
social and environmental aspects of infrastructure projects on PPP basis is built.
BEZA project envisages capacity building to BEZA to ensure that the ESMF is effectively operationalized. The BEZA project personnel will be exposed to formal training in the management of environmental and social issues. The training program for various role players will include

- an orientation program on the ESMF,
- Environmental Assessment Processes,
- Environmental Management Plan
- Social Impact Assessment (SIA), Resettlement Action Plan (RAP), Indigenous People Development Plan (IPDP)
- Project Management.

The ESMF will help improve the effectiveness in the management of environmental and social impacts during planning, implementation and operation of proposed investments. Capacity building will enhance the projects’ ESMF management capacity by allowing real application of the critical practices such as the following:

(a) Basic practices: screening impacts, scoping assessments, planning mitigation options, public consultation to assess feasibility and acceptability options;
(b) 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;
(c) 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;

3.4 TRAINING NEEDS AND PLANS

A plan is to be designed for a comprehensive training programme that aims at enhancing capacity of relevant implementing agencies. The technical advisory services firm and any other consultant will play the key role in the initial phase in conducting the trainings. A panel of experts will be developed so that suitable expert/s can be chosen from a list as a resource person for providing training, as and when required for a particular training event. The objectives of the training under the ESMF are to:

(a) to identify, prepare, implement and manage the environmental and social aspects of their projects;
(b) ensure that investors have the capacity to assist in preparing sub-project proposals, mitigation plans and
(c) Ensure that BEZA have the capacity to appraise, approve and supervise the implementation of subprojects; and training plans will be prepared accordingly.

Different groups involved in BEZA project implementation have different training needs in terms of raised awareness, sensitization to the issues, and detailed technical training:

3.5 TECHNICAL ASSISTANCE FOR CAPACITY BUILDING IMPLEMENTATION

The capacity building and training constitute a separate component of BEZA and adequate resources for this component should be allocated to ensure effective implementation of the ESMF. The resources are needed to implement the following items.

- Institutional development activities
- The training program for BEZA, who will directly involve in the planning, design and implementation of the project to implement the ESMF
- to understand and appreciate the ESMF requirements,
- to prepare and review the IEE/ EIA,
- to prepare and review EMP/ SMP,
- To understand, prepare and review RAP
- to monitor the implementation of the sub-project specific ESMFs
- Annual reviews and audits
4 GENERAL ENVIRONMENTAL MANAGEMENT

4.1 OVERVIEW
An Environmental Management Plan (EMP) is an implementation plan for mitigation, protection and/or enhancement measures, which are recommended in the EIA. It details:

(a) The measures to be taken during the implementation and operation of a project to eliminate or offset adverse environmental impacts, or to reduce them to acceptable level.

(b) The actions needed to implement these measures.

EMP documents key elements of environmental management including the environmental policy, responsibilities, applicable standard operating procedures and best management practices (BMP), record keeping, reports, communication, training, monitoring, and corrective action. It features the “PLAN, DO, CHECK, ACT” model for future and ongoing improvement of environment.

<table>
<thead>
<tr>
<th>Plan</th>
<th>Planning, including identifying environmental impacts and establishing environmental goals.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do</td>
<td>Implementing, including employee training and establishing operational controls.</td>
</tr>
<tr>
<td>Check</td>
<td>Checking, including auditing, monitoring and taking corrective action.</td>
</tr>
<tr>
<td>Act</td>
<td>Reviewing, including progress reviews and taking action to make needed changed to the EMP.</td>
</tr>
</tbody>
</table>

Before preparing Environmental Management Plan, it is necessary to get a brief idea on available environmental resources of Bangladesh.

4.2 TARGET AREAS OF ENVIRONMENTAL MANAGEMENT
The BEZA projects are expected to be located all over Bangladesh. Therefore, it is necessary to keep in mind the general variation in the environmental conditions expected in different parts of the country. A brief description of the important environmental resources and issues are discussed in this section.

4.2.1 Physiographic and Land Use Pattern
Bangladesh is located between 20°34′ and 26°38′ N, and 88°01′ and 92°41′ E. The area of the country is 1,47,570 square km with a coastline of about 700 km in length. Land
boundaries with India 4,053 km and 193 km with Myanmar. The land is flat to the extent of about 80% intersected by numerous rivers and their distributaries. The rest 20% of the area consists of uplands (~8%) and hill areas (~12%). The hill areas consist of Chittagong Hill Tracts, hill ranges of northeastern Sylhet and hills along the narrow strip of Sylhet and Mymensingh Districts.

Most of the land is used for agriculture. Land use is generally classified into five categories as agricultural, forest, cultivable waste, current fallow and as ‘not available for cultivation’. The category of ‘not available for cultivation’ consists of mainly of urban, rural settlements and industrial land.

4.2.2 Hydrology
Bangladesh is characterized by an exceptional hydro-geographical setting. It is one of the largest deltas in the world and is crisscrossed by numerous rivers, their tributaries and distributaries. There are about 700 rivers, canals, and streams in Bangladesh, with a total length of approximately 22,155 km, which occupy a riverine area of about 9,384 sq km. A vast amount of water flows through Bangladesh mostly during June-October. The rivers of Bangladesh also carry huge amounts of sediment, an estimated 24 billion tons/year. The ultimate result is additional new land in some places due to accretion, forming islands called chars, and loss of land in some other places due to erosion.

Hydrology of a given area is extremely important for any sub-project, which may have impact upon water bodies. Impact on water flow by any subproject should be carefully considered in subproject planning.

4.2.3 Ground Water
Groundwater is a vital natural resource for the reliable and economic provision of potable water supply in both the urban and rural environment. Presently about 80% of the people in rural Bangladesh depend on groundwater for drinking. Urban water supply is also largely dependent on groundwater. Until the emergence of the Arsenic problem, groundwater was hailed for providing the access to clean drinking water in Bangladesh.

Groundwater in Bangladesh occurs at a very shallow depth where the recent river-borne sediments form prolific aquifers in the floodplains. The main component of discharge is the withdrawal of groundwater by different types of tube wells. A minor component of discharge is natural flow towards lower gradient. The groundwater level is at or very close to the surface during the monsoon whereas it is at maximum depth during the months of April and May. Because of uneven distribution of water resources, dry season demand for water in Bangladesh is mainly met by groundwater.
4.2.4 Ecology
The most important terrestrial ecosystem in Bangladesh is forest. The total land under forest in Bangladesh is about 2.56 million ha. A significant part of the existing forest area is designated as State Forest; most of this land is actually barren of tree vegetation.
Again, Bangladesh has an enormous area of seasonal wetland. In fact, half of the country could be delineated as such. The area under perennial wetlands is much smaller and is principally permanent rivers and streams, shallow freshwater lakes and marshes, fish ponds and estuarine systems in the extensive mangrove swamps.
Wetland resources are crucial to the environment of Bangladesh. Both perennial and seasonal wetlands provide habitats to a large variety of flora and fauna. Wetlands also provide subsistence for a significant proportion of the population through their fishery resources. But the wetlands of Bangladesh are being drastically affected by the impacts of the increasing human population. The wetlands are being lost to flood control, drainage and irrigation development. Severe erosion in the catchments areas is causing increased siltation, and having major impacts on the key wetland areas.

4.2.5 Climate
Bangladesh has a subtropical monsoon climate characterized by wide seasonal variations in rainfall, moderately warm temperatures, and high humidity. Regional climatic differences in this flat country are minor. Three seasons are generally recognized: a hot, humid summer from March to June; a cool, rainy monsoon season from June to October; and a cool, dry winter from October to March. Heavy rainfall is characteristic of Bangladesh. About 80% rainfall occurs during the monsoon season. The monsoons result from the contrasts between low and high air pressure areas that result from differential heating of land and water.

4.2.6 Environmentally and Ecologically Sensitive Areas
Environmentally sensitive areas are those having significant value in their natural state, or having socio-cultural significance or sensitivity. Cultural or historical sites and densely populated urban centers are examples of the later category. Ecologically Sensitive Areas can be defined as areas that may contain unique features, maintain key natural processes, support endangered, endemic or threatened plants or animals and their habitats, or provide important breeding areas for wildlife.
In sensitive areas, environmental and ecological impacts tend to be more severe than elsewhere, and therefore, extra precautions must be taken to avoid significant environmental impacts. In many cases, this will mean extra investments in mitigation measures, while in some cases these areas will simply have to be avoided, resulting, for example, in the
abandonment of a subproject or there-alignment of a section of road. The list of ecologically critical areas declared by DoE is attached in Annex 5.1

4.2.7 Natural Resources

Bangladesh constitutes the eastern two-thirds of the Ganges-Brahmaputra deltaic plain, which stretches northward from the Bay of Bengal. Except for the small, jungle Barind and Machupur tracts, to the northwest and north, the plain is a flat surface of recent alluvium with an elevation less then 30 feet above sea level. In the northeast and southeast the alluvial Sylhet and Chittagong Hills Plains are constituted by ridges running north-south that form part of the mountain divides with Mynamar and India. Bangladesh is fringed on the south by a huge expanse of marshy delta forest.

There are three main categories of soil in Bangladesh: old alluvial soil, recent alluvial soil, and hill soil. The fertile, recent alluvial soils, found mainly in flooded areas, are usually pale brown, sandy, high in mica, and chalky clays and loams. They are deficient in phosphoric acid, nitrogen, and humus but not in potash and lime. The old alluvial soils in the Barind and Madhupur jungles are dark brown clays and loams, they are sticky during the rainy season and hard during the dry. The hill soils are generally permeable and can support dense forest growth. (Source: Encyclopedia Britannica, 2008)

The Sundarbans - the largest continuous block of mangrove forest in the world - covers an area of 5,770 sq. km of land and water. It is a part of the world's largest delta, which is formed from sediments deposited by the Ganges and Brahmaputra rivers that converge on the Bengal basin. The western part of the forest lies in India and the rest (about 60 percent) in Bangladesh. About one third of the forest is covered by rivers and tidal creeks varying in width from a few to 5 kilometers. All parts of the Sundarbans forest are subject to tidal inundation during spring tides. The Bangladesh part of the forest is dominated by a high mangrove forest cover. The climate is mainly tropical maritime with lots of rain, most of which falls during the monsoon. The monsoon season (May – October) is hot and humid, while winter (October – February) is mild and dry. During January temperatures can fall as low as 4°C.

4.2.8 Water Resources

Rivers in Bangladesh are subject to constant, sometimes rapid changes of course which can affect the hydrology of a large region; consequently, no description of Bangladesh's topography retains its absolute accuracy for long. Each year between June and October the rivers overflow and flood the surrounding areas, and recede in November. Without the floods, the fertile silt deposits would not be replenished, but severe floods regularly damage
crops, ruin hamlets and sometimes take a heavy toll on human and animal populations. The rivers can be divided into five systems: (1) The Ganges, or Padma, and its deltaic streams, (2) the Meghna and the Surma river system, (3) the Jamuna and its adjoining channels, (4) the North Bengal rivers, and (5) the rivers of the Chittagong Hill Tracts and the adjoining plains. (Source: Encyclopedia Britannica, 2008)

### 4.2.9 Rainfall

Bangladesh has a typical monsoon climate characterized by rain-bearing winds, moderately warm temperatures, and high humidity. During the summer (April to September), maximum temperatures range between 91° and 96° F (33° and 36° C). April is the warmest month in most parts. January is the coolest month in the winter season, which lasts from about November to March. Bangladesh receives heavy rainfall; except for some parts in the west, it generally exceeds 60 inches (1,500 millimeters) annually. Large areas of the south, southeast, north, and northeast receive from 80 to 100 inches, and the northern and north-western parts of the Sylhet area receive from 150 to 200 inches. The maximum rainfall occurs during the monsoon period, from June to September or early October.

In the early summer (April and May) and late in the monsoon season (September to November), storms of very high intensity often occur; they may create winds with speeds of more than 100 miles per hour, piling up the waters of the Bay of Bengal to crests as high as 20 feet that crash with tremendous force onto the coastal areas and the offshore islands, causing heavy losses of life and property. The conditions of lowest atmospheric pressure occur in Bangladesh in June and July, the storm season. (Source: Encyclopedia Britannica, 2008)

### 4.2.10 Fisheries

In recent years, the fisheries and livestock sectors have been playing an increasingly important role in the economy of Bangladesh. It is a labor-intensive, and quick-yielding sector which augments growth and alleviates poverty. Around 1.3 million people are directly employed in the fisheries sector alone. The sector contributes 3.3 percent of the GDP and 10.33 percent of the agriculture sector. The sector includes open water bodies such as rivers, canals, lakes, and closed water bodies such as ponds and flood-control polders totaling 4 million hectares. Almost 80 percent of the country's protein requirement, around 70 percent of exports in the primary commodity category, and almost 9 percent of total exports come from this sub-sector. The sub-sector marked a continuous annual growth of 8.6 percent since 1996. This increase is due to both government and private initiatives (Government Statistics, 2012).
4.3 MAIN ENVIRONMENTAL CONCERNS

The key environmental concerns in Bangladesh include the following and special care needs to be taken for preparing an EMP:

- Flooding
- Drainage
- River bank erosion
- Surface water quality
- Seasonal fluctuations in ground water table
- Groundwater quality
- Arsenic Contamination of Aquifers
- Saline intrusion (coastal areas)
- Wetland deterioration
- Land degradation
- Ambient Air Pollution
- Indoor Air Pollution
- Forestry management
- Biodiversity conservation
- Fish and fisheries resource management
5 LEGAL AND INSTITUTIONAL FRAMEWORK (ENVIRONMENTAL)

5.1 OVERVIEW
The institutional and legal setting in Bangladesh provides the context within which the environmental assessment procedure for BEZA projects was developed. It is imperative that the project sponsors for BEZA projects are aware of and comply with the legal and institutional requirements of the GOB.

5.2 ENVIRONMENT RELATED POLICIES IN BANGLADESH
A wide range of laws and regulations related to social and environmental issues are effective in Bangladesh. Many of these are cross-sectoral and only partially related to environmental and social issues. The laws and regulations such as National Water Policy, 1999; Forest Act 1927 (modified up to 30th April 2000); National Forest Policy, 1994; National Conservation Strategy; National Environmental Management Action Plan (NEMAP); Environment Conservation Act 1995 (ECA 1995); Environmental Conservation Rules 1997; Environment Conservation (Amendment) Act (2002) and Draft Environment Conservation (Amendment) Act 2009; Costal Zone Policy, 2005; Costal Development Strategy, 2006; National Agricultural Policy, 1999; National Fisheries Policy, 1996; National Livestock Development Policy, 2007; Standing Orders on Disaster, 1999; Climate Change Strategy and Action Plan, 2009; National Plan for Disaster Management, 2008-2015; Acquisition And Requisition of Immovable Property Ordinance, 1982 and Other Legislation are considered here.
Some of the most important legislations that have implication with the project/sub-project/scheme activities:
- Bangladesh Environmental Conservation Act (ECA), 1995
- Environment Conservation Rules (ECR), 1997
- National Water policy, 1999
- National Fisheries Policy, 1996
- National Agricultural Policy, 1999
- National Livestock Development Policy, 2007
- Others
The most important of these are the Environment Conservation Act, 1995 (ECA, 1995), and the Environment Conservation Rules (ECR, 1997). The ECA 1995 is primarily an instrument for establishing the Department of Environment (DoE), and for controlling industrial pollution. The Act also defines in general terms that if any particular activity is causing damage to the eco-system, the person responsible will have to apply corrective measures. Until the appearance of ECR, 1997, enforcement of the Act was not possible, as many of the clauses refer to specifications spelled out in the Rules.

The following section will discuss the relevant policies, which regulate environmental management in Bangladesh and are also relevant to projects that may be financed by BEZA.

The relevant laws are,

1. National Environmental Policy, 1992

5.2.1 National Environmental Policy, 1992

The Bangladesh National Environmental Policy sets out the basic framework for environmental action together with a set of broad sectoral action guidelines. Key elements of the policy are:

- Maintenance of the ecological balance and overall progress and development of the country through protection and improvement of the environment;
- Protection of the country’s assets, properties and resources against natural disasters;
- Identification and regulation of all types of activities which pollute and degrade the environment;
- Ensuring sustainable utilization of all natural resources;
- Promoting active association with all environment related international initiatives.

The Environmental Policy requires the following specific actions with respect to the ‘Industrial’ sector:

- To phase in corrective measures in polluting industries;
- To conduct Environmental Impact Assessment (EIAs) for all new public and private industrial developments;
- To ban, or find environmentally sound alternatives for, the production of goods that cause environmental pollution; and
• To minimize waste and ensure sustainable use of resources by industry.

