

# ENVIRONMENTAL & SOCIAL MANAGEMENT FRAMEWORK (ESMF)

Promoting private sector investment through large scale adoption of energy saving technologies and equipment for garment sector

Bangladesh

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## List of Acronyms

ADB	Asian Development Bank
BAU	Business as Usual
BCCTF	Bangladesh Climate Change Trust Fund
BNBC	Bangladesh National Building Code
BOD	Biological Oxygen Demand
BOQ	Bill of Quantities
BP	Bank Procedures
CBN	Cost of Basic Needs
CBO	Community Based Organization
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Di-oxide
COD	Chemical Oxygen Demand
DG	Director General
DoE	Department of Environment
DPD	Deputy Project Director
DSC	Design and Supervision Consultancy
E&S	Environment & Safeguard
EA	Environmental Assessment
ECA	Environmental Conservation Act
ECC	Environmental Clearance Certificate
ECoP	Environmental Code of Practice
ECR	Environmental Conservation Rules
EE	Energy Efficient
EE&C	Energy Efficiency and Conservation
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
EMF	Environmental Management Framework
EMP	Environmental Management Plan
EMS	Environmental Management System
EPZ	Export Processing Zones
ESA	Environment and Social Assessment
ESC	Environmental and Social Considerations
ESIA	Environmental Social Impact Assessment
ESMF	Environment and Social Framework
ESMP	Environmental & Social Management Plan
ESMS	Environmental & Social Management System
ESSF	Environmental and Social Safeguard Framework
ETP	Effluent Treatment Plants
FDI	Foreign Direct Investment
FGD	Focus Group Discussion
FRE	Factory/Resident Engineer
FYP	Five Year Plan
GAP	Gender Action Plan

GAR	Gender Assessment Report
GCF	Green Climate Fund
GDP	Gross Domestic Product
GHG	Green House Gas
GIIP	Good International Industry Practice
GIS	Geographic Information System
GoB	Government of Bangladesh
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
HIES	Household Income and Expenditure Survey
ICT	Information and Communications Technology
IDCOL	Infrastructure Development Company Limited
IEE	Initial Environmental Examination
IFC	International Finance Corporation
INDC	Intended Nationally Determined Contributions
INGO	International Non-Governmental Organization
JICA	Japan International Cooperation Agency
KII	Key Informant Interview
LCD	Liquid-crystal display
LED	Light Emitting Diode
LGED	Local Government Engineering Department
LULUCF	Land use, land-use change, and forestry
M&E	Monitoring and Evaluation
MDSP	Multi-Purpose Disaster Shelter Plan
MoEF	Ministry of Environment and Forest
Mtoe	Million Tonnes of Oil Equivalent
NBR	National Board of Revenue
NGO	Non-Governmental Organization
NOC	No Objection Certificate
NO <sub>x</sub>	Nitrogen Oxide Gas
NRDC	Natural Resources Defense Council
OP	Operational Policies
PAP	Projects Affected Person
PC	Public Consultation
PCAIP	Public Consultation and Access to Information Plan
PFIs	Participating Financial Intermediaries
<i>PKSF</i>	<i>Palli Karma Sahayak Foundation</i>
PMO	Prime Minister's Office
PMU	Project Management Unit
PPE	Personal Protective Equipment
PPR	Public Procurement Rule
PWD	Public Works Department
R&D	Research and Development
RAP	Resettlement Action Plan
REDD	Reducing emissions from deforestation and degradation



RET	Renewable Energy Technologies
RMG	Ready-made Garments
SCM	Supply Chain Management
SDG	Sustainable Development Goals
SEC	Special Environmental Clause
SIA	Social Impact Assessment
SME	Small and Medium Enterprise
SMP	Social Management Plan
Sox	Sulphur Oxide Gas
SPS	Safeguard Policy Statement
SRIA	Strategic Research and Innovative Agenda
TOC	Theory of Change
TP	Tribal Peoples
UN	United Nation
UNFCCC	United Nations Framework Convention on Climate Change
VFD	Variable Frequency Drive
VGD	Vulnerable Group Development
VGf	Vulnerable Group Feeding
WB	World Bank
WDF	Washing, Dyeing and Finishing
WGB	World Bank Group

## EXECUTIVE SUMMARY

Improved energy efficiency in Bangladesh can lead to greater business growth and profitability at the local level; at the national level, it supports GDP growth and enhances energy security, and at a global level, it helps mitigate climate change and ensures sustainable global growth. For industries, energy efficiency reduces production costs and increases profits. This also reduces their carbon footprint at no additional cost (an important consideration in the face of international buyers' requirements). Among all the sub-sectors, Garment and textile sector (manufacturing sector) consumes maximum energy. As the Garment and Textile sector consumes maximum energy, it also holds a significant potential to reduce energy consumption. Valuing these benefits, in the current environment in Bangladesh, if energy-intensive industries (Garment and textile) in sectors with high savings potential start utilizing energy-efficient technologies, they will be poised to capture huge future economic opportunities. In addition to such economic benefits, the environmental impact of decreased energy usage and reduced carbon emissions, social impact by providing well-being and employment will create a more sustainable Bangladesh for future generations.

Based on the existing scenario of the RMG sector in Bangladesh, it is evident that the adoption of energy efficiency measures can considerably improve the socio-economic impact of the sector as well as reduce environmental impact. Infrastructure Development Company Limited (IDCOL) intends to realize these benefits by developing and implementing a program to support entrepreneurs and business establishments with financial and market resources to avail investment opportunities for energy-saving technology upgrades. IDCOL has solicited financial support from the Green Climate Fund (GCF) to execute this program. This fund will then be utilized as concessional loans to finance garment business via four local financial institutions (LFIs) i.e. City Bank Ltd, Southeast Bank Ltd, BRAC Bank Ltd, and IDLC Finance Ltd.