Under the National Environmental Policy, Department of Environment is directed to review and approve all Environmental Impact Assessments.

5.2.2 National Environmental Management Action Plan, 1995

The National Environmental Management Action plan (NEMAP) is a wide-ranging and multi-faceted plan, which builds on and extends the statements set out in the National Environmental Policy. NEMAP was developed to address issues and management requirements and set out the framework within which the recommendations of the National Conservation Strategy are to be implemented. NEMAP has the following broad objectives:

• Identification of key environmental issues affecting Bangladesh;
• Identification of actions necessary to halt or reduce the rate of environmental degradation;
• Improvement of the natural environment;
• Conservation of habitats and bio-diversity;
• Promotion of sustainable development; and
• Improvement of the quality of life of the people.

5.2.3 National Conservation Strategy, 1992

The National conservation strategy provides recommendations for sustainable development in the industrial sector as follows:

• All industries shall be subject to EIA and adoption of pollution prevention/control technologies shall be enforced;
• Hazardous or toxic materials/wastes shall not be imported as raw materials for industry;
• Import of appropriate and environmentally sound technology shall be ensured; and
• Dependence on imported technology and machinery should gradually be reduced in favor of sustainable local skills and resources.

5.2.4 National Water Policy, 2000

The National water policy recognizes that continued development and management of the nation’s water resources is essential and includes protection, restoration and preservation of the environment and biodiversity including wetlands, mangrove and other natural forests, endangered species and water quality. It also states objectives for all agencies and departments entrusted with water management in regards to their responsibilities for regulation, planning, construction, operation and maintenance. Pollution of surface and
ground water around various industrial centers from untreated effluent discharge into water courses is a critical water management issue. The Policy of the Government in this regard is that:

- Zoning regulations will be established for location of new industries in consideration of safe water availability and suitable effluent discharge possibilities;
- Effluent disposal will be monitored by relevant government agencies to prevent water pollution;
- Standards of effluent disposal into common watercourses will be set by Water Resources Planning Organization (WARPO) of the Ministry of Water Resources in consultation with DoE;
- Industrial polluters will be required by law to pay for remedial clean up of water bodies polluted by them.

5.2.5 National Water Management Plan, 2001

The National Water Management Plan addresses options for water quality, considerations behind measures to clean up industrial pollution, where effluent discharge monitoring and zoning regulations for new industries are emphasized.

5.3 RELEVANT LAWS AND REGULATIONS IN BANGLADESH

A large number of laws related to environmental issues, some dating back to 19th century exist in Bangladesh. The most important of these are the Environmental Conservation Act, 1995 (ECA 1995) and the Environmental Conservation Rules (under the ECA, 1995) 1997, (ECR 1997). Many of the other laws are cross sectoral and are only partially related to environmental issues.

Tab 0 presents an outline of the National legal instruments along with a list of key governmental institutions that have regulatory power over environmental aspects associated with the projects financed by BEZA.
Table 6.1 Environment Related Laws and Regulations

<table>
<thead>
<tr>
<th>Laws/ Regulations</th>
<th>Enforcing Agencies - Ministry/ Authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>The Environment Conservation Act, 1995 and subsequent amendments in 2000 and 2002</em></td>
<td><em>Department of Environment, Ministry of Environment and Forest</em></td>
</tr>
<tr>
<td>Regulated/ Enforced Items</td>
<td></td>
</tr>
<tr>
<td>Declaration of Ecologically Critical Areas;</td>
<td></td>
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<tr>
<td>Obtaining Environmental Clearance Certificate;</td>
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<tr>
<td>Regulation with respect to vehicles emitting smoke harmful for the environment;</td>
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<tr>
<td>Regulation of development activities from environmental perspective; Promulgation of standards for quality of air, water, noise, and soils for different areas and for different purposes;</td>
<td></td>
</tr>
<tr>
<td>Promulgation of acceptable limits for discharging and emitting waste;</td>
<td></td>
</tr>
<tr>
<td>Formulation of environmental guidelines relating to control and mitigation of environmental pollution, conservation and improvement of environment.</td>
<td></td>
</tr>
<tr>
<td>The Act is being implemented by Department of Environment (DoE). DoE is under the Ministry of Environment and Forest and is headed by a Director General (DG). The DG has complete control over the DoE. The power of DG, as given in the Act, may be outlined as follows:</td>
<td></td>
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<tr>
<td>The DG has the power to close down the activities considered harmful to human life or the environment. The operator DoEs have the right to appeal and procedures are in place for this. However, if the incident is considered an emergency, there is no opportunity for appeal.</td>
<td></td>
</tr>
<tr>
<td>- The DG has the power to declare an area affected by pollution as an ecologically critical area. The type of work or process which can take place in such an area is governed by DoE.</td>
<td></td>
</tr>
<tr>
<td>- Before going for any new development project, the project proponent must have to take Environmental Clearance from DoE. The procedures to take such clearance are in place.</td>
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</tr>
<tr>
<td>- Failure to comply with any part of ECA’95 may result in punishment by a maximum of 10 years imprisonment or a maximum fine of Tk. 1000,000 or both.</td>
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</table>
### Environment Conservation Rules, 1997 and subsequent amendments in 2002 and 2003

| Department of Environment, Ministry of Environment and Forest |
| --- | --- |
| **Regulated/ Enforced Items** |  |
| Declaration of ecologically critical Area; |  |
| Requirement of Environmental Clearance Certificate for various categories of projects; |  |
| Requirement for IEE/EIA according to the appropriate category of the project; Renewal of the environmental clearance certificate within 30 days after the expiry; |  |
| Provision of standards for quality of air, water & sound and acceptable limits for emission/discharges from vehicles and other sources. |  |
| This Rules describes details on: |  |
| **Green List** projects are considered relatively pollution-free. Examples of projects under this category are plantation, nursery, etc. |  |
| **Orange List** projects fall into two categories. Orange A projects are required to submit general information, a feasibility report, a process flow diagram and schematic diagrams of waste treatment facilities along with their application for obtaining DoE environmental clearance. Orange B projects are required to submit an Initial Environmental Examination (IEE) report, along with their application and the information and papers specified for Orange B projects. Examples of Orange A projects are installation of tube wells, pond sand filter (PSF), tank/reservoir, sanitary latrines etc. Example of Orange B projects are construction/re-construction of earthen roads, culverts, multipurpose community resource center, office building for GS, re-excavation of canal, repairing embankment, and raising school field, etc. |  |
| **Red List** projects are those which may cause ‘significant adverse’ environmental impacts and are, therefore, required to submit an EIA report. It should be noted that they may obtain an initial site clearance on the basis of an IEE report, and subsequently submit an EIA report for obtaining environmental clearance along with other necessary papers, like the feasibility study report, no objection from local authority. Examples of red list projects are construction of bridge, flood shelter, embankment, water control structure etc. |  |

### Environment Court Act, 2000 and subsequent amendments in 2002

<p>| Judiciary Ministry of Environment &amp; Forest |
| --- | --- |
| <strong>Regulated/ Enforced Items</strong> |  |
| GOB has given highest priority to environment pollution and passed ‘Environment Court Act, 2000’ for completing environment related legal proceedings effectively. |  |</p>
<table>
<thead>
<tr>
<th>Act/Regulation</th>
<th>Regulatory Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Vehicle Act, 1927 The Motor Vehicles Ordinance, 1983 The Bengal Motor Vehicle Rules, 1940</td>
<td>Bangladesh Road Transport Authority (BRTA)</td>
</tr>
<tr>
<td>Exhaust emission; Vehicular air and noise; Road safety; Licensing.</td>
<td></td>
</tr>
<tr>
<td>The Brick Burning (Control) Act, 1989 The Brick Burning (Control) Amendment Act, 1992</td>
<td>Ministry of Environment &amp; Forest</td>
</tr>
<tr>
<td>Control of brick burning requires a license from the MoEF; Restricts brick burning with fuel wood.</td>
<td></td>
</tr>
<tr>
<td>The Removal of Wrecks and Obstructions in inland Navigable Water Ways Rules 1973</td>
<td>Bangladesh Inland Water Transport Authority</td>
</tr>
<tr>
<td>Removal of wrecks and obstructions in inland Navigable Waterways.</td>
<td></td>
</tr>
<tr>
<td>Management and Control of water supply and sanitation in urban areas.</td>
<td></td>
</tr>
<tr>
<td>National Safe Drinking Water Supply and Sanitation Policy (NSDWSSP, 1998) was drafted in 1998, and 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:</td>
<td></td>
</tr>
<tr>
<td>To manage water supply and sanitation related basic needs for all.</td>
<td></td>
</tr>
<tr>
<td>To bring the positive change of peoples attitude, regarding water and sanitation.</td>
<td></td>
</tr>
<tr>
<td>To reduce the outbreak of water borne diseases.</td>
<td></td>
</tr>
<tr>
<td>To increase the efficiency of the Local Government and associated community for handling more effectively the problems related to water supply and sanitation.</td>
<td></td>
</tr>
<tr>
<td>To improve sustainable water supply and sanitation system.</td>
<td></td>
</tr>
<tr>
<td>To ascertain proper conservation, management and use of surface water and to control</td>
<td></td>
</tr>
</tbody>
</table>
water pollution due to the scarcity of underground water.

To take necessary steps to use and conserve rain water.

<table>
<thead>
<tr>
<th>The Ground Water Management Ordinance 1985</th>
<th>Upazila Parishad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulated/ Enforced Items</td>
<td>Management of ground water resources; Tube well shall not be installed in any place without the license granted by Upazila Parishad.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Forest Act, 1927 and subsequent amendments in 1982 and 1989</th>
<th>Ministry of Environment and Forest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulated/ Enforced Items</td>
<td>Reserve Forests; Protected Forests; Village Forests.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Private Forests Ordinance Act, 1959</th>
<th>Regional Forest Officer, Forest Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulated/ Enforced Items</td>
<td>Conservation of private forests and for the aforestation on wastelands.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bangladesh Wild Life (Preservation) Act, 1974</th>
<th>Ministry of Environment and Forest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulated/ Enforced Items</td>
<td>Bangladesh Wild Life Advisory Board</td>
</tr>
<tr>
<td></td>
<td>Preservation of Wildlife Sanctuaries, parks, reserves.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Protection and Conservation of Fish Act 1950 subsequent amendments in 1982</th>
<th>Ministry of Fishery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulated/ Enforced Items</td>
<td>Protection and Conservation of fishes in Government owned water bodies.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Natural Water Bodies Protection Act 2000</th>
<th>RAJUK/Town Development Authority/Municipalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulated/ Enforced Items</td>
<td>According to this Act, the character of water bodies i.e. rivers, canals, tanks, or floodplains identified as water bodies in the master plans or in the master plans formulated under the</td>
</tr>
</tbody>
</table>
laws establishing municipalities in division and district towns shall not be changed without approval of the concerned ministry.

<table>
<thead>
<tr>
<th>National Water Policy, 1999</th>
<th>Ministry of Water Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>The National Water Policy promulgated in 1999 with the intension of guiding both public and private actions in the future for ensuring optimal development and management of water that benefit both individuals and the society at large. The policy aims to ensure progress towards fulfilling national goals of economic developments, poverty alleviation, food security, public health and safety, decent standard of living for the people and protection of natural environment. According to the policy, all agencies and departments entrusted with water resource management responsibilities (regulation, planning, construction, operation, and maintenance) will have to enhance environmental amenities and ensure that environmental resources are protected and restored in executing their tasks. Environmental needs and objectives will be treated equally with the resources management needs. The policy has several clauses related to the protection and conservation 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 4.9d: Water bodies like baors, haors, beels, roadside borrow pits, etc. will, as far as possible, be reserved for fish production and development. Perennial links of these water bodies with the rivers will also be properly maintained. 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).</td>
<td></td>
</tr>
</tbody>
</table>
Clause 4.12b: Adhere to a formal environmental impact assessment (EIA) process, as set out in 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.

| The Embankment and Drainage Act 1952 | Ministry of Water Resources and FCD |

*Regulated/ Enforced Items*

An Act to consolidate the laws relating to embankment and drainage and to make better 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 and other damage by water.

| Standing Orders on Disaster, 1999 | Ministry of Disaster Management |

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.

| National Livestock Development Policy, 2007 | Ministry of Fisheries and Livestock |
The National Livestock Development Policy has been prepared to address the key challenges and opportunity for a comprehensive sustainable development of the Livestock subsector through creating an enabling policy framework. The policy recognizes that there are no guidelines for environmental protection and bio-security when establishing poultry farms. The use of antibiotics in feeds is thought to be common and a cause of public health concern. The policy recommends for developing and enforcing specific guidelines for establishing environment-friendly commercial poultry farms.

<table>
<thead>
<tr>
<th>National Agricultural Policy 1999</th>
<th>Ministry of Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>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 diversification and salt tolerant crop varieties. Irrigation from surface water will get priority and appropriate infrastructure will be built for capturing surface water from khals, beels and small rivers considering the water bodies as fish production systems.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>National Fisheries Policy, 1998</th>
<th>Ministry of Fisheries and Livestock</th>
</tr>
</thead>
</table>
| The National Fisheries Policy, 1998 recognizes that fish production has declined due to environmental imbalances, adverse environmental impact and improper implementation of fish culture and management programs. The policy suggests following actions:  
☐ To conserve fish habitats from damage, appropriate care should be taken during the implementation of all development activities such as flood control, irrigation and drainage projects, agriculture, industries, road and development projects.  
☐ Shrimp and fish culture will not be expanded to the areas which damage mangrove forest in the coastal region  
☐ Biodiversity will be maintained in all natural water bodies and in marine environment. Chemicals harmful to the environment will not be used in fish and shrimp farms  
☐ Harvest of fish and shrimp by the trawlers in the shallow coastal areas (within 40 meter depth) will be banned  
☐ Breeding ground of fish and fresh water giant prawn will be conserved  
☐ Environment friendly shrimp culture technology will be used  
☐ Control measures will be taken against activities that have a negative impact on fisheries. | |
5.4 ENVIRONMENTAL GUIDELINES FOR PROJECTS IN BANGLADESH

As pointed out earlier, the most important laws/rules in table 6.1 are the ECA 1995 and the ECR 1997. The ECA1995 is primarily an instrument for the Department of Environment (DoE) and for controlling industrial pollution. The ECR, 1997 was promulgated under ECA, 1995 to operationalize the enforcement of the Act. Depending on the extent of impact on the environment, industries the Department of Environment classifies all the projects in four categories. These are:

i) Green;
ii) Orange- A;
iii) Orange- B; and
iv) Red

5.4.1 Green Category

Projects, which do not have any negative impact on the environment, belong to Green category. For this category of projects, no Initial Environmental Examination (IEE) or Environmental Impact Assessment (EIA) is required. However, the project proponent will have to submit an application in a prescribed format to DOE for Site Clearance Certificate and Environmental Clearance Certificate.

Examples

- Bamboo and cane goods;
- Candle, watches etc. assembling and manufacturing; and
- Cork (excluding metallic item).

5.4.2 Orange A and B Category

Orange category includes those projects that produce such wastes that can produce moderate or significant impacts on environment but the impacts could be mitigated easily if proper action is undertaken. Depending on the nature and extent of impacts the projects under Orange category has been sub-divided into two sub-categories-Orange A and Orange B. The projects/industries likely to produce some wastes but those are not harmful for surrounding resources and vice-versa

Jobless youths will be trained on aquaculture and financial assistance will be provided for their post-training fish culture activities.

(Source: Different Laws and Regulation of GoB)
environment and can be managed easily are categorized under “Orange-A”.

Example
- Small hotel/restaurant business;
- Weaving factory;
- Handloom industry;

The “Orange-B” category projects/industries are those likely to produce adverse environmental impacts but not to any significant level and that the impacts can be easily mitigated with no residual adverse impacts.

Examples
- Mineral water, soft drink, etc., manufacturing and bottling;
- Processing of fish;
- Meat and other food items;

5.4.3 Red Category
This category includes industries, first requiring IEE for the purpose of obtaining site clearance, and then EIA, for obtaining environmental clearance. In this case also an application has to be made in a prescribed format along with an IEE report, on the basis of which site clearance may be granted with suitable conditions or the project may be rejected, on grounds of unsuitable location. If the site clearance is granted the project proponent can go ahead with implementation of the project subject to the conditions as may be stipulated while granting the site clearance.

Examples
- Port/Zone development including container terminals, island container depot etc.;
- Telecommunication systems, networks and services including information and communication technology (ICT); and
- Power generation, transmission, distribution and services.

5.5 INSTITUTIONAL ORGANIZATIONS

5.5.1 Department of Environment (DoE)
The primary institution for environmental management in Bangladesh is the Department of Environment (DoE), working under the Ministry of Environment and Forest (MoEF). The Department was created in 1989 to ensure sustainable development and to conserve and manage the environment of Bangladesh. The following Policy, Acts and Rules facilitate the activities of the Department
- Environment Policy, 1992;
• Environmental Conservation Act, 1995 and subsequent amendments in 2000 and 2002;
• Environmental Conservation Rules, 1997 and subsequent amendments in 2002 and 2003;
• Environment Court Act, 2000 and subsequent amendments in 2002

The principal activities of DoE are:
• Defining Environmental Impact Assessment (EIA) procedures and issuing environmental clearance permits - the latter being legal requirements before proposed projects can proceed to implementation stage;
• Providing advice or taking direct action to prevent degradation of the environment;
• Pollution control, including the monitoring of effluent sources and ensuring mitigation of environmental pollution;
• Setting the Water Quality Standard (WQS) for particular uses of water and for discharges to water bodies; and
• Declaring Ecologically Critical Areas (ECAs) where the ecosystem has been degraded to a critical state.

5.5.2 Department of Forest

The Department of Forest is responsible for sensitive area protection in four types of legally protected areas - wildlife sanctuaries, game reserves, reserved forests, and natural forests.

5.6 DOE REQUIREMENTS ON ENVIRONMENTAL ASPECTS

For any projects, the sponsor needs to obtain the clearance from the DOE in two stages:

a. Initial Stage: Site Clearance Certificate (SCC)
b. Advanced Stage: Environmental Clearance Certificate (ECC)

a) Initial Stage

For obtaining the SCC, the following two documents need to be submitted to the DOE:
• An Initial Environmental Examination (IEE) Report and
• A TOR for detailed Environmental Impact Assessment (EIA) (with a process flow diagram)

Without the SCC, the sponsor cannot apply for approval of the civil design of the project to the local authorities. After the SCC is obtained, the sponsor can proceed for land development and other primary civil works.

b) Advanced Stage

After receiving the SCC, the sponsors need to proceed for ECC. The EIA has to be submitted to DOE for clearance. After EIA approval, construction of super-structure and erection of
capital machinery can be done. ECC needs to be obtained before commercial operation.

c) Validity Period of Environmental Clearance Certificate

<table>
<thead>
<tr>
<th>Categories of Project</th>
<th>Validity</th>
<th>Renewal Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>1 year</td>
<td>30 days before expiry of the validity period</td>
</tr>
<tr>
<td>Orange A &amp; B</td>
<td>1 year</td>
<td></td>
</tr>
<tr>
<td>Red</td>
<td>3 year</td>
<td></td>
</tr>
</tbody>
</table>

5.7 WORLD BANK SAFEGUARD POLICIES

Safeguard policies, incorporating environmental principles, are designed to protect the interests of third parties from adverse impacts of World Bank-assisted projects. The objective of these policies is to prevent and mitigate undue harm to people and their environment in the development process. The Safeguards are designed to protect the environment from possible adverse effects of its projects.

The Bank requires environmental assessment (EA) and Social Assessment of projects proposed for Bank financing to help ensure that they are both socially and 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)/Bank 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) is the statement of policy objectives and operational principles including the roles and obligations of the Borrower and the Bank, where as Bank Procedures (BP) is the mandatory procedures to be followed by the Borrower and the Bank. OP/BP 4.01 issued in January 1999, is the central documents that defines the Bank's environmental assessment requirements. Following are the WB’s environmental and social/resettlement guidelines:

Environmental Policies

- OP 4.01 Environmental Assessment
- OP 4.04 Conservation of Natural Habitats
- OP 4.09 Pest Management
- OP 4.36 Forestry
- OP 4.37 Safety of Dams

Social Policies

- OP 4.11 Safeguarding Cultural Property in IFC Financed Projects
- OP 4.12 Involuntary Resettlement
- OP 4.10 Indigenous Peoples
Legal policies
- OP 7.50 Projects on International Waterways
- OP 7.60 Disputed Areas

The most relevant policies of WB in BEZA activities is OP 4.01 Environmental Assessment, 4.36 Forestry and OP 4.12 Involuntary Resettlement.

Environmental Assessment (OP 4.01) Environmental Assessment is one of the 10 environmental, social, and legal Safeguard Policies of the World Bank. Environmental Assessment is used in the World Bank to identify, avoid, and mitigate the potential negative environmental impacts associated with Bank lending operations. In World Bank operations, the purpose of Environmental Assessment is to improve decision making, to ensure that project options under consideration are sound and sustainable, and that potentially affected people have been properly consulted.

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. EA is 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 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.

World Bank Environmental Screening under OP 4.01

All World Bank projects are classified into three environmental assessment categories as shown in the following table:

<table>
<thead>
<tr>
<th>Category</th>
<th>Category A</th>
<th>Category B</th>
<th>Category C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>The project is likely to have significant adverse environmental impacts that are sensitive, diverse, or multiple</td>
<td>The project has potential adverse environmental impacts on human populations</td>
<td>The project is likely to have minimal or no adverse impacts</td>
</tr>
</tbody>
</table>
unprecedented. These impacts may affect an area broader than the sites or facilities subject to physical works environmentally important areas—including wetlands, forests, grasslands, and 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 for Category A projects.

| EA Requirements | For a Category A project, the project sponsor is responsible for preparing a report, normally an EIA. | EA is narrower than that of Category A EA. Like Category A EA, it examines the project's potential negative and positive environmental impacts and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance. | Beyond screening, no further EA action is required for a Category C project. |

Table 6. 2: The Safeguard Policies of World Bank on Environmental Issues

<table>
<thead>
<tr>
<th>Sl.</th>
<th>World Bank Policy</th>
<th>Reasons of Applicability</th>
<th>Addressed by</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Environmental Assessment OP 4.01</td>
<td>Project is likely to have impact on natural environments. Particularly, air, water land, human safety, natural habitats, forestry.</td>
<td>Preparation of detailed environmental management framework and participation framework to address the environmental issues.</td>
</tr>
</tbody>
</table>
2 Natural Habitats OP 4.04 Project passes through or is adjacent to national parks and / or protected forests. Preparation of an environmental management plan to address impacts, if any, on biodiversity (flora and fauna)

3 Forestry OP 4.36 Project passes through or is adjacent to major forest areas. Preparation of the environmental management plan to address impacts, if any, on forest areas

(Source: World Bank Documents)

5.8 CATEGORIES OF PROJECTS ACCORDING TO THE WORLD BANK

Based on project type and scale, project location, sensitivity of issues, nature of impacts and magnitude of impacts, World Bank has classified all projects into three categories, viz: Category A, Category B and Category C. These are described in the following sections.

5.8.1 Category A:

A project is classified as Category A if it 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. EA for a Category A project examines the project's potential negative and positive environmental impacts, compares them with those of feasible alternatives (including the "without project" situation), and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance. For a Category A project, the borrower is responsible for preparing a report, normally an EIA (or a suitably comprehensive regional or sectoral EA)

5.8.2 Category B

A project is classified as Category B if its potential adverse environmental impacts on human population or environmentally important areas—including wetlands, forests, grasslands, and 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 for Category A projects. The scope of EA for a Category B project may vary from project to project, but it is narrower than that of Category A EA. Like Category A EA, it examines the project's potential negative and positive environmental impacts and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance.
5.8.3 Category C

A project is classified as Category C if it is likely to have minimal or no adverse environmental impacts. Beyond screening, no further EA action is required for a Category C project.

5.9 COMPARISON BETWEEN GOB AND WB GUIDELINES

After reviewing the law of GoB and World Bank guidelines, it is necessary to identify the similarities and differences between those so that the more stringent requirements can be applied for the sub projects. In general OP 4.01 requirements are more comprehensive when compared with the requirements of Bangladesh legal system. Table 6.3 lists some key comparisons between GoB and World Bank guidelines.

Table 6.3: Comparison between GoB and World Bank Guidelines

<table>
<thead>
<tr>
<th>Sl</th>
<th>Criteria</th>
<th>Requirements as per GoB law</th>
<th>Requirements as per OP 4.01</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Type of Environmental Analysis</td>
<td>Project specific</td>
<td>Project specific, regional and sectoral</td>
</tr>
</tbody>
</table>
| 2  | Basis for Categorization | Currently, screening criteria available only for industrial projects, where assessment is done based on:  
- Level of pollution emission  
- Type of project and location  
- Scale of project  
- Operational activities  
Non-industrial projects are reviewed on a case by case basis by DOE | Detailed screening criteria for all projects based on  
- Sensitivity  
- Nature and magnitude of potential impacts |
| 3  | EA Outputs | Since detailed rules and regulations for EA have not been prescribed, EA outputs are not specified. However, the industrial sector guidelines, the water sector guidelines and the road sector guidelines have specific EA output requirements, such as:  
- Baseline survey |  
- EA Report  
- Analysis of alternatives  
- Environmental Management Plan |
<table>
<thead>
<tr>
<th></th>
<th>Draft Environmental and Social Management Framework (ESMF) of BEZA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• IEE/EIA Report</td>
</tr>
<tr>
<td></td>
<td>• Site clearance</td>
</tr>
<tr>
<td></td>
<td>• Risk analysis and management</td>
</tr>
<tr>
<td></td>
<td>• Analysis of alternatives</td>
</tr>
</tbody>
</table>

4 Public Consultation

<table>
<thead>
<tr>
<th></th>
<th>No special mention is made for public consultation in BECA. Sectoral guidelines mentioned above have prescribed consultation.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mandatory at the stage of</td>
</tr>
<tr>
<td></td>
<td>• Preparation of EA</td>
</tr>
<tr>
<td></td>
<td>• Project appraisal</td>
</tr>
<tr>
<td></td>
<td>• Project design</td>
</tr>
<tr>
<td></td>
<td>• Project implementation and monitoring</td>
</tr>
</tbody>
</table>

5 Disclosure of Information

<table>
<thead>
<tr>
<th></th>
<th>BECA makes no reference to disclosure. The Sectoral guidelines prescribe some provisions for disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mandatory at</td>
</tr>
<tr>
<td></td>
<td>• Summary of project description and potential adverse impact</td>
</tr>
<tr>
<td></td>
<td>• Summary of EA report and conclusion</td>
</tr>
<tr>
<td></td>
<td>• EA report</td>
</tr>
</tbody>
</table>

(Source: ESF, IDCOL, 1997)
6 ENVIRONMENTAL IMPACT AND MITIGATION MEASURES

6.1 OVERVIEW

The analysis of the environmental impacts is an important tool in determining the appropriate mitigation measures to be employed. Identifying the related impacts is an exhaustive process that always has to be updated. The most important impact for the projects is the activities and its associated effects on the environment.

This section gives a broad overview of the probable impacts that might occur during the project implementation and execution, including a general indication to the seriousness or significance of potential impacts. It also discusses the possible mitigation measures that can be put in place to mitigate any negative impacts and enhance the positive ones.

6.2 POTENTIAL IMPACTS

Considering the interaction between engineering operations and activities and the environment, the potential impacts occurring in the following three phases are considered:

i) Pre – Construction (Planning and Design)

ii) Construction

iii) Operation & Maintenance

It is recommended that the impact assessment measures the performance during all the three phases against the baseline position.

6.2.1 Pre-Construction (Planning and Design) Phase

The location of industry in an environmentally sensitive area such as a wildlife sanctuary, game reserve, protected wetland, forest or area of cultural importance has the potential to cause adverse impacts. Table 7. 1 Site Location and Sensitivity presents the framework for assessing the sensitivity of a sub-project depending upon its location.

<table>
<thead>
<tr>
<th>SL</th>
<th>Environmental Issues</th>
<th>Low Sensitivity</th>
<th>Medium Sensitivity</th>
<th>High Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Natural Habitats</td>
<td>No critical natural habitats; no other natural habitats</td>
<td>No critical natural habitats; other non-forest natural habitats present</td>
<td>Critical natural habitats [Critical natural habitats are defined as existing and proposed protected areas] along with unprotected natural habitats</td>
</tr>
</tbody>
</table>


6.2.2 Construction Phase

Generally, construction impacts are expected to affect the environment for a relatively short time period and these are expected to cease soon after the completion of construction. The potential major impacts are described herein:

a) Impact on Flora and Fauna

The construction of buildings and other infrastructure could result in clearing and depletion of vegetation that will result in loss of plant cover, disturbance and loss of fauna habitats, weakening and degradation of soils, disturbance of the natural landscape and disfiguring of the natural morphology.

b) Impact on Soil and Land Degradation

Earthmoving equipments such as excavators are likely to be used in cutting/excavation works. These equipments may expose the soil to erosion and also compact it and may break down the soil structure, which may potentially decrease the drainage of the areas. Furthermore, the risks of accidental discharge of hazardous products, leakage of hydrocarbons, oils or grease from construction machinery also constitute potential sources of soil and water pollution.

c) Impact on Vehicular Traffic

Construction work may result in a high traffic volume within the area. Wastes generated from project activities such as cement bags, paint drums and debris may result in pollution and other impacts.

---

### Environmental and Social Management Framework (ESMF) of BEZA

<table>
<thead>
<tr>
<th>SL</th>
<th>Environmental Issues</th>
<th>Low Sensitivity</th>
<th>Medium Sensitivity</th>
<th>High Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Induced Development</td>
<td>Area or region is well consolidated; dense road network</td>
<td>Medium density road network; open lands are still available</td>
<td>Area or region is undeveloped; road network is incipient or non-existent</td>
</tr>
<tr>
<td>3</td>
<td>Soil Stability / Erosion</td>
<td>Flat terrain; no potential erosion problems.</td>
<td>Medium slopes; some erosion potential</td>
<td>Mountainous terrain; high slopes; unstable soil formations; high erosion potential</td>
</tr>
</tbody>
</table>

(Source: ESMF, PSDSP Economic Zone Project, 2009)
constitute obstructions to vehicular traffic.

d) Impact on Waste Management
Activities at construction sites may produce construction wastes such as excavated soils and debris. In addition, unmanaged waste can have a significant indirect economic impact by reducing the price of properties nearby and in general, by affecting the aesthetics, child-friendliness and overall condition of the environment.

e) Impact on Slope, Erosion and Drainage
If the topography of the project area is hilly, erosion problems during construction are likely to be more severe, as compared to a flat area. However, if the area is flat, water may not drain away easily, in general, and stagnant pools of water may get created. These pools, if not drained regularly may provide favorable breeding grounds for mosquitoes.

f) Impact on Air Quality
Air quality will be impacted by emissions from vehicles, earthmoving equipment and released particulate matter.

g) Impact on Water Quality
Water quality may be impacted by wastewater discharge from construction activities. These will include discharge from onsite sewage system and rainwater run-off. The discharge of this wastewater into surface water may impact water quality by causing changes to its physical, chemical and biological properties. Given the high anticipated volume of waste/spoil that may be generated, it is likely that the waste may get stockpiled on road sides. If it is not properly contained, rains could carry it along with runoff into other surface waters, leading to increased turbidity and siltation. This could affect aquatic resources such as fisheries etc.

6.2.3 Operation and Maintenance Phase
Operational impacts continue during the life of the project after the completion of construction phase and may last for a longer time. Operation of industries emits a number of pollutants that need to be carefully mitigated and monitored. Main pollutants during the operation phase are as follows:

a) Liquid Wastes
   - Process Water from the industries
   - Domestic Sewage
   - Oils & Grease
   - Contaminated Water
- Solvents

b) Solid Wastes
- Packaging materials
- Raw material residues
- Container residues
- Scrap metals
- Sludge containing various toxic metals

c) Air Emission
- Smoke
- Volatile organic compounds
- Particulates
- Oxides of Nitrogen
- Sulphur dioxide
- Carbon Dioxide

d) Noise
- Use of machineries

e) Health & Safety
- Water pollution hazards
- Potential Fire Hazards
- Handling of Chemicals
- Heat Generation
- Air pollution hazards

f) Smell
- Effluent discharge
- Use of chemicals

g) Visual impact
- Construction of industries and buildings
- Smoke
6.3 MAJOR ENVIRONMENTAL IMPACTS

gives an overview of the major environmental impacts resulting from the preconstruction, construction and operation of BEZA Projects.