Accordingly, IDCOL had submitted a concept note to GCF, providing a brief of the program as well as a project preparation funding (PPF) application<sup>1</sup>. As a result of the approval of the PPF application, funds for project preparation activity have been provided by GCF to develop a financing proposal. Through this assignment, IDCOL intends to generate project-specific information required for developing the GCF financing proposal. KPMG India, Rahman Rahman Huq (KPMG Bangladesh), and C3ER, BRAC University is supporting IDCOL to develop the proposal.

For carrying out the environmental and social assessment of the program, factory surveys, consultations with different stakeholders, Key Informant Interviews (KII), review of EA reports of similar ongoing interventions, etc. were made. Factory visits were conducted to 20 selected RMG units. The literature review focused on current policies, legislation, procedures, and practices of the Government of Bangladesh (GoB), GCF, and the World Bank and other international organizations' operational policies on environmental and social safeguards.

The Environmental and Social Management Framework (ESMF) is prepared as per the requirement of the government of Bangladesh and Green Climate Fund (GCF) of Project/Program Financing. Given the development stage of the project, the exact location, size, and extent of the sub-projects are unknown at this level, and the details of the sub-projects will be finalized during the project implementation phase. Thus, the ESMF has been developed to provide guidance for screening and assessing environmental and social issues at sub-project level and prepare site-specific Environmental and Social Management System (ESMS). The ESMF will provide the necessary background for environmental and social considerations, a checklist of potential environmental and social issues of the Project activities to be considered and built into the design of the Program so that environmentally and socially sustainable implementation can take place. It will provide guidelines to carry out Environmental and Social Impact Assessment (ESIA), and to prepare Environmental and Social Management Plans (ESMP) to mitigate any negative social and environmental impacts of the project interventions.

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<sup>1</sup>Reference: [PPF Application for IDCOL \(GCF Website, 2018\)](#)

The existing national policies and legislations, international frameworks on environment, social and energy efficiency issues along with the Accredited Entity (IDCOL) and GCF's environmental and Social Safeguard Policies were reviewed for this document. Especially, the ESMS need to be aligned with the ECR 1997 and IFC's Performance Standards. Garments and sweater production are categorized in the 'Orange B' category in the Environment Conservation Rules, 1997. The potential adverse environmental and/or social risks and impacts related to the programme activities are individually or cumulatively generally site-specific, largely reversible, and readily addressed through adequate policy implementation and workplace standards. Thus, it is classified as a Category 'B' under the GCF Risk Categories. However, the program will be categorized as Medium level of intermediation, or I2 according to GCF guidelines as financial intermediation will be involved in the investment process. ***As per IFC's PS, the project will be aligned with PS1-4; PS5-8 will not be applicable for this particular project activities as it does not include any resettlement issues, involvement of indigenous people, direct impact on biodiversity and cultural heritage.***

The End Borrower will follow the related government rules (laws, ordinances, acts, etc.) and GCF Operational Policies and Guidelines. Participation of different relevant stakeholders along with the RMG workers and community people will be ensured during the planning and design of the sub-project. Besides, special attention will be given to ensure the participation of different vulnerable groups and gender inclusion. The ESMS should include environmental and social impacts assessment (ESIA) and ESMP to comply with the Environment and Social Safeguard (ESS) Standard of GCF on the assessment and management of environmental and social risks and impacts. Based on the results of the assessment, the ESMP will be designed such that the measures are adequately described, roles defined and the corresponding timelines and resources identified. Where the sub-project involves existing facilities, an environmental and social audit may be required, and the corresponding ESMP may include remediation, recompense or management of any residual environmental and social issues. The ESMP will be integrated into the overall planning, design, resourcing and execution of the GCF- financed activities as well as being reflected in the ESMS.

The ESMP mainly highlights the potential impacts of the project activities on environmental issues (energy consumption, air, water, noise, soil pollution, waste management) and social issues (labor and working conditions, equal opportunity despite of gender, race and religion, occupational health and safety, community health, safety and security, sexual harassment and conflict) both in the factory area as well as the adjacent community. Moreover, the ESMS shall integrate in the due diligence process a program-level Grievance Redress Mechanism (GRM) and program-level Stakeholder Engagement Plan (SEP). The GRM and SEP should ensure that the views of the various stakeholders and affected communities, including vulnerable women and indigenous peoples are reflected at the program-level outcomes. The PIU will be responsible for monitoring the GRM and will periodically report to the LFI and AE.

In order to effectively monitor the compliance with the stipulations given under ESMS (including monitoring compliance with developed ESMP), a robust institutional arrangement should be present. Each of the sub-projects will include a monitoring and evaluation plan to ensure proper implementation of the activities. A project implementation unit (PIU) will be responsible for monitoring and evaluation of the ESMS at sub-project level. There will be an project implementation unit (PIU) for each of 4 LFIs to monitor the sub-project activities. The FIs will collect screening reports, ESIA, periodic monitoring reports, stakeholder engagement reports and monitor the clients' ES performance and submit the reports to the AE. After getting clearance from the AE the final reports will be submitted to GCF and AE's website. For ease of the local stakeholders the ESIA and ESMP reports will be translated into Bengali and both the English and Bengali versions will be uploaded to the AE and GCF' website.

# 1 INTRODUCTION

## 1.1 Background

1. Bangladesh is a rapidly growing economy with an average GDP growth of 6% over the last 10 years and reaching around 8% in 2017-18.<sup>2</sup> It is expected to continue growing at 8% for 2019 and 2020, making it the fastest-growing economy in Asia-Pacific.<sup>3</sup> The industry sectors are leading Bangladesh's economic growth with the sector witnessing a trajectory from 6% growth to 12% growth between 2008 to 2018, while the agriculture and services sector witnessed a sub-7% growth rate in the same period<sup>2</sup>. This has made a steady transformation from an agrarian economy to an industrial economy profoundly visible – the share of industries in GDP has increased from 27% to 34% while that of the agriculture and services sector decreased by four and seven percentage points respectively<sup>2</sup>.
2. Within the Industrial sector, Ready Made Garments (RMG) is the leading sub-sector contributing to around 11% to the country's GDP in 2017-18<sup>4</sup>. It is the largest exporting industry in Bangladesh and has experienced phenomenal growth over the last three decades – contribution in total export increased from 4% in 1983-84 to 84% in 2017-18<sup>2</sup>.
3. The industry plays a key role in employment generation and the provision of income to the poor – it employs nearly 4.4 million workers<sup>5</sup>. The sector has also played a significant role in the socio-economic development of the country, with women comprising nearly 80% of the total workforce in the sector<sup>6</sup>. It also plays a pivotal role in promoting the development of linkage small scale industries, since 99% of the accessories like dyeing, printing, zippers, labels are manufactured in Bangladesh<sup>7</sup>. This had helped open up employment opportunities through indirect economic activities, thereby contributing to the country's overall socio-economic development, woman empowerment, and poverty alleviation.
4. In the energy space of Bangladesh, industries are the second most energy-intensive sector after the residential sector. As per the data available for 2016<sup>8</sup>, Industries consume 27% of energy demand for nearly a major demand sector, accounting for about 27% of the total energy demand of the country and is second only to the residential sector. When compared with the sector-wise energy demand for 2014, it is observed that the share of Industries has increased, and the residential sector has reduced which highlights the growing energy need for industries in Bangladesh.
5. While the energy savings opportunity is present across the various industrial sub-sectors, the RMG sector, in particular, provides a substantial scope of savings. As discussed, the combined RMG and textile sector accounts for approximately 30% of the energy consumption in the industrial sector.
6. Energy accounts for more than 25%<sup>9</sup> of the costs of an average manufacturing company and is higher in energy-intensive industries. An energy-efficiency program can save between 10% and 30% of those energy costs within three years. The implemented energy efficiency measures not only minimize the energy consumption of the unit and GHG emissions but also increases the

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<sup>2</sup>Source: [Bangladesh Statistical Yearbook 2018 \(Bangladesh Bureau of Statistics, 2019\)](#)

<sup>3</sup>Source: [Statement of ADB's country director in Bangladesh \(Dhaka Tribune, 2019\)](#)

<sup>4</sup>Source: [Statement by BGMEA \(Textile Today, 2019\)](#)

<sup>5</sup>Source: Information disseminated by BGMEA

<sup>6</sup>Source: [Statement by BGMEA President \(BGMEA website, 2019\)](#)

<sup>7</sup>Source: As per presentation provided by BGMEA representative

<sup>8</sup>Source: [Energy Sankey Diagram – Bangladesh \(International Energy Agency, 2019\)](#)

<sup>9</sup>Source: Industrial Policy Measures for Industrial Energy Efficiency Improvements

productivity of the industrial unit. Indirect savings from reduced maintenance, materials, waste, and risk increase the benefits, combining to cut direct energy costs by about half effectively. Tax reductions and government incentives further boost savings in many countries. Most savings are generated from adapting equipment and processes. In production, typical efficiency measures include more effective motors, drives, boilers, furnaces, pumps, compressors, and ventilation and heating systems. Energy recovery systems can help reduce demand. Industrial energy efficiency can generate multiple benefits for companies and the economy.

7. In the context of the RMG sector, there is considerable scope for adopting energy efficiency (EE) measures along with the benefits of adopting such measures. However, multiple barriers are preventing large scale adoption of EE measures, thereby deferring the realization of benefits arising out of it. A key barrier is the availability of concessional financing to support high upfront costs of the EE equipment and longer payback periods as well as limited market information regarding available options for EE. The proposed program aims to address these key barriers by supporting entrepreneurs and business establishments in the garments sector with financial and market resources to avail investment opportunities for energy-saving technology upgrades. In order to facilitate the implementation of the program, Infrastructure Development Company Limited (IDCOL) has requested financial support from the Green Climate Fund (GCF).
8. IDCOL will be arranging concessional loans from GCF and provide selected Local Financial Institutions (LFIs) access to these loans, which in turn will finance the beneficiaries, i.e., garments businesses in Bangladesh, to adopt energy-efficient technologies & appliances. As an integral condition of GCF funding, co-financing sources will also be identified who will contribute to the financial pool for this program. These co-financing sources have been identified as the LFIs themselves as well as garment industry sponsors.
9. The cost of purchasing energy-saving equipment and technology will be the subject of the loan and will be used by the beneficiaries to purchase, install, and use energy-saving technologies. Thus, the LFIs will be the borrowers and the executing entity (EE), while the beneficiaries of the program will be Implementing Entity (IE) for the program.
10. IDCOL has shortlisted four LFI's (South East Bank Ltd., The City Bank Ltd., BRAC Bank Ltd., and IDLC Finance Ltd.) based on their role play in the industry, management capacity & track record of financing energy-efficient technologies (also considered Green Banking financing experience) and experience of working with international (direct & refinanced through Central Bank) fund. The type of customer/ market segment each LFI serves was also taken into consideration to ensure a diverse set of RMG factories can be reached under the program.
11. As per preliminary analysis in the program concept note, it has been estimated that the program would require the financial support of USD 250 million – USD 150 million coming from GCF loan and USD 100 million from co-financing sources. The disbursement period has been considered to be five years, and the repayment period of maximum 20 years has been considered at this stage.