Table 7.2: Major Environmental Impacts

<table>
<thead>
<tr>
<th>SL</th>
<th>Parameters</th>
<th>Impacts</th>
</tr>
</thead>
</table>
| 1  | Soil       | ▪ Possible increase in soil erosion as a result of the construction activities (clearing of vegetation and soil excavation)  
▪ Loss of productive topsoil resulting from site clearance  
▪ Soil contamination resulting from the release of chemicals (lubricant, fuel, paint) from the machinery |
| 2  | Water      | ▪ Run-off erosion may occur from unprotected excavated areas during heavy rain resulting to sedimentation of the nearby water-bodies  
▪ Potential pollution of the water bodies through run-off of hazardous construction waste (lubricants, cements, paint and fuels)  
▪ Contamination of surrounding water bodies through improper disposal of industrial effluent and sewage during operation  
▪ Possible run off from the temporary solid waste storage site into the drainage system (during the project operational phase) |
| 3  | Ecosystem  | ▪ Destruction of vegetation, loss of habitat and loss of biodiversity  
▪ Possible loss of endangered and rare species  
▪ Change in land use and disturbance of ecosystem  
▪ Contamination of biota |
| 4  | Air        | ▪ Particulate matters emission from construction activities  
▪ Emission of pollutants (NOx, SOx, CO) from the construction  
▪ Machineries  
▪ Possible release of micro organisms to the air during the operational phase of the project |
<table>
<thead>
<tr>
<th></th>
<th>Noise</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td></td>
<td>▪ Construction equipment will generate noise above the usual level</td>
</tr>
<tr>
<td>6</td>
<td>Landscape</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Change in natural drainage pattern</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Destruction of vegetation and trees</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Deforestation and desertification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Visual impact</td>
</tr>
</tbody>
</table>

### 6.4 ASSESSMENT OF IMPACTS

This section contains a discussion of the possible environmental effects of the BEZA sub-projects for the specific issue areas that were identified as having the potential to experience significant impacts. “Significant effect” can be defined as ‘a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.’

An economic or social change by itself shall not be considered a significant effect on the environment, but may be considered in determining whether the physical change is significant.” In the impact analysis, significance thresholds are those criteria which are universally recognized, or are developed specifically for a single project analysis to determine whether potential effects are significant.

Environmental impacts of the sub-projects can broadly be classified as those taking place during pre-construction, construction and operational phases. The overall strategy has the following sequence:

Types of Impacts are grouped into four classes. These are:

i) **Class I  Significant and Unavoidable:**
   An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Significance thresholds are those criteria which are developed specifically to determine whether potential effects are significant.

ii) **Class II  Significant but Mitigable:**
    An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures.

iii) **Class III  Not Significant:**
     An impact that may be adverse, but DoEs not exceed the threshold levels and DoEs not require mitigation measures. However, mitigation measures that could further
lessen the environmental effect may be suggested if readily available and easily achievable.

iv) **Class IV Beneficial:**
An effect that would reduce existing environmental problems or hazards.

In those cases where the mitigation measure for an impact could have a significant environmental impact in another issue area, this impact is discussed as a residual effect. The impact analysis concludes with a discussion of cumulative impacts, which evaluates the impacts associated with the proposed project in conjunction with other future development in the area.

![Fig 7.1 Impact Structure](image)

**6.4.1 Cumulative Impacts**
Cumulative impacts can be defined as impacts, which potentially develop from the combined impacts of more than one project or large scale program occurring within the same area of influence and time span. In such cases, cumulative impacts will have to be assessed based on the combined effects of potential impacts from the various program inputs. The cumulative impacts may occur due to the following environmental parameters:

- Change in Land use
- Traffic
- Industrial Wastewater Effluent
- Solid Waste Disposal
6.5 MITIGATION MEASURES

This section includes the principles, procedures and mitigation measures that are relevant and suitable to the project for ensuring the most appropriate environmental mitigation and enhancement plans applicable during different stages of project implementation. To avoid and minimize the impacts resulting from the activities of different sub-projects, measures/management plans, which are essential to mitigate the impacts as discussed, are based upon appropriate technological design, improvements or adjustments, policy including good site operational practices etc.

Therefore, the mitigation plan has been adopted to highlight the action procedures to avoid/minimize / control the resultant impacts arising out of the different project phases i.e. pre-construction, construction and operation which are elaborately described in the following Table 7.3 Mitigation Measures.

### Table 7.3 Mitigation Measures

<table>
<thead>
<tr>
<th>Issue</th>
<th>Mitigation Measure</th>
<th>Time Frame</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. CONSTRUCTION PHASE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Soil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disposal from excavated earthworks</td>
<td>• Earthwork cuts will be used where possible</td>
<td>During Construction</td>
<td>Project Sponsor</td>
</tr>
<tr>
<td></td>
<td>• Residual spoil will be disposed of according to the erosion prevention plan</td>
<td></td>
<td>BEZA</td>
</tr>
<tr>
<td>Loss of Top Soil</td>
<td>• Topsoil from all areas to be permanently covered shall be stripped, stored and used for re-vegetation works;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Construction vehicles, machinery, and equipment shall move or be stationed in designated areas. Access to adjacent agricultural land will be minimized</td>
<td>During Construction</td>
<td>Project Sponsor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BEZA</td>
</tr>
</tbody>
</table>
### Soil erosion and Water Pollution

- Measures as per design or as directed by the Consultants to control soil erosion. Earth materials and stone will be properly disposed of so as not to block rivers, resulting in adverse impact on water quality.
- Measures will be taken to prevent earth works
- Mitigation measures will be taken to prevent the untreated wastewater produced in construction from entering into creek and streams

<table>
<thead>
<tr>
<th>b) Water Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Siltation of water bodies</td>
</tr>
<tr>
<td>Contaminated runoff from inappropriately stored hazardous materials</td>
</tr>
</tbody>
</table>

### Air Quality

- Water will be sprayed on construction sites, exposed sites and earth roads to minimize dust;
- Concrete batching plants and crushing plants will be sited at least 500 m from the nearest habitation and fitted with dust

<table>
<thead>
<tr>
<th>c) Air Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation of Dust</td>
</tr>
</tbody>
</table>
| Emissions from construction vehicles, equipment and machinery | • All emissions will meet standards.  
• Developer will submit dust suppression program before construction | During Construction | Project Sponsor | BEZA |
|---|---|---|---|---|
| d) Noise Quality | • Within 200 m of the nearest habitation, construction work will be restricted to between 0600 to 2100 hours.  
• Maintenance of machinery and vehicles should be enhanced to keep their noise within acceptable level | During Construction | Project Sponsor | BEZA |
| e) Impact on Flora | • Minimum damage or disruption to the flora. Trees or shrubs will be removed that impinge directly on the permanent works or necessary temporary works. | During Construction | Project Sponsor | BEZA |
| f) Impact on Fauna | • All works are to be carried out in such a fashion that the damage or disruption of the fauna is minimum. | During Construction | Project Sponsor | BEZA |
### g) Waste Management

<table>
<thead>
<tr>
<th>Generation of Solid wastes</th>
<th>Solid waste generated to be accumulated at one place and treated.</th>
<th>During Construction</th>
<th>Project Sponsor</th>
<th>BEZA</th>
</tr>
</thead>
</table>

### B. OPERATION & MAINTENANCE PHASE

#### Industrial Effluent

- All recommendations on ESMF shall be implemented.
- All industrial effluent will be directed to central effluent treatment plant before disposal.
- Industrial Effluent will be treated to applicable standards.

<table>
<thead>
<tr>
<th>Throughout Operation Period</th>
<th>Project Operator</th>
<th>BEZA</th>
</tr>
</thead>
</table>

#### Air Emission

- All recommendations of ESMF shall be implemented.
- Suitable dust collectors (bag filters) shall be provided at all major emission source.
- For dispersion of the hot air from boiler stack, it is recommended that the height of the stack chimney should be at least 2.5 times of the nearest height of the building.
- The effluents will be treated to applicable standards.

<table>
<thead>
<tr>
<th>Throughout Operation Period</th>
<th>Project Operator</th>
<th>BEZA</th>
</tr>
</thead>
</table>

#### Noise

- All recommendations of ESMF shall be implemented.
- Proper design and sound management practice will be adopted.
- The noise emission shall conform to applicable standards.

<table>
<thead>
<tr>
<th>Throughout Operation Period</th>
<th>Project Operator</th>
<th>BEZA</th>
</tr>
</thead>
</table>
- Green belts as sound barriers shall be established.
- Monitoring will be conducted during the operational phase to confirm noise-modeling results.

<table>
<thead>
<tr>
<th>Solid Waste</th>
<th>All materials will be disposed through central solid waste management system</th>
<th>Throughout Operation Period</th>
<th>Project Operator</th>
<th>BEZA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational Health</td>
<td>Occupational, Health and Safety Program will be adopted. Review and evaluate to improve the effectiveness of Environmental Health and Safety Program</td>
<td>Throughout Operation Period</td>
<td>Project Operator</td>
<td>BEZA</td>
</tr>
</tbody>
</table>
7 LEGAL AND INSTITUTIONAL FRAMEWORK (SOCIAL)

7.1 OVERVIEW

The World Bank – the financer of the BEZA project), requires the project sponsors to identify, review and abide by all laws of the host country that are applicable to land acquisition and involuntary resettlement including:

- The scope of the power of eminent domain and the nature of compensation associated with it, both the procedures for assessing compensation values and the schedule for making compensation payments
- The legal and administrative procedures applicable, including the appeals process and the normal time for such procedures
- Land titling and registration procedures
- Laws and regulations relating to agencies responsible for implementing resettlement and those related to land compensation, consolidation, land use, environment, water use, and social welfare

The table below lists the relevant National laws relevant for the project sponsor to comply with and the government agencies responsible for different aspects of the social management for sub-project to be funded by BEZA.

7.2 RELEVANT NATIONAL LEGISLATION

Table 8.1: Relevant National Legislation

<table>
<thead>
<tr>
<th>Laws/Regulations</th>
<th>Enforcing Agencies- Ministry/Authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Antiquities Act 1968</td>
<td>Ministry of Cultural Affairs</td>
</tr>
<tr>
<td><em>Regulated/ Enforced Items</em></td>
<td></td>
</tr>
<tr>
<td>This legislation governs preservation of the national cultural heritage, protects and controls ancient monuments, regulates antiquities as well as the maintenance, conservation and restoration of protected sites and monuments, controls planning, exploration and excavation of archaeological sites.</td>
<td></td>
</tr>
<tr>
<td>2. The Building Construction Act 1952 (with amendments)</td>
<td>Ministry of Works</td>
</tr>
<tr>
<td>Laws/Regulations</td>
<td>Enforcing Agencies-Ministry/Authorities</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Regulated/ Enforced Items</td>
<td></td>
</tr>
<tr>
<td>An Act to provide for the prevention of haphazard construction of building and</td>
<td></td>
</tr>
<tr>
<td>excavation of tanks which are likely to interfere with the planning of certain</td>
<td></td>
</tr>
<tr>
<td>areas in Bangladesh.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>• The Land Acquisition Act, 1894</td>
<td>Revenue Department</td>
</tr>
<tr>
<td>• The Acquisition and Requisition of Immovable Property Ordinance 1982</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>Regulated/ Enforced Items</td>
<td></td>
</tr>
<tr>
<td>Current GoB Act &amp; guidelines, relating to acquisition of land</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
<tr>
<td>The Factories Act, 1965 and Bangladesh Labor Law, 2006</td>
<td>Ministry of Labor</td>
</tr>
<tr>
<td>6.</td>
<td></td>
</tr>
<tr>
<td>Regulated/ Enforced Items</td>
<td></td>
</tr>
<tr>
<td>This Act pertains to the occupational rights and safety of factory workers and</td>
<td></td>
</tr>
<tr>
<td>the provision of a comfortable work environment and reasonable working</td>
<td></td>
</tr>
<tr>
<td>conditions.</td>
<td></td>
</tr>
</tbody>
</table>

### 7.3 ACQUISITION AND REQUISITION ORDINANCE, 1982

In 1982, the Acquisition and Requisition of Immovable Property Ordinance, came in force. This law replaced the earlier law, The Land Acquisition Act, 1894 (I of 1894) and others that have been in force between 1947 and 1982, and is the major basis for all the present actions regarding acquisition, resettlement and rehabilitation. The relevant and salient points of the 1982 law are as follows:

"Property" means only immovable property (land and building) and includes any right in such property and "Owner" includes the occupiers.

Matters to be considered in determining compensation include:

- the market value of property
- damage to standing crops or trees due to acquisition
- damage due to severance of acquired property from other property at the time of actual taking of permission by concerned authorities
- damage to other properties or earnings
o expenses for relocation of residence
o damage due to lowering of profit of the property to be acquired between the serving of acquisition notice and actual acquisition.

While the rules under the Act 'appear' fairly generous, problems often arise in implementing the provisions of the Act. Determining market value and damage to property or income are difficult to establish in normal circumstances. It becomes more so in an emotion charged situation such as acquisition of land in a land-scarce and agricultural-dependent society. Arbitrariness is almost certainly likely to result. The situation is not helped by assigning by the government to itself sweeping powers in matters of acquisition. Read with the Article 42, sub clause (2) of the Constitution referred to above, there is every chance that the acquisition may not be entirely necessary, that compensation may be rather inadequate or paid such later than actual acquisition.

To sum-up the legal context, while there are constitutional and legal provisions for acquisition and payment of compensation for acquisition of land and other immovable property for state-determined purposes, there are also uncertainties in the actual practice because of lack of clear guidelines, sweeping power given to Deputy Commissioners who actually serve notice and take possession of acquired property and the denial of legal instruments to citizens against such actions.

The present laws, acts, regulations and rules are not very explicit regarding resettlement and rehabilitation of project-affected people (PAP). One can, however, as indicated earlier interpret the spirit and letter of these laws (including constitutional provisions) and rules to imply that resettlement and rehabilitation of people adversely affected due to the project is the responsibility of the project authorities. As a result, in recent years there have been several instances where attempts have been made and are being made to take affirmative action. In all such cases the core idea is to prepare an entitlement matrix based upon an entitlement policy. Entitlement here means the rights of the persons adversely affected by the project to receive certain benefits from the project authorities to compensate for their losses that may include land and other immovable property, income, standing crops, occupation etc. The compensation is often in terms of cash grants but also includes training and credit facilities and other necessary facilities in resettlement and rehabilitation.
7.4 WORLD BANK’S SAFEGUARD POLICIES

7.4.1 OP 4.12 Requirements (Involuntary Resettlement)

The primary objective of the World Bank policy on is to explore all alternatives to avoid or minimize involuntary resettlement. Where resettlement is unavoidable, the resettlement activities should be conceived and executed as sustainable development programs, providing sufficient resources to enable affected persons to share in project benefits and to assist in their efforts to improve their livelihood and standard of living, or at least to restore them to pre-project level. The policy also requires that affected people are meaningfully consulted and should have opportunities to participate in planning and implementing resettlement programs.

Measures required to ensure that resettlement has a positive outcome are as follows:

- Providing project-affected persons with options; permitting their participation in planning and selecting these options; prompt compensation at full replacement cost for losses; choosing relocation sites that provide, at a minimum, the same benefits as the sites that are replaced;
- Providing allowances and other assistance to make a smooth transition after displacement
- Identifying vulnerable groups and providing special assistance to these groups
- Implementing an institutional structure that supports the process to a successful end.

World Bank's policy on Involuntary Resettlement requires payment of compensation and other assistance to project affected people before they are displaced from their existing locations. Further, the policy requires income rehabilitation assistance to those affected due to the loss of their productive assets or loss of incomes and livelihood.

Absence of legal title DoEs not exclude affected individuals from the eligibility to receive compensation and or other assistance. The Policy also requires that those without a legal title should be given assistance to meet the objectives of the policy. The genesis of these rights may come from continued possession of public land where the government has not sought eviction. The Bank's policy also recognizes that stakeholders who illegally occupy project-affected areas after established cut-off-date for any components are not eligible for compensation. Institutional or project specific policies are being prepared to address these gaps and to meet the requirements of multilateral agencies and best practices.

The principles for World Bank OP 4.12, involuntary resettlement are

- Involuntary resettlement should be avoided where feasible, or minimized, exploring all viable alternative project plans
- Where it is not feasible to avoid resettlement, resettlement activities should be conceived
and executed as sustainable development programs.

- Displaced persons should be assisted in their efforts to improve their livelihoods and standards or at least restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.