## 1.2 Basis of the Environment and Social Management Framework (ESMF)

12. Given the development stage of the project, the exact location, size, and extent of the sub-projects are unknown at this level, and the details of the sub-projects will be finalized during the program implementation phase. Thus, the Environmental and Social Management Framework (ESMF) has been developed to provide guidance for screening and assessing environmental and social issues at sub-project level and prepare site-specific Environmental and Social Management System (ESMS). The ESMF further highlights relevant policies, guidelines, codes of practice, and procedures to be taken into consideration for the integration of environmental and social aspects into the project design. Adhering to the principles and procedures and using the checklist of potential environmental and social issues laid out in this ESMF will help the End-borrowers i.e. the

RMG Units to ensure compliance with the GCF safeguard policies and the relevant provisions under the related Government policies, and associated rules, regulations, and procedures.

13. In order to ensure sub-projects are eligible for funding under GCF, ESMF has been developed aligned to GCF's Environmental and Social Safeguard Policies, in addition to conformity with environmental and social legislation of the Government of Bangladesh (GOB). The ESMF will provide the necessary background for environmental and social considerations, a checklist of potential environmental and social issues of the Program activities to be considered and built into the design of the Program so that environmentally and socially sustainable implementation can take place. It will provide guidelines to carry out Environmental and Social Impact Assessment (ESIA), and to prepare Environmental and Social Management Plans (ESMP) to mitigate any negative social and environmental impacts of the sub-project interventions.
14. This ESMF will also serve as the guideline for preparing Terms of Reference (TOR) of any environmental and/or social safeguard staff to be employed to support oversight and monitoring of compliance with requisite environmental and social norms. Therefore, the ESMF must be used as the template and guideline to ensure the diligent environmental compliance of the planning and implementation of the activities envisaged under the GCF projects.

### 1.3 Objectives and General Principles of the ESMF

#### 1.3.1 Environment Management Framework (EMF)

15. The objective of the EMF is to ensure that activities under the proposed operations will address the following issues:
  - Minimize potential negative environmental impacts as a result of either individual projects or their cumulative effects;
  - Enhance positive environmental outcomes;
  - Provide a mechanism for consultation and disclosure of information;
  - Ensure that environmental and related social issues are thoroughly evaluated, and necessary interventions are incorporated in planning, decision making, and implementation of Program activities;
  - Protect environmentally sensitive areas from additional disturbance from Program interventions; Protect human health and safety; and
  - Ensure compliance and due diligence with GCF environmental safeguard policies as well as with related Government policies, regulations, guidelines, and procedures as applicable to the type of project activities financed by the Program.
16. Considering the objectives of the EMF, the planning and implementation of the Program activities will be based on the principles incorporated in the Program design, and the implementation arrangements. The work scope of the executing entity and implementing entity involves assessment of energy-efficient equipment and machinery, installation/replacement of EE equipment and machinery, and ensuring environmental, social, and gender safeguards during the implementation of the project interventions.
17. The project will ensure that environmental considerations are given sufficient attention to planning and design. To this end, the End Borrower will carry out an environmental assessment for the RMG unit along with social and gender assessment. The project will ensure that environmental assessment addresses all potential environmental direct and indirect impacts of the sub-project throughout its life: preconstruction, construction and operation stages and mitigation measures have been taken to mitigate negative consequences and enhance positive impacts.

18. The End Borrower will follow the related government rules (laws, ordinances, acts, etc.) and GCF Operational Policies and Guidelines. Participation of different relevant stakeholders along with the RMG workers and community people will be ensured during the planning and design of the project. Besides, special attention will be given to ensure the participation of different vulnerable groups and gender inclusion.

### 1.3.2 Social Management Framework (SMF)

19. The Social Management Framework (SMF) is designed as a guide to the Executing Entity (EE) in mainstreaming social development and safeguards compliance requirements as per relevant national legislative and the GCF operational guidelines providing general policies, principles, and procedures in site selection, design, and implementation of projects. Specific objectives of the SMF are the following:

- Enhance the social development outcomes of introducing EE measures in the RMG factories.
- Avoid or minimize the impact on labor force and gender to the extent possible.
- Identify and mitigate adverse impacts that the project interventions might cause on people (men & women), including protection against loss of livelihood activities, with culturally, socially, and economically appropriate measures.
- Develop necessary social development and safeguard compliance measures through adequate disclosure and consultation with affected people and their community, and
- Ensure compliance with the relevant GOB policies and those of the GCF on social safeguards and other social issues, including those with gender implications.

20. Considering the mentioned objectives, the Social Management Framework will be prepared for Program activities following the principles, guidelines, and procedures outlined in this SMF and implemented. The projects under the Program may have varying assessment plans according to their specific requirements. During the preparation of the SMF, the End Borrower will undertake community and stakeholder consultations about the objectives, scopes, and social safeguard implications of subprojects. In addition, the End Borrower will undertake social screening of all sites to identify potential social safeguard issues and adopt and implement impact mitigation measures consistent with the Bank’s OP 4.12 and OP 4.10.