7.4.2 OP 4.10 Requirements (Indigenous Peoples)

This policy contributes to the WB’s mission of poverty reduction and sustainable development by ensuring that the development process fully respects the dignity, human rights, economies, and cultures of. The Bank recognizes that the identities and cultures of Indigenous Peoples are inextricably linked to the lands on which they live and the natural resources on which they depend. These distinct circumstances expose Indigenous Peoples to different types of risks and levels of impacts from development projects, including loss of identity, culture, and customary livelihoods, as well as exposure to disease. As social groups with identities that are often distinct from dominant groups in their national societies, Indigenous Peoples are frequently among the most marginalized and vulnerable segments of the population. A project proposed for Bank financing that affects Indigenous Peoples requires:

- Screening by the Bank to identify whether Indigenous Peoples are present in, or have collective attachment to, the project area
- A social assessment by the borrower
- A process of free, prior, and informed consultation with the affected Indigenous Peoples’ communities at each stage of the project, and particularly during project preparation, to fully identify their views and ascertain their broad community support for the project.
- The preparation of an Indigenous Peoples Plan (IPP) or an Indigenous Peoples Planning Framework (IPPF).
- Disclosure of the draft Indigenous Peoples Plan or draft Indigenous Peoples Planning Framework

The borrower makes the social assessment report and draft IPP/IPPF available to the affected Indigenous Peoples’ communities in an appropriate form, manner, and language. Before project appraisals, the borrower sends the social assessment and draft IPP/IPPF to the Bank for review. Once the Bank accepts the documents as providing an adequate basis for project appraisal, the Bank makes them available to the public in accordance with The World Bank Policy on Disclosure of Information, and the borrower makes them available to the affected Indigenous Peoples’ communities in the same manner as the earlier draft documents.
7.5 COMPARISON OF REQUIREMENTS OF GOB AND WB

While Bangladesh law provides for land acquisition, the regulations and rules are not very explicit regarding the resettlement and rehabilitation of Project Affected People (PAP). The World Bank OPs, on the other hand, are more comprehensive requiring the following:

- Payment of adequate compensation for various losses at replacement value.
- Rehabilitation to ensure improvement/or at least restoration of lost economic activities, income and standard of living.
- Public consultation during the entire process of social assessment and disclosure of information (where ensuring that the information available to stakeholders is adequate and accessible is key)
- A grievance procedure that is accessible and adequately responsive (time for processing claims, etc) A Resettlement Action Plan, and where appropriate, an Indigenous Peoples’ Development Plan

While Bangladesh law (Ordinance 1982) provides for land acquisition, the regulations and rules are not very explicit regarding the resettlement and rehabilitation of PAPs. The World Bank ODs, on the other hand, are more comprehensive and stringent, requiring, among other things, the following:

- Payment of compensation for various losses at replacement value
- Rehabilitation to ensure improvement/restoration of the standard of living
- Public consultation during the entire process of social assessment and disclosure of information.
- A Resettlement Action Plan, and where appropriate, an Indigenous Peoples Development Plan

Tables below lists some key comparisons between Bangladesh Law and WB policy regarding land acquisition and compensation.

Table 8.2: Comparison: Bangladesh law and World Bank OP 4.12

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Coverage</td>
<td>Legal owners</td>
<td>All affected parties, including squatters and illegal occupants</td>
</tr>
<tr>
<td></td>
<td>Share-croppers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tenants</td>
<td></td>
</tr>
<tr>
<td>Compensation</td>
<td>Based on market values over previous 12 months</td>
<td>Replacement cost at current market price</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Requires livelihood restoration</td>
</tr>
<tr>
<td>Uses of material from dismantled structures</td>
<td>Material is to be auctioned after being compensated for it</td>
<td>Material can be taken and re-used by affected party</td>
</tr>
<tr>
<td>Minimization of impacts</td>
<td>Discourages unnecessary acquisition but no mechanism to monitor</td>
<td>Alternative analysis required to justify avoidance and/or mitigation of impacts</td>
</tr>
<tr>
<td>Cut-off dates</td>
<td>Not addressed</td>
<td>Important to ensure that squatters are included in compensation and to prevent rent-seeking behavior of additional squatters settling onto project land</td>
</tr>
<tr>
<td>Consultation</td>
<td>No consultation required</td>
<td>Consultation as core issue in RAP preparation and implementation</td>
</tr>
<tr>
<td>Relocation assistance</td>
<td>No assistance provided</td>
<td>Relocation assistance required</td>
</tr>
<tr>
<td>Livelihood restoration</td>
<td>Not addressed</td>
<td>Livelihood restoration component and attention to post-resettlement required</td>
</tr>
</tbody>
</table>

### 7.6 ADDRESSING WORLD BANK SAFEGUARD POLICIES

#### Table 8.3: Addressing World Bank Safeguard Policies

<table>
<thead>
<tr>
<th>World Bank Policy</th>
<th>Reasons of Applicability</th>
<th>Addressed by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Cultural Resources OP 4.11</td>
<td>Project may pass through culturally significant areas – including areas that are an integral part of a people’s cultural identity and practices</td>
<td>Usually avoided by Govt. authorities while selecting the site</td>
</tr>
<tr>
<td>Involuntary Resettlement OP 4.12</td>
<td>Project may require physical relocation of people or entire communities and/or private</td>
<td>A process of consultation, including adequate and accessible disclosure of any resettlement information.</td>
</tr>
<tr>
<td>Indigenous Peoples</td>
<td>Project affecting the dignity, human rights, economic and cultures of Indigenous Peoples because of acquisition of land and common resources on which they depend for their social, economic and cultural needs and also their homesteads requiring relocation.</td>
<td>Preparation of Indigenous Peoples’ Development Plan (IPDP) based on Social Impact Assessment that involved free, prior and informed consultations and updating it in accordance with changes in the Project that involves Indigenous Peoples.</td>
</tr>
</tbody>
</table>
8 SOCIAL MANAGEMENT PROCESS

8.1 GENERAL

Social issues are usually common to all sectors with the degree of effect of any issue varying on an individual basis. The major social issues related to infrastructure projects include:

(i) site planning
(ii) involuntary resettlement;
(iii) protection of marginalized and vulnerable groups; and
(iv) public consultation, participation, and consensus building.

All proposed investments in the BEZA, based on the significance of impact, would fall in three categories using WB policies, as classified in Section 6.8.

- Category “A” projects involve land acquisition, resettlement, or indigenous peoples. These will require the project sponsor to prepare appropriate plans in compliance with WB policy criteria OP 4.12 and OP 4.10.
- Category “B” projects will require preparation of a Social Management and Monitoring Plan as needed to address salient social risks.
- Category “C” projects have minimal or no adverse environmental or social effect and need no further action beyond screening.

8.2 STAGES IN PROJECT DEVELOPMENT

All projects and policies go through a series of steps or stages, starting with initial planning, then implementation and construction, carrying through to operation and implementation. It is imperative for the project sponsor to understand that Social impacts will be different for each stage; therefore it is essential to define the stages in project development:

<table>
<thead>
<tr>
<th>Stage 1. Pre-Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 2. Construction/Implementation</td>
</tr>
<tr>
<td>Stage 3. Operation/Maintenance</td>
</tr>
</tbody>
</table>

a) Pre-Construction

This refers to all activity that takes place from the time a project or policy is conceived to the point of construction activity or policy implementation. Examples include project design, revision, public comment, licensing, the evaluating of alternatives, and the decision to go ahead.

b) Construction/Implementation

This stage begins when a decision is made to proceed, a permit is issued or a law or
regulation takes place. This involves clearing land, building access roads, developing utilities, displacement and relocation of people. The build-up of a migration work force may occur creating social stresses.

c) Operation/Maintenance
This stage occurs after the construction is complete. It is during this stage that communities seeking industrial development will focus their attention on the long-term economic benefits that accrue from a development.

8.3 FLOWCHART FOR SMF
The flow chart is prepared to illustrate the social compliance activities for preparation of an infrastructure project for obtaining BEZA loan. The flow chart given below, in Fig. 8.1, provides a guideline to the project sponsor in carrying out the necessary steps to address social requirements of a sub-project for BEZA funding.

A Social Impact Assessment (SIA) of the project, with a socio-economic sample survey of the project and influence area is a must for assessment of the project. This SIA will determine if any RAP or IPDP will be required to be done. If the land is procured by the project sponsor through voluntary negotiation or the land has been acquired by the government beforehand, then no RAP etc, will be required.
8.4 SOCIAL COMPLIANCE MATRIX

The matrix below has been designed considering OP 4.12 and OP 4.10 of World. This will assist the project sponsor to comply with the requirement for social aspects for BEZA funding.
Table 9.1: Social Compliance Matrix

<table>
<thead>
<tr>
<th>Project Stage</th>
<th>Action required</th>
<th>Applicable standards and institutional responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-feasibility studies</td>
<td>Social screening</td>
<td>OP 4.12 para 27</td>
</tr>
<tr>
<td></td>
<td>For projects not requiring specific resettlement and land acquisition studies</td>
<td>For FIL projects requiring involuntary resettlement, the financial intermediary (FI) screens sub-projects to ensure consistency with OP 4.12.</td>
</tr>
<tr>
<td></td>
<td>Social performance frameworks will be designed</td>
<td>If the initial screening identifies indigenous peoples present, screening as stated in OP 4.10 will be undertaken.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Public information campaign/communication, consultation and participation</td>
<td>The project sponsor will carry out a public information campaign (which may be monitored by the relevant implementing agency) that will comply with OP 4.12</td>
</tr>
<tr>
<td>Project Design</td>
<td>Scoping: Identify significant potential impacts and project alternatives and propose terms of reference for SIA</td>
<td>WB OP 4.12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The project sponsor will identify the presence of significant potential impacts and assess against project alternatives and then propose terms of reference for the SIA</td>
</tr>
<tr>
<td></td>
<td>Baseline Data Collection (SIA): Identify current socio-economic conditions without the project and update it during the project with changes</td>
<td>The project sponsor will carry out a sample socio-economic survey of both proposed project area as well as surrounding areas of the project that would have impacts. The socio-economic survey would have to comply to OP 4.12</td>
</tr>
<tr>
<td>Project Stage</td>
<td>Action required</td>
<td>Applicable standards and institutional responsibility</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----------------------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>Estimate social impacts</td>
<td></td>
<td>The project sponsor will estimate impacts based on OP 4.12</td>
</tr>
<tr>
<td>Preparation of SMP</td>
<td></td>
<td>For IPDP, OP 4.10 will be considered.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The project sponsor to design plan for specific actions during land acquisition, engineering design and construction stages to conform to GoB requirement (Acquisition &amp; Requisition of Property Ordinance 1982) as well as World Bank’s requirements OP 4.12</td>
</tr>
<tr>
<td>Preparation of RAP on the basis of SIA</td>
<td></td>
<td>The project sponsor will prepare a RAP following OP 4.12</td>
</tr>
<tr>
<td>Preparation of IPDP on the basis of SIA</td>
<td></td>
<td>The project sponsor will prepare IPDP (if indicated by the SIA) following OP 4.10</td>
</tr>
<tr>
<td>Design mitigation measures</td>
<td></td>
<td>The project sponsor will design mitigation measure in line with OP 4.12. For Indigenous peoples OP 4.10 will be consulted.</td>
</tr>
<tr>
<td>Project Appraisal/Approval</td>
<td>Review and Approval of RAP</td>
<td>PFI is to review report to assess compliance with WB 4 OP.12 and if relevant OP 4.10. Also to check for compliance with GoB’s requirements for compensation for LA.</td>
</tr>
<tr>
<td>Implement Plan</td>
<td>Implement SMP</td>
<td>Appointed Agency (Consulting company or NGO) to implement</td>
</tr>
<tr>
<td>Engineering</td>
<td>Social Monitoring of SMP</td>
<td>Appointed Agency (Consulting company or NGO) to implement</td>
</tr>
<tr>
<td><strong>Project Stage</strong></td>
<td><strong>Action required</strong></td>
<td><strong>Applicable standards and institutional responsibility</strong></td>
</tr>
<tr>
<td>------------------</td>
<td>--------------------</td>
<td>---------------------------------------------------------</td>
</tr>
<tr>
<td>Design &amp; Construction Works</td>
<td></td>
<td>company or NGO) to implement</td>
</tr>
<tr>
<td>Post-Construction</td>
<td>Social Audit and regular monitoring arrangements and evaluation</td>
<td>Selected Agency (Consulting company or NGO) to audit</td>
</tr>
</tbody>
</table>

### 8.5 SOCIAL SCREENING

To assess the precise nature and magnitude of social impacts, social screening may be conducted as part of the feasibility study for each subproject. To ensure consistency in the application of social screening criteria, a standard field level social screening checklist needs to be used.

To the extent possible, social and environment screening should be carried out together with technical and economic screening. Social screening will identify the probability for loss of land assets/structures, livelihoods, willingness of the community to donate land to the project, and other significant social impacts. Social screening also enables the categorization of subprojects based on the level of social impacts. Where the extent of adverse social impacts is minor and no displacement or loss of assets or livelihoods is expected, no further action is required. However, where the social screening indicates that land acquisition and/or loss of assets are unavoidable, appropriate resettlement plans are of paramount importance.

### 8.6 PUBLIC INFORMATION CAMPAIGN AND CONSULTATION

The World Bank requires participation by interested parties and PAPs in the assessment of social effects of a project. The public Involvement takes two forms: a formal and an informal process. The primary purposes of the consultation and participation process are: dissemination of information to the participants; solicitation of information relative to the interests of the participants; and solicitation of comments, concerns and suggestions for inclusion in the development of the project.

The first step is the identification of who will actually be involved in the social assessment process. In general, the participants will include all governmental agencies and ministries that have statutory responsibility for management of resources affected by the project. A second group of potential participants are the NGOs including national organizations and CBOs. The
third group includes the local population that will be directly or indirectly affected by project implementation.

### 8.6.1 Involvement of the Host Populations

The population living in the areas identified as hosts for a relocated population also needs to be integrally involved in the planning and implementation of a resettlement plan.

### 8.6.2 Formal Consultation Process

Frequently, the initial contact with participants by the project sponsor is achieved through distribution of the Scoping Document. Included in the scoping document is an invitation to participate in a workshop to discuss the project and its objectives and to discuss the particular social concerns of the agencies and the local population.

A second workshop is advised, especially for larger, more complex projects to review the status of the studies being conducted and to obtain the information necessary. Upon completion of a draft RAP and IPDP, a final workshop is recommended to obtain oral comments and suggestions from the various stakeholders. The formal consultation process should also include the solicitation and receipt of written comments and suggestions on all social documents.

### 8.6.3 Informal Consultation Process

Informal consultation like Focus Group Discussion (FGD) with various stakeholders throughout the Social Assessment process is strongly encouraged. This consultation includes discussions with the various governmental organizations involved and interactions with NGOs and local populations to discuss various social issues pertinent to the planning and implementation of the project.

A record of the informal discussions with agencies and/or other participants should be included in the SMP.

### 8.7 RECORD OF CONSULTATION

A record of the formal and informal consultation with participants is an important component of the SMP. The record will verify that PI requirements of WB have been met satisfactorily. The PI record should include for workshops: an agenda of workshops, minutes of the workshop proceedings, issues discussed, responses to issues, a list of attendees, for written comments: actual letter containing comments and suggestions, the project sponsors responses to the comments and suggestions with rationale; for informal discussions with Agencies: brief memoranda describing topics discussed, information obtained from agencies, issues and suggestions raised and responses; for informal discussions: brief memoranda describing
persons and situations of the discussions, issues discussed, information obtained and responses of the Project sponsor to issues and concerns raised.

8.8 SOCIAL IMPACT ASSESSMENT (SIA)

The SIA is one of the primary requirements of the project sponsor in order to comply with social requirements for a World Bank-assisted project. The project sponsor should use social impact assessment specialists for the SIA.

8.8.1 Identifying Social Impact Assessment Variables.

This is another important consideration before conducting the SIA, as this incorporates the local characteristics of the project affected areas and establishes a baseline for variables that would be used to collect data. A general list of social variables is given below:

a) Population Characteristics: present population and expected change, ethnic and racial diversity, and influxes and outflows of temporary residents as well as the arrival of seasonal or leisure residents.

b) Community and Institutional Structures: the size, structure, and level of organization of local government including linkages to the larger political system.

c) Political and Social Resources: distribution of power authority, the interested and affected publics, and the leadership capability and capacity within the community.

d) Individual and Family changes: factors, which influence the daily life of the individuals and families, including attitudes, perceptions, family characteristics and friendship networks.

e) Community Resources: patterns of natural resource and land use; the availability of housing and community services.

The figure below gives a matrix relating project stage to Social Impact Assessment Variables.