## 1.4 Overall Structure of ESMF

21. This framework has been prepared for the Executing Entities and Implementing Entities of the target program and is divided into four parts and supported by Annexures. The table below provides the brief description of these parts and the sections of this document which correspond to each part:

Part Name	Description	Relevant section of this document
Part A: General Overview	<ul style="list-style-type: none"> <li>• Legislative, regulatory, and institutional setup that exists in the Country</li> <li>• Safeguard policies of multilaterals like GCF and World Bank, relevant to the environmental and social assessment</li> <li>• Brief description of the proposed program</li> </ul>	<ul style="list-style-type: none"> <li>• Section 2: Program Description</li> <li>• Section 3: Policy, legal and administrative framework</li> </ul>
Part B: Environment & Social Impact Assessment (ESIA)	Procedure for undertaking social and environmental impact assessment for sub-project type	<ul style="list-style-type: none"> <li>• Section 4: Environmental Assessment</li> <li>• Section 5: Social Assessment</li> </ul>

Part Name	Description	Relevant section of this document
Part C: Supporting activities for assessment	Description of activities which support environment and social impact assessment procedure like: <ul style="list-style-type: none"> <li>• Environmental and social screening</li> <li>• Other sub-project specific procedures</li> <li>• Grievance redressal</li> <li>• Stakeholder consultation and participation</li> </ul>	<ul style="list-style-type: none"> <li>• Section 6: Specific Project and Implementation procedure</li> <li>• Section 7: Grievance Redressal Mechanism (GRM)</li> <li>• Section 8: Consultation and participation</li> </ul>
Part D: Environment & Social Management Plan (ESMP)	Guidelines on developing the environmental and social management plan based on assessment of sub-project impact along with institutional arrangement to monitor safeguards compliance	<ul style="list-style-type: none"> <li>• Section 9: Environmental Management Plan</li> <li>• Section 10: Social Management Plan</li> <li>• Section 11: Institutional Arrangement for Safeguard Compliance and Capacity Building</li> </ul>
Annexures	Supporting documents to provide assistance in developing documents mentioned in Parts A-D	<ul style="list-style-type: none"> <li>• Annex 4: Environmental Screening Checklist</li> <li>• Annex 5: Environment Code of Practice (ECoP)</li> <li>• Annex 6: Environmental Monitoring Checklist</li> <li>• Annex 7: Format of Half-Yearly Monitoring Report</li> <li>• Annex-8: Grievance Response Form</li> <li>• Annex-9: Screening Form for Social Safeguards Issues which includes Social Screening Checklist</li> </ul>



## 2 PROGRAM DESCRIPTION

### 2.1 Program Brief

22. Ready Made Garments (RMG) is the leading sub-sector of Bangladesh, contributing to around 11% to the country's GDP in 2017-18. It is the largest exporting industry in Bangladesh and has experienced phenomenal growth over the last three decades. While the sector continues in its growth trajectory, there are a number of hurdles in the horizon which need to be overcome to reach USD 50 billion export by 2021 set by the national body for garments manufacturers in Bangladesh - Bangladesh Garment Manufacturers and Exporters Association (BGMEA). These impediments include rising energy costs, increasing worker wages, low worker productivity, graduation from LDC status of Bangladesh and increased demand of sustainable production practices from customers.
23. All of these supply and demand side factors are expected to erode the prime competitive advantage of Bangladesh RMG sector i.e. low production cost in future. In order to overcome these challenges and restore that competitive advantage as well as comply with changing customer preferences, the concept of energy efficiency can provide a vital tool to change the fortunes of the sector.
24. The sub-sector has a share of 15.4% of total industrial energy use<sup>10</sup> - the industrial sector itself contributing to 49% of Bangladesh's annual energy consumption<sup>11</sup>. However, the increased consumption does not necessarily translate to efficient use of energy in the RMG industry and energy efficiency and conservation (EE&C) measures within the sector can help reduce the energy consumption by as much as 30%. This will lead to multiple benefits including lower cost of production, lower emissions, increased productivity among others. However, there are multiple barriers to implementing energy efficient measures in RMG sector in Bangladesh – limited management commitment, limited technical and market knowledge on energy efficiency measures, lack of adequate demonstration examples, high capital investment requirement, unviable financing routes, complex technical requirements for processing loans, limited number of banks providing energy efficiency financing and limited capacity in bank in appraising energy efficiency sub-projects.
25. The current program, to be funded by GCF, aims to address the barrier on non-availability of concessional financing to support high upfront costs of the energy efficient equipment and longer payback periods as well as ensure adequate market information regarding options for energy efficiency is made available to the stakeholders. The proposed program aims to address these key barriers by supporting entrepreneurs and business establishments in the garments sector with financial and market resources to avail investment opportunities for energy saving technology upgrades. Accordingly, program design has been conceived to have two components:

#### **Component 1: Technical assistance activities (TA Component)**

26. This component aims to improve market perception about energy efficiency and provide support to the relevant stakeholders at all stages of implementation energy efficient measures. It is envisaged to create an interface between energy efficiency equipment suppliers or manufacturers and the decision makers behind the investment for energy efficiency i.e. RMG unit owners, thereby helping disseminate the information related to energy efficiency and resolve any queries that the unit owners may have. Policy makers will also be apprised the barriers to implementing energy efficiency measures and provide guidance in developing enabling policies, regulations to help overcome these barriers.