<table>
<thead>
<tr>
<th>Social Impact Assessment Variable</th>
<th>Pre-Construction</th>
<th>Implementation/ Construction</th>
<th>Operation/ Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Characteristics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population change</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnic and racial distribution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relocated populations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influx or outflows or temporary workers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Impact Assessment Variable</td>
<td>Pre-Construction</td>
<td>Implementation/Construction</td>
<td>Operation/Maintenance</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>------------------</td>
<td>-----------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Seasonal residents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community and Institutional Structures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voluntary association</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest group activity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size and structure of local government</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Historical experience with change</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment/income characteristics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment equity of minority groups</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local/regional/national linkages</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political and Social Resources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distribution of power and authority</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identifications of stakeholders</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interested and affected publics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leadership capability and characteristics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual and Family Changes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceptions of risk, health, and safety</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Displacement/relocation concerns</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust in political and social institutions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential stability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Resources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in community infrastructure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land use patterns</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effects on cultural, historical, and archaeological sites</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8.8.2 Combining Social Impact Assessment Variables, Project Stage, and Setting

Social impact specialists engaged by the project sponsor will construct a matrix to that will serve as a guide for their assessing of significant social impacts. For each project stage, the assessor should identify potential impacts on each social variable identified in the matrix. This approach ensures that no critical areas are overlooked. The analytical procedures would be repeated for each of the SIA variable for each stage of the project. The procedures for accomplishing these tasks are outlined below:

8.8.3 Steps in the Social Impact Assessment Process

The process in the social assessment is described below in 10 steps.

i) Public Involvement

ii). Identification of Alternatives

iii). Baseline Conditions

iv) Scoping

v). Projection of Estimated Effects-Investigate the probable impacts

vi). Predicting responses to impacts

vii). Indirect and Cumulative Impacts

viii). Changes in Alternatives

ix). Mitigation and x.) Monitoring

i) Public Involvement-

Develop an effective public Involvement plan to involve all potentially affected publics. Requires identifying and working with all potentially affected groups starting at the very beginning of planning for the proposed action.

ii). Identification of Alternatives-

Describe the proposed action of policy change and reasonable alternatives. The proposed action is described in detail to begin to identify the data requirements needed from a project proponent (World Bank) to frame the SIA

iii). Baseline Conditions:

Describe the relevant human environment/area of influence and baseline conditions. These are the existing conditions and past trends associated with human environment in which the proposed activity is to take place.

The Base conditions would include the following set aspects of human environment:

- Relationship with the biophysical environment
iv) **Scoping:**

Identify the full range of probable social impacts that will be addressed based on discussion or interviews with numbers of all potentially affected. After initial scoping, the social impact assessor (social impact specialist engaged by the project sponsor) selects the SIA variables for further assessment situations. Considerations need to be given to both the impacts perceived by the project sponsor/executing agency (as the case may be) and to those perceived by the affected groups and communities through consultations.

The principal methodology employed here is reviews of the existing social science literature, public scoping, public surveys, and public participation techniques. It is a requirement of OP 4.12 that views of affected people are taken into consideration.

Relevant criteria for selecting impacts include:

- Probability of the event occurring
- Number of people including indigenous populations that will be affected
- Duration of impacts (long-term vs. short-term)
- Value of benefits and costs to impacted groups (intensity of impacts)
- Extent that the impact is reversible or can be mitigated
- Likelihood of causing subsequent impacts
- Relevance to present and future policy decisions
- Uncertainty over possible effects
- Presence or absence of controversy over the issue.

v). **Projection of Estimated Effects**

Investigate the probable impacts

The probable social impacts will be formulated in terms of predicted conditions without the actions (baseline projection); predicted conditions with the actions; and predicted impacts which can be interpreted as the differences between the future with and without the proposed action. Investigation of the probable impacts involves five major sources of information:

- Data from project proponents
- Records of previous experience with similar actions as represented in reference literature as well as other SIA’s.
- Census and vital statistics
- Documents and secondary sources
- Field research, including informant interviews, hearing, group meetings, and surveys of the general population.

The record of previous experience is very important to the estimation of future impacts. Expert knowledge of the social impact specialists is used to enlarge this knowledge base and to judge how the study case is likely to deviate from the typical patterns.

vi). Predicting responses to impacts
This determines the significance of the identified social impacts. After direct impacts have been estimated the Social Impact Specialist must next estimate how the affected people will respond in terms of attitude and actions. The actions of affected groups are to be estimated using comparable cases and interviews with affected people about what they expect to do.

vii). Indirect and Cumulative Impacts
This estimates subsequent impacts and cumulative impacts. Indirect impacts are those caused by the direct impacts; they often occur later than the direct impacts, or further away. Cumulative impacts are those impacts which result from the incremental impacts of an action added to other past, present, and reasonably foreseeable future actions regardless of which agency or person undertakes them.

viii). Changes in Alternatives
Recommend new or changed alternatives and estimate or project their consequences. Each new alternative or recommended change should be assessed separately. Here more innovative alternatives and changes probably should be presented in an experimental structure.

ix). Mitigation
Develop a mitigation plan. A SIA should identify means to mitigate adverse impacts. These measures include avoiding the impact by not taking or modifying an action; minimizing, rectifying, or reducing the impacts through the design or operation of the project; or compensation for the impact by providing substitute facilities, resources, or opportunities.

x). Monitoring
Develop a monitoring plan. A monitoring program should be developed for identifying deviations from the proposed action and any important unanticipated impacts. A monitoring plan should be developed to track project and program development and compare real impacts with projected areas.
A flowchart of the Steps in the Social Impact Assessment Process is provided in the next page.
Fig 9.2: Steps in the Social Impact Assessment Process

1. Develop public scoping program (public involvement)
2. Describe proposed action and alternatives (identification of alternatives)
3. Describe relevant human environment and area of influence (baseline conditions)
4. Identify probable impacts (based on scoping)
5. Investigate probable impacts (projection of estimated effects)
6. Recommend changes in proposed action or alternatives (changes in alternatives)
7. Develop monitoring program (monitoring)
8. Determine probable response of affected publics
9. Mitigation plan
10. Estimate indirect and cumulative impacts

Draft Environmental and Social Management Framework (ESMF) of BEZA 83
8.9 IDENTIFICATION OF IMPACT

Basic categories of issues/impacts those needed to be addressed under the entitlement framework are the following:

- Loss of land
- Loss of water source
- Loss of structure
- Loss of source of livelihood
- Loss of access to common resources and facilities
- Loss of standing crops, trees and perennial trees
- Loss of public infrastructure
- Loss of services (electricity, water, transport, etc)
- Loss of or imperilled access to any of the above

Table 9.3: List of Probable Impacts during Various Phases of the Project

<table>
<thead>
<tr>
<th>Pre-Construction</th>
<th>Construction</th>
<th>Operation &amp; Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Site Surveys &amp; Investigations</strong></td>
<td><strong>Contractors' Camps.</strong></td>
<td><strong>Increased employment opportunities</strong></td>
</tr>
<tr>
<td>- Inducement of uncertainties relating to land acquisition</td>
<td><strong>Employment</strong></td>
<td><strong>Increased economic activity</strong></td>
</tr>
<tr>
<td>- Stimulation of new construction to obtain higher compensation</td>
<td>- Employment opportunities for local population</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Conflicts between the imported workers and local population</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Risk of HIV/AIDS and other transmittable diseases</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Inducement of traffic congestion &amp; related road safety hazards</td>
<td></td>
</tr>
<tr>
<td>Land &amp; Property Acquisition</td>
<td>Clearance of Site</td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------</td>
<td></td>
</tr>
<tr>
<td>• Loss of and displacement from homestead land</td>
<td>• Interference with utility services</td>
<td></td>
</tr>
<tr>
<td>• Loss of agricultural land and other productive assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Loss of business/commercial land or premises</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Loss of public buildings and facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Loss of cultural heritage/Resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Loss of sensitive habitats</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Construction Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Loss of and displacement from productive land</td>
</tr>
<tr>
<td>• Waterborne disease risks/Safety hazard on abandonment</td>
</tr>
<tr>
<td>• Visual alteration in landscape quality</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Construction Traffic</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Damage to road pavement &amp; structures</td>
</tr>
<tr>
<td>• Increased traffic congestion &amp; related road safety hazards.</td>
</tr>
</tbody>
</table>
8.10 IMPACT MITIGATION
Impact mitigation includes the principles, procedures and mitigation measures that are relevant and suitable to the project for ensuring the most appropriate environmental mitigation and enhancement plans applicable during different stages of project implementation. To avoid and minimize the impacts resulting from the activities of the different sub-projects, measures/management plans, which are essential to mitigate the impacts as discussed, are based upon appropriate technological design, improvements or adjustments, policy including good site operational practices etc.

Environmental and social impacts of the subprojects can broadly be classified as those taking place during pre-construction, construction and operational phases. The overall strategy has the following sequence:

- Impact avoidance: Changing project location, design and construction methods to avoid impacts.
- Impact minimization: Where impacts cannot be avoided, implementing mitigation measures to reduce the impact to acceptable levels.
- Compensation: Arranging compensation where impacts cannot be avoided or sufficiently mitigated.
- Enhancement: measures, which, at insignificant cost to the project, give appreciable social or developmental benefits.

The mitigation plan is adopted to highlight the action procedures to avoid/ minimize/ control the resultant impacts arising out of the different project phases i.e. pre-construction, construction and operation.

8.11 LAND ACQUISITION FOR PROJECTS
Land Acquisition is the action of acquiring private land by the state as per provisions of the law of the land. The earliest law on such land acquisition in the territory of present Bangladesh was the Bengal Regulation I of 1824 enacted to promote British commercial interests in salt manufacture. This law was repealed and replaced by Act I of 1850. By Act XLII of 1850, construction of railways was declared a public purpose and summary powers were assumed by the government to expedite acquisition of land as well as taking earth for construction of roads, canals, and railways.

Act VI of 1857 consolidated various laws on the subject. This act was made applicable to the whole of British India. But it did not provide for acquisition of land for private companies. A new law entitled Act XXII of 1863 was enacted to authorize the Governor
General-in-Council to declare projects dealing with Irrigation, navigation, and improvement of docks and harbors as work of public utilities. This process of modification and consolidation continued till enactment of Act X of 1870.

The Act of 1894 made the collector's award of compensation final, unless altered by a decree of the civil court in a regular suit. The object of the act was to provide a speedy method of determining the compensation to be followed for acquiring land. This was a comprehensive law, which also provided for emergency situations. To mitigate the hardships of those affected, the collector was put under legal obligation to pay compensation on the basis of provisional estimates as under:

(a) 10% for structures and buildings;
(b) 75% for households, overheads and orchards; and
(c) 50% for vacant ‘nal’ lands.

The Acquisition and Requisition of Immovable Property Ordinance 1982 (Ordinance 11 of 1982), now constitutes the sole instrument of land acquisition in Bangladesh (except in the 3 hill districts). This law provides for acquisition and requisition of immovable properties for a public purpose or in the public interest. Places of worship, graveyard or cremation ground, however, were exempted. Detailed procedures have been prescribed to ensure that a deputy commissioner proceeds systematically and on sound principles in such cases, leaving room for owners to raise objections which must be disposed of after due hearing.

This delegation of decision-making power was dictated by the delay in the acquisition process under the previous law. Delay in acquisition of land caused delay in the implementation of development projects. Moreover, foreign financing agencies were insistent upon expeditious land acquisition. Accordingly, a time limit was fixed according to the following scheme:

(a) if the quantity of land proposed to be acquired was up to 50 bighas and there was no objection - 45 days; and if objection was raised - 75 days; and
(b) if the quantity was over 50 bighas and no objection was raised - 105 days; and if objection was raised - 135 days. An additional maximum time limit of 112 days was allowed for finalization of the award. Thus the maximum time of finalization of an acquisition case is now 187 days if the quantity of land is up to 50 bighas and 274 days if it is over 50 bighas.

Laws, rules and procedures for land acquisition in the plain land districts of Bangladesh do not apply in the Chittagong Hill Tracts, which now comprise the three districts of Rangamati, Khagrachhari and Bandarban.
8.11.1 Steps in Land Acquisition
The following are the major steps of Bangladesh Government’s Immovable and Movable Properties / Land Acquisition (LA) after the finalization of the engineering designs:

- Preparation of the land acquisition proposals (LAPs)
- LAPs submitted to the Ministry for administrative approval
- Administrative approval received from the Ministry
- LAPs submitted to the Deputy Commissioners (of respective Districts)
- LAPs approved by the District Land Acquisition Committees (DLACs)
- LAPs approval by the Ministry of Land
- Notice-3 issued by the DCs
- Notice-6 issued by the DCs
- Notice-7 issued by the DCs
- Compensation Budgets submitted by the DCs to project authority
- Compensation Budgets forwarded to the concerned Line Ministry for approval
- Compensation Budgets approved by the Ministry
- Authority to place the Compensation funds with the DCs
- DCs start the payment of the ‘compensation under the law’ (CUL)

8.12 RESETTLEMENT ACTION PLAN (RAP)

8.12.1 Land Acquisition Plan
For any land acquisition a Land Acquisition Plan (LAP) is needed. Preparation of the land acquisition plans will include locating each of the components; sorting out the ownership status of the lands in which project shall be established; and preparing the schedules of plots (with ‘dag’ or Plot numbers and other information required by the acquiring body) from which lands are to acquired. These are the documents the relevant project authority will submit to DC along with a request to start the acquisition process. LAPs will be prepared for proposed site and will ensure that the total amount of land in the individual acquisition packages DoEs not exceed 50 standard bighas, which the Divisional Commissioners can approve without referring to the Ministry of Land.

8.12.2 Resettlement Types
For acquisition of land, if the SIA indicates that a resettlement Action Plan (RAP) is required, then the project sponsor will engage a Social Specialist who will prepare a RAP with the assistant of NGO, considering all World Bank OPs.
i) **Short RAP**: As per WB OP 4.12, where impacts on the entire displaced population are minor or fewer than 200 people are displaced, an is required.

ii) **Full RAP**: In other cases, a full RAP is to be prepared.

Resettlement effects result from a wide range of project types envisaged under the BEZA. These range from small plots of land required for schools or health centers may create limited resettlement effects. Long alignments required for power lines, roads, railways, or canals may cause resettlement along a narrow right of way, or disrupt community networks, dividing roads, paths, irrigation systems, and landholdings. Most types of projects have the resettlement effects as set out in the table below:

**Table 9.4: Resettlement in Different Project Types**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Project Components</th>
<th>Type of Resettlement Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power and Energy</td>
<td>• Transmission alignment</td>
<td>• Minor resettlement effects from construction of pylons. These might be severe if landholdings are small. Right-of-way restrictions, without land acquisition, might affect people’s land use along the transmission alignment. May require temporary land borrow during construction</td>
</tr>
<tr>
<td></td>
<td>• Power generation plants, transmission stations, substations, and access roads</td>
<td>• May cause severe localized effects, and temporary land borrow during construction. Power plants may cause resettlement effects through pollution of land, air, or water.</td>
</tr>
<tr>
<td></td>
<td>• Hydroelectric power reservoirs</td>
<td>• Reservoir construction can have severe and often widespread effects, displacing whole communities from construction and inundation areas, and disrupting patterns of communication, landholdings, social and economic systems, and resource use. Temporary land borrow for construction.</td>
</tr>
<tr>
<td>Sector</td>
<td>Project Components</td>
<td>Type of Resettlement Effect</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>---------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Transport</td>
<td>• Road or rail alignment</td>
<td>• Resettlement effects over alignment. Disruption can usually be addressed within existing community units because alignment is narrow. However, if the alignment is long, cutting across administrative boundaries, the distribution of responsibilities may be unclear and entitlements may vary between sections. Alignments might divide landholdings, local roads and paths, irrigation systems, economic and social networks, or access to resources. May require temporary land borrow for construction.</td>
</tr>
<tr>
<td></td>
<td>• Associated stations, terminals, bridges</td>
<td>• May cause localized resettlement effects, and necessitate temporary land borrow for construction.</td>
</tr>
<tr>
<td></td>
<td>• Airports, seaports, river ports</td>
<td>• Severe resettlement effects for communities currently occupying land are possible. Can displace whole communities, or disrupt patterns of communication, landholdings, social and economic systems and resource use. Temporary land borrow for construction.</td>
</tr>
<tr>
<td>Water supply and sanitation</td>
<td>• Reticulation systems</td>
<td>• Temporary land borrow. Use of existing rights-of-way (for example, roads) can minimize disruption. Narrow land corridors might be acquired permanently with minor disruption.</td>
</tr>
<tr>
<td></td>
<td>• Pumping stations, treatment sites</td>
<td>• May cause more severe localized effects. Temporary land borrow for construction.</td>
</tr>
<tr>
<td></td>
<td>• Reservoirs for water supply</td>
<td>• Reservoir construction can have severe and often widespread effects.</td>
</tr>
<tr>
<td>Sector</td>
<td>Project Components</td>
<td>Type of Resettlement Effect</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Solid waste</td>
<td>• Transfer stations, landfill sites</td>
<td>• May cause severe localized effects</td>
</tr>
<tr>
<td>Urban renewal</td>
<td>• Urban infrastructure sites</td>
<td>• May cause severe localized effects</td>
</tr>
<tr>
<td>Health</td>
<td>• Sites for hospitals, clinics, teaching facilities</td>
<td>• May cause severe localized effects. Communities might be prepared to volunteer small sites for community services.</td>
</tr>
<tr>
<td>Education</td>
<td>• Sites for schools, training institutions, etc</td>
<td>• May cause severe localized effects. Communities might be prepared to volunteer small sites for community services.</td>
</tr>
<tr>
<td>Irrigation and Flood control</td>
<td>• Canal alignments, protective embankments, and associated works • Dams</td>
<td>• Resettlement effects over a narrow alignment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Dam construction can have severe and widespread effects</td>
</tr>
<tr>
<td>Mining operations</td>
<td>• Strip mining</td>
<td>• May cause severe localized effects, or resettlement effects due to severe loss of environmental quality (ex. Polluted land or water)</td>
</tr>
<tr>
<td>Forestry developments</td>
<td>• Reforestation, industrial plantations, forest closure</td>
<td>• May cause loss of access to forest products for cash and subsistence. Loss of grazing rights. Displacements of communities.</td>
</tr>
<tr>
<td>Parks, conservation sites</td>
<td>• National parks or biodiversity areas</td>
<td>• May cause loss of grazing rights, or disruption of grazing routes. May displace communities from park.</td>
</tr>
</tbody>
</table>
8.12.3 Resettlement Action Plan (RAP) Preparation

According to WB OP 4.12, the Resettlement Action Plan (RAP) for any project shall cover the following elements.

a) Description of the project:

General description of the project and identification of the project area

b) Potential impacts:

Identification of:

- The project component or activities that give rise to resettlement
- The zone of impact of such component or activities
- The alternatives considered to avoid or minimize resettlement
- The mechanisms established to minimize resettlement, to the extent possible, during project implementation

c) Objectives:

The main objectives of the resettlement program

d) Socio-economic studies:

The findings of socio-economic studies to be conducted in the early stages of project preparation and with the involvement of potentially displaced people, to include:

(a) The results of a census survey covering:

(i) Current components of the affected area to establish a basis for the design of the resettlement program and to exclude subsequent inflows of people from eligibility for compensation and resettlement assistance

(ii) Standard characteristics of displaced households, including a description of production systems, labor, and household organization; and baseline information on livelihoods (including, as relevant, production levels and income derived from both formal and informal economic activities) and standards of living (including health status) of the displaced population. The magnitude of the expected loss – total or partial – of assets, and the extent if displacement, physical or economic. Information on vulnerable groups or persons as provided for in OP 4.12, para. 8, for whom special provisions may have to be made.

(iii) provisions to update information on the displaced people's livelihoods and standards of living at regular intervals so that the latest information is available at the time of their displacement.
(b) Other studies describing the following

(i) land tenure and transfer systems, including an inventory of common property natural resources from which people derive their livelihoods and sustenance, non-title-based usufruct systems (including fishing, grazing, or use of forest areas) governed by local recognized land allocation mechanisms, and any issues raised by different tenure systems in the project area;

(ii) the patterns of social interaction in the affected communities, including social networks and social support systems, and how they will be affected by the project;

(iii) public infrastructure and social services that will be affected; and

(iv) social and cultural characteristics of displaced communities, including a description of formal and informal institutions (e.g., community organizations, ritual groups, nongovernmental organizations (NGOs)) that may be relevant to the consultation strategy and to designing and implementing the resettlement activities.

e) Legal Framework:
The findings of an analysis of the legal framework will cover the following:

(a) the scope of the power of eminent domain and the nature of compensation associated with it, in terms of both the valuation methodology and the timing of payment

(b) the applicable legal and administrative procedures, including a description of the remedies available to displaced persons in the judicial process and the normal timeframe for such procedures, and any available alternative dispute resolution mechanisms that may be relevant to resettlement under the project;

(c) relevant law (including customary and traditional law) governing land tenure, valuation of assets and losses, compensation, and natural resource usage rights; customary personal law related to displacement; and environmental laws and social welfare legislation;

(d) laws and regulations relating to the agencies responsible for implementing resettlement activities;

(e) gaps, if any, between local laws covering eminent domain and resettlement
and the Bank's resettlement policy, and the mechanisms to bridge such gaps; and

(f) any legal steps necessary to ensure the effective implementation of resettlement activities under the project, including, as appropriate, a process for recognizing claims to legal rights to land—including claims that derive from customary law and traditional usage (see OP 4.12, para.15 b).

f) Institutional Framework.

The findings of an analysis of the institutional framework will cover:

(a) the identification of agencies responsible for resettlement activities and NGOs that may have a role in project implementation;

(b) an assessment of the institutional capacity of such agencies and NGOs;

(c) any steps that are proposed to enhance the institutional capacity of agencies and NGOs responsible for resettlement implementation.

g) Eligibility.

The definition of displaced persons and criteria for determining their eligibility for compensation and other resettlement assistance, including relevant cut-off dates.

h) Valuation of and compensation for losses

The methodology to be used in valuing losses to determine their replacement cost; and a description of the proposed types and levels of compensation under local law and such supplementary measures as are necessary to achieve replacement cost for lost assets.

i) Resettlement measures.

A description of the packages of compensation and other resettlement measures that will assist each category of eligible displaced persons to achieve the objectives of the policy (see OP 4.12, para. 6). In addition to being technically and economically feasible, the resettlement packages should be compatible with the cultural preferences of the displaced persons, and prepared in consultation with them.
j) Site selection, site preparation, and relocation.
Alternative relocation sites considered and explanation of those selected, covering
(a) institutional and technical arrangements for identifying and preparing
relocation sites, whether rural or urban, for which a combination of
productive potential, locational advantages, and other factors is at least
comparable to the advantages of the old sites, with an estimate of the time
needed to acquire and transfer land and ancillary resources;
(b) any measures necessary to prevent land speculation or influx of ineligible
persons at the selected sites;
(c) procedures for physical relocation under the project, including timetables
for site preparation and transfer; and
(d) legal arrangements for regularizing tenure and transferring titles to
resettlers.

k) Housing, infrastructure, and social services.
Plans to provide (or to finance resettlers' provision of) housing, infrastructure (e.g.,
water supply, feeder roads), and social services (e.g., schools, health services);
plans to ensure comparable services to host populations; any necessary site
development, engineering, and architectural designs for these facilities.

m) Environmental protection and management.
A description of the boundaries of the relocation area; and an assessment of the
environmental impacts of the proposed resettlement and measures to mitigate and
manage these impacts (coordinated as appropriate with the environmental
assessment of the main investment requiring the resettlement).

n) Community participation. Involvement of resettlers and host communities
This includes the following components:
(a) A description of the strategy for consultation with and participation of
resettlers and hosts in the design and implementation of the resettlement
activities;
(b) a summary of the views expressed and how these views were taken into
account in preparing the resettlement plan;
(c) a review of the resettlement alternatives presented and the choices made by
displaced persons regarding options available to them, including choices
related to forms of compensation and resettlement assistance, to relocating
as individuals, families, or as parts of preexisting communities or kinship groups, to sustaining existing patterns of group organization, and to retaining access to cultural property (e.g., places of worship, pilgrimage centers, cemeteries).

(d) Institutionalized arrangements by which displaced people can communicate their concerns to project authorities throughout planning and implementation, and measures to ensure that such vulnerable groups as indigenous people, ethnic minorities, the landless, and women are adequately represented.

o) Integration with host populations.

Measures to mitigate the impact of resettlement on any host communities, including

(a) consultations with host communities and local governments;
(b) arrangements for prompt tendering of any payment due the hosts for land or other assets provided to resettlers;
(c) arrangements for addressing any conflict that may arise between resettlers and host communities; and
(d) any measures necessary to augment services (e.g., education, water, health, and production services) in host communities to make them at least comparable to services available to resettlers.

p) Grievance procedures.

Affordable and accessible procedures for third-party settlement of disputes arising from resettlement; such grievance mechanisms should take into account the availability of judicial recourse and community and traditional dispute settlement mechanisms.

q) Organizational responsibilities.

The organizational framework for implementing resettlement, including identification of agencies responsible for delivery of resettlement measures and provision of services; arrangements to ensure appropriate coordination between agencies and jurisdictions involved in implementation; and any measures (including technical assistance) needed to strengthen the implementing agencies' capacity to design and carry out resettlement activities; provisions for the transfer to local authorities or resettlers themselves of
responsibility for managing facilities and services provided under the project and for transferring other such responsibilities from the resettlement implementing agencies, when appropriate.

**r) Implementation schedule.**

An implementation schedule covering all resettlement activities from preparation through implementation, including target dates for the achievement of expected benefits to resettlers and hosts and terminating the various forms of assistance. The schedule should indicate how the resettlement activities are linked to the implementation of the overall project.

**s) Costs and budget.**

Tables showing itemized cost estimates for all resettlement activities, including allowances for inflation, population growth, and other contingencies; timetables for expenditures; sources of funds; and arrangements for timely flow of funds, and funding for resettlement, if any, in areas outside the jurisdiction of the implementing agencies.

**t) Monitoring and evaluation.**

Arrangements for monitoring of resettlement activities by the implementing agency, supplemented by independent monitors as considered appropriate by the Bank, to ensure complete and objective information; performance monitoring indicators to measure inputs, outputs, and outcomes for resettlement activities; involvement of the displaced persons in the monitoring process; evaluation of the impact of resettlement for a reasonable period after all resettlement and related development activities have been completed; using the results of resettlement monitoring to guide subsequent implementation.

**8.12.4 Abbreviated Resettlement Plan**

Where the impacts on the entire displaced population are minor, or fewer than 200 people are displaced, an abbreviated resettlement plan may be agreed with the project sponsor. This is in line with OP 4.12 para. 25. Information disclosure procedures set forth in para. 22 are applicable.

An abbreviated plan covers the following minimum elements:

- (a) a census survey of displaced persons and valuation of assets;
- (b) description of compensation and other resettlement assistance to be provided;
- (c) consultations with displaced people about acceptable alternatives;
- (d) institutional responsibility for implementation and procedures for grievance
redress

(e) arrangements for monitoring and implementation

(f) a timetable and budget.

8.13 INDIGENOUS PEOPLES DEVELOPMENT PLAN (IPDP)

If the SIA indicates the need for an Indigenous Peoples Development Plan IPDP, then an IPDP is will be prepared by the project sponsor through social experts. The level of detail will vary depending on the nature of the sub-project and the nature of the effects to be addressed. The IPDP will include the following elements, as mentioned in the WB OP 4.10.

(a) a summary of the information referred to in the OP.

(b) A summary of the social assessment.

(c) A summary of results of the free, prior, and informed consultation with the affected Indigenous Peoples’ communities that was carried out during project preparation and that led to broad community support for the project.

(d) A framework for ensuring free, prior, and informed consultation with the affected Indigenous Peoples’ communities during project implementation (see paragraph 10 of this policy).

(e) An action plan of measures to ensure that the Indigenous Peoples receive social and economic benefits that are culturally appropriate, including, if necessary, measures to enhance the capacity of the project implementing agencies.

(f) When potential adverse effects on Indigenous Peoples are identified, an appropriate action plan of measures to avoid, minimize, mitigate, or compensate for these adverse effects.

(g) The cost estimates and financing plan for the IPP.

(a) Accessible procedures appropriate to the project to address grievances by the affected Indigenous Peoples’ communities arising from project implementation. When designing the grievance procedures, the borrower takes into account the availability of judicial recourse and customary dispute settlement mechanisms among the Indigenous Peoples.

(b) Mechanisms and benchmarks appropriate to the project for monitoring, evaluating, and reporting on the implementation of the IPP. The monitoring and evaluation mechanisms should include arrangements for the free, prior,
and informed consultation with the affected Indigenous Peoples’ communities.

8.14 GRIEVANCE REDRESS MECHANISM
Despite best efforts to arrive at fair rewards in project involving involuntary resettlement, there will always be a few unsatisfied citizens. The relevant authority will make efforts at project level to resolve grievances through negotiations involving community leaders and PAP’s representatives. Grievance Resolution Committee: In case the dispute is not resolved at local level, the matter through submission of a relevant formal reference would be placed before a Grievance Resolution Committee. Grievance Resolution Committee (GRC) shall be constituted consisting of a panel of five (5) Members, one of whom shall be community relation officer, to be appointed by the concerned authority. Other members would include two (2) representatives from the PAPs community of the project area, those who are would publicly known to be persons of integrity, good judgment and command respect.
PART-D OPERATIONAL MANUAL

9 OPERATIONAL MANUAL

9.1 SEQUENCE OF TASKS OF THE ESMF IN DIFFERENT PHASES OF BEZA PROJECT

The ESMF tasks have been grouped in five phases, as mentioned below. The activities, by a project sponsor, in different phases are described in detail in the subsequent sections. The phases are:

i). Pre-Construction Phase
ii). Land Acquisition Phase
iii). Financing Phase
iv). Construction Phase
v). Post-Construction Operation Phase

i). PRE-CONSTRUCTION PHASE

1. Environmental and Social Screening, report on Impact Identification and project alternatives (prepared by the sponsor)

2. Initial Environmental Examination IEE, (with TOR for EIA)

   *Site Clearance Certificate (SCC) obtained for minor civil works.*

3. Social Impact Assessment (SIA), after base line data collection, will include:
   - Social Management Plan (SMP), with Mitigation measures
   - Rehabilitation Plan (RP)

4. Environmental Impact Assessment EIA, will include:
   - Environmental Management Plan EMP

*Environmental Clearance Certificate (ECC) obtained and Project Construction may start, subject to availability of fund.*

ii). LAND ACQUISITION PHASE

Case i) LAND PURCHASE BY SPONSOR (THROUGH NEGOTIATION)

1. Land is purchased directly by the Sponsor, through negotiation with the landowners. The usual policy is to pay the market price or the replacement value of the land and the structures. A ‘Land Acquisition Specialist’ engaged by the project sponsor (or requiring body, RB) and its representative works jointly, in collaboration with a Legal Advisor.

*No RAP is required in such cases and development may start immediately.*
Case ii) LAND ACQUISITION BY GOB (WITH GOB OR SPONSOR FUND)

1. Land Acquisition Plan (LAP), prepared by requiring body, RB. Includes:
   - Land plot schedule of the project foot-print area, along with Mouza maps
   - Entitlement list and Compensation package prepared by joint verification survey, by representatives of RB and DC’s office

2. Estimated land compensation money deposited by RB and Compensation payment made by DC to the affected persons.

*Land acquired and handed over to RB and development starts*

Case iii) LAND ACQUISITION BY GOB (FOR AVAILING WORLD BANK FINANCES)

1. Disclosure (of Project information) and Consultations (with potential affected persons), by project sponsor and/or engaged consultants.

2. Socio-Economic (sample) Survey, PRA and FGD in Project and Surrounding Area, the methodology depending on pattern of livelihood and other parameters.

3. Resettlement Action Plan (RAP) preparation, after Socio-economic (census) Survey in the Project footprint area. The RAP will include:
   - Project Affected People (PAP) list
   - Compensation policy
   - Compensation Matrix and Entitlement Plan
   - Relocation Plan (RP), if any
   - Indigenous People Development Plan, IPDP (if required)

   [For projects not requiring specific resettlement and LA studies, a ‘Social Performance Framework’ will be sufficient]

4. Engagement of RAP Implementation Agency (Consulting Company or NGO)

5. Disclosure of RAP information and Consultations with PAP

6. Grievances and Redress Mechanism management

7. RAP approved by WB

8. Compensation Payment to PAP
   - Compensation as per GoB policy by DC
   - Additional Entitlement to PAP, by the project

iii). FINANCING PHASE

*Loan Application is submitted to BEZA, by the private sector sponsor, at the stage when*
the project is awarded by the public sector and agreement signed between them. By the time most of the studies have been completed and the land is acquired.

1. Review of and due diligence on already completed EIA and SIA Reports. Assess if all issues have been adequately addressed. Decide if further alternatives are to be examined.

iv). **CONSTRUCTION PHASE**

1. Implementation of Environmental Management Plan (EMP) and its monitoring
2. Monitoring of Management Plan (SMP), which includes RAP, Relocation, Livelihood restoration, Training activities, etc.)

v). **POST-CONSTRUCTION OPERATION PHASE**

1. Environmental and Social Audit, as per recommendation of EIA and SIA.
2. Regular monitoring of environmental issues as per EMP, and keep records.