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<sup>10</sup> Source: [Information derived from EE & Conservation Master Plan upto 2030 \(DANIDA, 2017\)](#)

<sup>11</sup> Source: : [Energy Efficiency and Conservation Master Plan up to 2030 \(JICA website, 2015\)](#)

27. Along with such capacity building activities, the TA consultants will also conduct market development activities like Technology Fairs which will help in bringing RMG units and energy efficient equipment providers in a single platform. Also, operationalization of a digital platform for knowledge management, business networking, query management, loan application process and automating program monitoring and evaluation process is also envisaged. The digital platform is expected to stimulate adoption of energy efficiency in RMG sector, even beyond program lifetime.
28. It is expected that without such enabling activities, a concessional line of financing would not help in generating interest among the stakeholders in undertaking energy efficiency measures. Also, given that the energy efficiency market in Bangladesh is in its infancy, such support activities would be critical to enable market transformation and galvanize the equipment procurement decisions of RMG units. Hence, the TA is viewed to be a critical component to ensure greater uptake of energy efficiency measures during the program duration as well as ensure sustainability of energy efficiency market for RMG sector beyond the program duration.

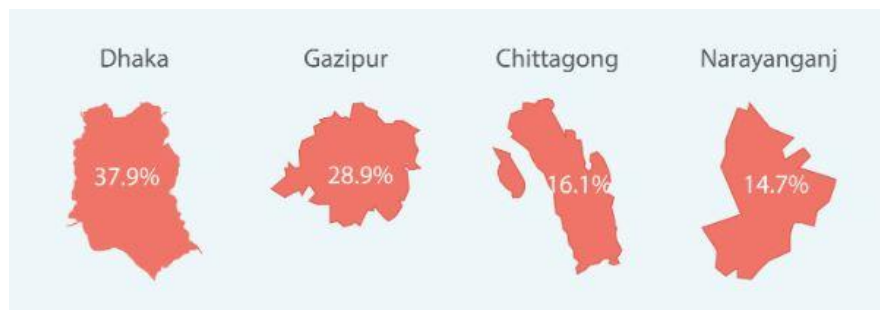
**Component 2: Energy Saving Technology Loan for garment sector with Preferential Rates (Loan Component)**

29. Under this component a feasible working mechanism has been developed to channelize funds from Green Climate Fund (GCF) to the beneficiaries i.e. implementing entities (IEs) through the accredited entity (AE) i.e. IDCOL and the executing entities (EEs) i.e. participating financial institutions (viz. BRAC Bank, City Bank, South East Bank and IDLC) to provide loans at concessional rates for installation of energy efficient equipment in RMG units
30. Under this mechanism, the AE will receive fund from GCF and lend to 4 EE, each of which shall have a separate account operated by IDCOL. The transaction through the channel will be in USD and BDT, as finalized by mutual consent of GCF, AE and EE. If any of the EEs disburse to end borrowers/RMG through other currency than USD, the exchange rate risk will be borne by EE. EEs will also maintain an individual GCF account for the transaction. The disbursement of loan to the RMGs and repayment of loan from the RMGs will be through this separate account. IDCOL will have special authority to withdraw GCF's fund from the EEs account in specified dates. In this regard, EEs can assign the relevant account receivables and sign agreement for creating floating charge over designated accounts/any specific book debt/receivable. In case there is a delay in payment, EE should notify AE the reason for the delay and upon three consecutive delay in instalment, the funding will be stopped.
31. For implementation, EE will complete the initial screening process and forward the selected RMG unit's documents to AE for clearance. AE will evaluate the borrower's application via a pre-set checklist considering whether the application is compliant with GCF requirements. Upon final clearance of AE, EE will approve and then consequently disburse loan to the RMG.
32. Based on this implementation arrangement there will be a 3-tier program monitoring system which will help channelize periodic information on the key project performance indicators from the IEs to GCF via EE and AE.
33. Under components 1 and 2, a budget of USD 3.5 million and 210 million has been earmarked respectively. 71% of the budget for Component 2 i.e. USD 150 million will be from GCF in the form of concessional loan to beneficiaries i.e. IEs, the remainder of the amount would be equally divided between EE (in the form of loans at market rates) and IEs i.e. end-borrowers (in form of equity contribution). The program is expected to lead to energy savings of 62.675 kTOE/year and subsequently a direct emission reduction of 0.594 MtCO<sub>2</sub>e/year. Considering the program duration i.e. 5 year, the total savings is estimated to be 1.604 MtCO<sub>2</sub>e and considering the program lifetime i.e. 20 years, total savings of 11.876 MtCO<sub>2</sub>e can be achieved.

34. The project exhibits substantial potential to affect a paradigm shift in the application of energy efficiency measure for RMG sector in Bangladesh and catalyze impact beyond a one-off project investment. It exhibits potential for scale-up and replication, knowledge sharing and learning, creation of an enabling environment for energy efficiency in Bangladesh as well as contribute to regulatory framework and policies. Overall, it exhibits a contribution to climate-resilient development pathways consistent with relevant national climate change mitigation strategies and plans.
35. The potential adverse environmental and/or social risks and impacts related to the program activities are individually or cumulatively generally site-specific, largely reversible, and readily addressed through adequate policy implementation and workplace standards. Thus, it is classified as a Category 'B' under the GCF Risk Categories. However, the program will be categorized as Medium level of intermediation, or I2 according to GCF guidelines as financial intermediation will be involved in the investment process.

## 2.2 Program Area

36. The Garment sector has seen tremendous growth and dominated the industrial sector of the country. Currently, there are more than 4,000 RMG firms (The Bangladesh Garment Manufacturers and Exporters Association, 2019) in Bangladesh. The majority of those firms are locally owned, except for a few foreign firms located in export processing zones. Nearly 98% of RMG firms of Bangladesh are located mainly in 4 districts viz Dhaka (38.0%), Gazipur (28.9%), Chittagong (16.1%), and Narayanganj (14.7%)<sup>12</sup>.



**Figure 2-1** Location of RMG factories in Bangladesh

37. Most of the factories are in different industrial clusters in these four districts due to availability of better infrastructural facilities, access to major trade routes for import and export, logistics and banking facilities as well as easier availability of workers. Even within these regions, there is a spread of RMG units within and beyond Export Processing Zones (EPZs) – only 1.5% of the total RMG enterprises are located in EPZs. This is due to the change in government legislation in 2010, allowing foreign direct investment (FDI) outside EPZs as well. Another key characteristic of the RMG sector in Bangladesh is that almost half of the units, i.e., 48.9% are small enterprises that hire less than 500 workers<sup>13</sup>.

<sup>12</sup>Source: [New Dynamics in Bangladesh's Apparels Enterprises \(CPD website, 2018\)](#)

<sup>13</sup>Source: [New Dynamics in Bangladesh's Apparels Enterprises \(CPD website, 2018\)](#)

38. The proposed program will attempt to reach the RMG units located in Dhaka, Gazipur, Chittagong, and Narayanganj districts as the majority of the RMG factories are located in this region.

## 2.3 Climate vulnerability

39. The textile and apparel manufacturing sector are a pollution-intensive sector that requires a large number of resources in every stage of the life cycle. The Natural Resources Defense Council (NRDC) estimated that, on average, a single ton of finished fabric could pollute up to 300 tons of water (NRDC 2012).



*Figure 2-2: The four heaviest impact areas of the fashion and apparel industry*

40. The largest portion of pollution for RMG sector stems from its Washing, Dyeing, and Finishing (WDF) units or as known in Bangladesh - dyeing, printing, and finishing. Washing involves cleaning textiles or apparel with water and chemicals; dyeing involves coloring or printing substrates; finishing involves the superficial treatment of textiles or apparel at the wet or dry stage.
41. PDF units can be of the following types: garment washing and dyeing (post-garmenting knit RMG and woven RMG processing WDF units); woven dyeing/printing-finishing (pre-garmenting textile operation for woven fabric processing); knit dyeing/printing-finishing (pre-garmenting textile operation for knit fabric processing); and yarn dyeing/washing (pre-garmenting textile operation for yarn processing) (World Bank 2012). Such operations are often conducted in the premises of relevant textile or RMG manufacturing units.
42. Sweaters are made from both dyed yarn and grey yarn. If produced solely with grey yarn, they need to be dyed. Otherwise, they are washed in the same factory or garment washing and dyeing units. Terry towels go through a similar process, as they are produced with colored/bleached yarns that may need simply washing sometimes, or with grey yarns that must be processed (dyed or bleached).
43. Washing and dyeing generates high volume of wastewater containing toxic chemicals and color which is a high impact source of water pollution. Also, hot water is discharged in the environment which comes from washing clothes and cooling of the machineries. If an industry is located near a natural water source then it might cause sever environmental damage (i.e., reduced oxygen level, increase toxicity, kill aquatic species) unless necessary precaution is taken. In the finishing part, a huge amount of dry waste is generated containing fiber and cloth pieces which can cause

environmental damage by polluting soil, water and air. A lot of other micro fibers are also generated as waste which can cause air pollution if not managed properly. Apart from this, the machineries generate CO<sub>2</sub>, NO<sub>x</sub>, VOCs and particulate matter (PM<sub>2.5</sub> & PM<sub>10</sub>) which are responsible for air pollution. All the mentioned issues are severely damaging to climate if proper treatment and management is not done.

44. The WDF units are again sub-divided depending on their integration with other types of operation such as: standalone or integrated with either woven or knit “parent” unit. More than 95% of WDF units are in Greater Dhaka (Narayanganj, Savar, Gazipur, and Dhaka City) and Chittagong. There are also WDF units in the export processing zones (EPZs) around the country (NRDC 2012 and ADSL 2009).