9.1.1 **Pre-Construction Phase Activities**

After identification of an infrastructure project in PPP, the project sponsor will carry out the Environmental and Social screening of the project. After screening, sponsor will apply for site clearance certificate for stating the project at site.

a) **Procedure For Issuing Site Clearance Certificate**

For obtaining the SCC, the following two documents need to be submitted to the DOE:

1. an Initial Environmental Examination (IEE) Report and
2. a TOR for detailed Environmental Impact Assessment (EIA) with a process flow diagram.

b) **The Content of Initial Environmental Examination (IEE) Report**

IEE is an important tool which should be carried out as early as the project planning stage as part of feasibility thus it can assure that the project will be environmentally feasible.

The contents of an IEE report are stated below:

A  Introduction
B  Description of the Project
C  Description of the Environment
D  Screening of Potential Environmental Impacts and Mitigation Measures
E  Institutional Requirements and Environmental Monitoring Plan
F  Public Consultation and Information Disclosure
G  Findings and Recommendation
H  Conclusions
The detail of the contents is stated below.

A Introduction
This section usually includes the following:
- Purpose of the report, including (a) identification of the project and project proponent; (b) brief description of the nature, size, and location of the project and of its importance to the country; and (c) any other pertinent background information; and
- Extent of the IEE study: scope of study, magnitude of effort, person or agency performing the study, and acknowledgement.

B Description of the Project
Furnish sufficient details to give a brief but clear picture of the following (include only applicable items):
- type of project;
- category of Project;
- need for project;
- location (use maps showing general location, specific location, and project site);
- size or magnitude of operation;
- proposed schedule for implementation; and
- descriptions of the project, including drawings showing project layout, and project components. This information should be of the same type and extent as is included in feasibility reports for proposed projects to give a clear picture of the project and its operations.

C Description of the Environment
Furnish sufficient information to give a brief but clear picture of the existing environmental resources in the area affected by the project, including the following (to the extent applicable):

(a) Physical Resources: (e.g.)
- atmosphere (e.g. air quality and climate)
- topography and soils,
- surface water
- groundwater
- geology/ seismology.

(b) Ecological Resources: (e.g.)
• fisheries
• aquatic biology
• wildlife
• forests
• rare or endangered species
• protected areas
• coastal resources

(c) Economic Development: (e.g.)
• Economic Zones
• industries
• infrastructure facilities (e.g. water supply, sewerage, flood control)
• transportation (roads, harbors, airports, and navigation)
• land use (e.g. dedicated area uses)
• power sources and transmission
• agricultural development, mineral development, and tourism facilities

(d) Social and Cultural Resources: (e.g.)
• population and communities (e.g. numbers, locations, composition, employment
• health facilities and education facilities
• socio-economic conditions (e.g. community structure, family structure, social wellbeing)
• physical or cultural heritage
• current use of lands and resources for traditional purposes by Indigenous Peoples
• Structures or sites that are of historical, archaeological, pale ontological, or architectural significance.

D Screening of Potential Environmental Impacts and Mitigation Measures
Using the checklist of environmental parameters for projects, this section will screen out “no significant impacts” from those with significant adverse impact by reviewing each relevant parameter according to the following factors or operational stages. Mitigation measures, where appropriate, will also be recommended environmental problems due to project location, and related to project design, construction, and operations. Potential
environmental enhancement measures and additional considerations will also be covered.

E  Institutional Requirements and Environmental Monitoring Plan
This section should state the impacts to be mitigated, and activities to implement the mitigation measures, including how, when, and where they will be implemented. Institutional arrangements for implementation should be described. The environmental monitoring plan will describe the impacts to be monitored, and when and where monitoring activities will be carried out, and who will carry them out. The environmental management and monitoring costs should also be described.

F  Public Consultation and Information Disclosure
This section will describe the process undertaken to involve the public in project design and recommended measures for continuing public participation; summarize major comments received from beneficiaries, local officials, community leaders, NGOs, and others, and describe how these comments were addressed; list milestones in public involvement such as dates, attendance, and topics of public meetings; list recipients of this document and other project related documents; describe compliance with relevant regulatory requirements for public participation; and summarize other related materials or activities, such as press releases and notifications. This section will provide of summary of information disclosed to date and procedures for future disclosure.

G  Findings and Recommendations
This section will include an evaluation of the screening process and recommendation will be provided whether significant environmental impacts need further detailed study or EIA. If there is no need for further study, the IEE itself, which at times may need to be supplemented by a special study in view of limited but significant impacts, becomes the completed environmental assessment for the project and no follow-up EIA will be needed. If an EIA is needed, then this section will include a brief terms of reference (TOR) for the needed follow-up EIA, including approximate descriptions of work tasks, professional skills required, time required, and estimated costs. The Bank's Environment Guidelines provides a guide for preparing the TOR for different projects.

H  Conclusions
This section will discuss the result of the IEE and justification, if any, of the need for additional study or EIA. If an IEE, or an IEE supplemented by a special study, is sufficient for the project, then the IEE with the recommended institutional and monitoring program becomes the completed EIA.
9.1.2 Criteria For Site Clearance Of Projects/Industries

For establishing industrial plant, following criteria have been proposed to consider in the Industrial Guidelines prepared by DOE;

(a) The location of an industry should be in the area, which is designated or likely to be designated as an industrial zone under the town and country planning regulations.

(b) The sites for industries of the Orange and Red categories should be away from the following features by the minimum distance shown against them.

<table>
<thead>
<tr>
<th></th>
<th>Environmentally or other sensitive areas</th>
<th>10 km (may extend sitting 25 km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>High tide line in coastal areas, or natural or modified flood plain boundary</td>
<td>0.5 km</td>
</tr>
<tr>
<td>3.</td>
<td>Boundary of the nearest human settlement</td>
<td>1.5 to 10 km (depending upon the size of settlement)</td>
</tr>
<tr>
<td>4.</td>
<td>Highway/ Railway boundary</td>
<td>0.5 km</td>
</tr>
</tbody>
</table>

(c) No “forest land” or prime agricultural land shall be used as industrial sites.

(d) The industrial premises should be adequately large to provide for;

(i) Storage of solid wastes;

(ii) Treatment of waste water;

(iii) Reuse of treated waste water, if feasible; and

(iv) Green belt of 15 to 100 meter width around the site perimeter, depending upon the size and pollution potential of the industry.

(e) Industrial plants with high potential for pollution should not be located in or near;

(v) Catchments areas of public water supply reservoir;

(vi) Recharge area of aquifer of present or possible water supply use;

(vii) Areas known to suffer from frequent inversions;

(viii) A habit of endangered species;

(ix) Areas prone to flooding or earthquake.

Other factors, which need to be taken into consideration from the point of view of potential impacts include,

(a) Assimilative capacity of receiving body of water;

(b) Effect on availability of existing infrastructure facilities to the local population like water supply, housing, power;
(c) Likely induced growth around the industrial site; and
(d) Views of the local people likely to be affected.

9.1.3 Procedure for Issuing Environmental Clearance Certificate

After receiving the SCC, the sponsors need to proceed for ECC. The EIA has to be submitted to DoE for clearance. The EIA will include the following documents:

- No objection certificate from local authority
- Outline of the plan for relocation and rehabilitation (if applicable
- Feasibility report
- Environmental Management Plan (including process flow diagram, layout plan, effluent treatment plant and its effectiveness)
- Emergency Plan relating to adverse environmental impact and plan for mitigation of the effects of pollution
- Detail Plan for addressing the DoE approved ToR

Issuance of Environmental Clearance Certificate by DOE for the industrial units and projects depends on their site and impact on the environment. The procedures for each category are described in detail in ECA 1995. After ECC is obtained, project construction may start, subject to availability of fund.

### Table 10.1 Validity Period of Environmental Clearance Certificate

<table>
<thead>
<tr>
<th>Categories of Project</th>
<th>Validity</th>
<th>Renewal Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>1 year</td>
<td>30 days before expiry of the validity period</td>
</tr>
<tr>
<td>Orange A &amp; B</td>
<td>1 year</td>
<td></td>
</tr>
<tr>
<td>Red</td>
<td>3 year</td>
<td></td>
</tr>
</tbody>
</table>

9.1.4 Land Acquisition Phase

The land procurement for the project may happen in three different ways;

1. Land purchase by the sponsor through negotiation
2. Land acquisition by GoB, with GoB or sponsor fund
3. Land acquisition by GoB for availing World Bank finances

In case 1, no RAP will be required as the purchase is done from willing seller, by directly paying the cost of land and structures.

In case 2, the land acquisition will be done by the concerned Deputy Commissioner following the law of the land.

In case 3, the land acquisition process must be in conformity with World Bank safeguard
policies, as WB fund will be utilized for land acquisition or development of the project. All these have been described in relevant chapter of this framework.

9.1.5 Construction Phase
During the construction phase, BEZA project will monitor the implementation of Environmental Management Plan (EMP) and Social Management Plan (SMP). This will include monitoring of RAP, Relocation, Livelihood restoration, Training activities, etc.

9.1.6 Post-Construction Operation Phase
In the operation phase BEZA project will not have much activity with regards to ESMF. However, an Environmental and Social Audit is recommended as per EIA and SIA.

9.2 INSTITUTIONAL FRAMEWORK FOR ESMF IMPLEMENTATION

9.2.1 Environment and Social Cell (ESC) of BEZA
To coordinate the environmental and social assessment processes and to ensure the effective implementation of the Environmental and Social Management Plan, the Project Director (the BEZA project) will establish an Environment and Social Cell (BEZA ESC). BEZA may also hire a consulting company for the purpose, who will work on behalf of the BEZA project.

This ESC (or the hired company) should have an ‘E & S Manager’/Specialist from the Project Director’s senior management who will assume responsibility for overseeing all environmental and social matters, ensure resources are made available for the E&S management. The E & S Manager may be supported by an Environment Specialist and Social Specialist who should be technically qualified, to implement and supervision activities. The E&S Manager and his Specialist should ensure the investment teams and legal counsels are all trained on the E&S policy and procedures and can call for meetings to discuss any policy or project related issues.

The Project Director should build and maintain a roster of qualified E&S consultants who can be called upon to assist for E&S reviews. It is strongly recommended that E&S responsibilities and outcomes be included in fund employees’ performance measurement system.

9.2.2 The Project Management Unit (PMU) in Sub-project
Each sub-project will establish a Project Management Unit (PMU). Implementation of the ESMF will be the responsibility of this PMU and its monitoring would be the responsibility of the ESC of BEZA.
Key responsibilities of PMU will include the following:

- Procurement of works, goods and services as per Annual Plan Operation (APO) following World Bank and GOB rules.
- To monitor and prepare reports on physical and financial progress of implementation
- To maintain financial accounts
- To conduct technical, financial and procurement audit.
- To ensure implementation of Environmental and Social Management Plan (ESMF) as set out in the Environmental Assessment (EA).
- To expedite the Land Acquisition process and provide compensation to the Project Affected Persons (PAPs) and implementation of Resettlement Action Plan (RAP)
- To liaise with the ministries / planning commissions and other institutions / agencies / ministries etc., if required.
- To make timely and efficient disbursements to all the parties working on the project.
- To prepare Implementation Completion Report (ICR) and Operational Plan (OP).

9.2.3 Project Environmental and Social Cell (PESC) under sub-project

Each PMU will also establish a Project Environmental and Social Cell (PESC)

The Functions of PESC will be:

- Ensure implementation of the ESMF throughout the project implementation period,
- Ensure integration of the ESA & resulting ESMF into the sub-project design and implementation plans (contract documents)
- Monitor implementation of the mitigation measures by the Contractors,
- Assist the Engineers at site by providing appropriate environmental and social advice, and developing appropriate environmental and social mitigation measures for the sub-projects
- Assist PMU to carry out participatory consultation during planning, design and implementation of the sub-projects
- Prepare regular periodic progress reports on the implementation of the ESMF throughout the project implementation period.
9.2.4 Resettlement Unit (RU) under PESC

Every Project Environment and Social Cell (PESC) shall set up a Resettlement Unit (RU) to organize, manage and coordinate works related to preparation and implementation of the Resettlement Plan. It should be mentioned that this RU shall be formed only for implementation of the resettlement plan. The RU will be responsible for coordination, management and day to day monitoring of the resettlement work and all works related to RAP and to determine entitlement package for each affected person.

9.3 ESMF IMPLEMENTATION BUDGET

In view of the environmental and social management measures suggested above to be implemented, necessary budgetary provisions should be made for different components of individual projects. Tentative budget for each of the projects should include the environmental management costs other than the good engineering practices, cost of environmental and resettlement monitoring. It is assumed that each of the sub-projects involving civil works will involve environmental and resettlement costs. These costs do not involve administration costs of environment and social staff at PMU.

A sample table for details of costs is provided in table below.

<table>
<thead>
<tr>
<th>Table 10.1: ESMF Implementation Budget (sample)</th>
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</table>

| Project Name: ________________________________ |

<table>
<thead>
<tr>
<th>Components, with Sub-Component</th>
<th>Env. Monitoring</th>
<th>R&amp;R Monitoring</th>
<th>Env. Management.</th>
<th>RAP Budget</th>
<th>Training/ Capacity Building Budget</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
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9.4 MONITORING OF ESMF

The objectives of ESMF monitoring are

- To provide timely information about the success or otherwise of the Environmental and Social Management process outlined in the ESMF in such a manner that changes can be made as required to ensure continuous improvement to the process;
and

- To evaluate the performance of the ESMF by determining whether the mitigation measures designed in the project have been successful in such a way that the pre-program environmental condition has been restored, improved upon or worse than before and to determine what further mitigation measures may be required.

It is suggested that environmental monitoring studies should be conducted separately because different activities during construction and operation period of the Project will result in different possible environmental impacts. Monitoring plan of the project is presented in construction and operation phases, respectively.

### 9.4.1 Construction Phase Monitoring

Monitoring every environmental and social parameter continuously is not practical and necessary. Environmental and social monitoring functions according to the characteristics of existing environmental and social conditions and identifies unacceptable changes during construction period. In this context, monitoring plan is designed to commit that “project activities have no permanent negative effect on environmental resources”.

For construction period, different components of Environment and social issues relevant to the project will be monitored and the results will be compared to legal limiting values.

### 9.4.2 Operational Phase Monitoring

In the operational phase of the project, fewer environmental and social impacts are expected than construction period. In addition, it is also recommended to carry out social survey prior to the operational phases in order to determine the needs of the local society and to develop social responsibility projects. Furthermore, in the operational phase of the project, there should be a routine social monitoring to follow up the development of the social responsibility projects and to record and resolve any complaint about the operations of project.
9.4.3 Monitoring Plan

Table 10.2: Monitoring Plan of ESMF

<table>
<thead>
<tr>
<th>Phase</th>
<th>What is to be monitored</th>
<th>Where is the parameter be Monitored</th>
<th>How is the parameter to be monitored</th>
<th>When is the parameter to be monitored frequency of measurement</th>
<th>Monitoring cost</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
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<tr>
<td>Operation</td>
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9.5 ESMF AUDITING FRAMEWORK

Audit is the process to review the effectiveness of environmental and social management. Its objectives are to:

- Determine whether a project complies with all regulatory and environmental and social performance standards or other management requirements for their operations.
- Ensure conformity with environmental and social assessment requirements, and test the accuracy of the assessment. It entails a systematic, documented and periodic review of project implementation. Therefore, its results could be very useful to improve project management performance.
The principal focus of the audit will be to assess the extent to which the ESMF has led to the implementation of the environmental codes of practices, appropriate mitigation measures in accordance with the ESMFs/ Specifications in the sub-projects.

9.6 PERIODIC REPORTING ON ESMF
The ESMF is not a static document. It may be improved with passage of time, based on experience gathered in execution of different sub-projects.

The Project Director should require its environmental Specialist and Social Specialist along with the other officials to prepare periodic reports on ESMF. The BEZA should also provide proper and periodic ESMFS reports to its investors and other stakeholders. These internal and external reports can also form the basis of the reports which the Project Director is required to prepare annually and periodically to World Bank. Internally and in addition to the annual external investor/stakeholder report, the Project Director should use all these opportunities to review and adjust its E&S policies and procedures and identify areas for improving their implementation.

9.7 CLIMATE RISK MANAGEMENT AND ADAPTATION
Bangladesh is expected to be disproportionately impacted by changes in sea level, warming temperatures, stresses on forest and agricultural systems, and increased climate variability. Floods, tropical cyclones, storm surges and droughts are likely to frequent and severer in the coming years. BEZA Project’s role is to help Bangladesh to identify and implement "win-win" actions that bring both developmental and climate change benefits.

The BEZA will ensure climate resilience in sub-projects (Economic Zones) design and implementation.
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