### 3 Guidelines for developing Environment and Social Management System (ESMS)

45. An Environment and Social Management System (ESMS) provides an opportunity for the GCF to incorporate environmental and social considerations into its decision-making and operations in ways that not only avoid and minimize adverse risks and impacts but also identify opportunities to improve environmental and social outcomes in a systematic, coherent and transparent manner.<sup>14</sup> The key elements of an ESMS may include the environmental and social policy, the interim environmental and social safeguards (ESS) standards and a suite of management processes and procedures, including organizational capacity and functions. As per GCF guidelines, an ESMS should reflect the mandate of an institution, how it is organized and operated and how it intends to fulfil this mandate.
46. Since the project<sup>15</sup> (RMG EE financing) is an FI operation, the proponent would need to adopt an Environmental and Social Management System (ESMS) following the guidelines of this ESMF. The ESMS prepared under this project by the 04 LFIs project shall describe the existing national policies and regulatory frameworks, IDCOL's ESMS system and the GCF's ESS Standards. Furthermore, the document should also describe in sufficient details the due diligence process to be undertaken for Component 03 – "USD 250 million financing for Energy Saving Equipment & Technology for RMG sector". The ESMS can include an Executive Summary which will include a summary information on project activities and their environmental and social risks and impacts and management measures, including plans and frameworks that are applicable to the project. It can also include institutional arrangements, monitoring, review and reporting as well as results of the public consultations carried out and the grievance redress mechanism that will be put in place.
47. The Environment and Social Safeguard (ESS) standard on the assessment and management of environmental and social risks and impacts requires accredited entities to ensure that each of the activities proposed for GCF financing is designed to meet the requirements of the GCF ESS standards. The scope and depth of environmental and social assessment will be proportional to the level of risks and impacts and address the specific requirements of applicable GCF ESS standards. Since the project has an environment and social category "B", which indicates project with limited impacts and with well-developed mitigation and monitoring measures, therefore as per GCF a limited focus environmental and social impacts assessment (ESIA) and ESMP will suffice. GCF adopts the International Finance Corporation (IFC) Performance Standards on Environmental and Social Sustainability and thus the ESMS should follow this as well.
48. The GCF requires the end borrowers to develop ESMPs that contain the measures to manage and mitigate the identified risks and impacts. Based on the results of the assessment, the ESMP will be designed such that the measures are adequately described, roles defined and the corresponding timelines and resources identified. Where the sub-project involves existing facilities, an environmental and social audit may be required, and the corresponding ESMP may include remediation, recompense or management of any residual environmental and social issues. The ESMP will be integrated into the overall planning, design, resourcing and execution of the GCF- financed activities as well as being reflected in the ESMS.
49. There will be a TA component under which IDCOL will design some capacity development activities for both the LFIs and end borrowers to implement the ESMS, including preparation, implementation, and monitoring of site-specific safeguard instruments and measures.

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<sup>14</sup> Green Climate Fund Environmental and Social Management System (ESMS)

<sup>15</sup> The programme will be addressing two different sectors i.e Textile and RMG. Here by project only the RMG sector financing is indicated.

50. Moreover, the ESMS shall integrate in the due diligence process a sub-project level Grievance Redress Mechanism (GRM) and sub-project level Stakeholder Engagement Plan (SEP). The GRM and SEP should ensure that the views of the various stakeholders and affected communities, such as vulnerable women are reflected at the program-level outcomes.
51. The ESMS will include both project-specific and aggregated monitoring and reporting. The reporting requirements will include annual performance reports and interim evaluation and final evaluation reports specifying the projects' consistency with the national policies and regulatory frameworks, IDCOL's ESMS and the GCF's ESS Standards and any other applicable environmental and social provisions in the legal agreement.

## 4 POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

52. The ESMF identifies all the national and state-level legislation, rules, and guidelines, which would be applicable to the program. It has also identified all the relevant international policies and guidelines, which are applicable to the program. This section highlights the relevant environmental and social policies and regulations and guidelines applicable to the constituent projects.

### 4.1 Government Policies, Acts, Rules, and Strategies

#### 4.1.1 *Bangladesh National Conservation Strategy (2016-2031)*

53. Like many development activities, conservation measures are imposed and implemented in industrial activities because of environmental externalities. Since Bangladesh is set to become more rapidly industrialized in the next decade, it seems essential to formulate appropriate conservation policies and to implement policies to support industrial products and services in the coming decades. As a part of a national conservation strategy, the following elements, some of which are already part of the present policy regime, need to be considered in relation to establishing a healthy industrial environment in Bangladesh:

- Enforcement of regulatory framework and provisions to be ensured, which should use administrative, economic, and other means to encourage entrepreneurs to adopt greener technology.
- Industrial land zoning to be imposed and planned relocation of highly polluting industries to be implemented again with substantial provisions of incentives.
- Coverage of green industries to be broadened, strengthened, and incentives for 'conservation technologies' be provided (with provisions for IPR issues to be negotiated if necessary).
- Conservation of resources in industries needs to be incentivized through the adoption of greener technology again through both administrative and economic instruments of subsidies, taxes, credit, and interest rates on related loans.
- Lobbying must be done for trade facilitation in favor of export-oriented industries if they have to adopt high-cost greener technology for which appropriate resource mobilization windows may be tapped.

#### 4.1.2 *National Environmental Policy 1992*

54. The concept of environmental protection through national efforts was first recognized and declared in Bangladesh with the adoption of the Environment Policy, 1992, and the Environment

Action Plan, 1992. The major objectives of Environmental policy are to i) maintain ecological balance and overall development through protection and improvement of the environment; ii) protect country against natural disaster; iii) identify and regulate activities, which pollute and degrade the environment; iv) ensure environmentally sound development in all sectors; v) ensure sustainable, long term and environmentally sound base of natural resources; and vi) actively remain associate with all international environmental initiatives to the maximum possible extent.

#### *4.1.3 Bangladesh Environmental Conservation Act (ECA), 1995 amended 2002*

55. This umbrella Act includes laws for conservation of the environment, improvement of environmental standards, and control and mitigation of environmental pollution. It is currently the main legislative framework document relating to environmental protection in Bangladesh, which repealed the earlier Environment Pollution Control ordinance of 1977.

56. The main provisions of the Act can be summarized as:

- Declaration of ecologically critical areas, and restrictions on the operations and processes, which can be carried or cannot be initiated in the ecologically critical area;
- Regulation in respect of vehicles emitting smoke harmful for the environment.
- Environmental Clearance;
- Regulation of industries and other development activities with regards to discharge permits;
- Promulgation of standards for quality of air, water, noises and soils for different areas for different purposes;
- Promulgation of standard limits for discharging and emitting waste; and
- Formulation and declaration of environmental guidelines.

57. The first sets of rules to implement the provisions of the Act were promulgated in 1997 (see below: “Environmental Conservation Rules 1997”). The Department of Environment (DoE) implements the Act. DoE is headed by a Director General (DG). The DG has complete control over the DoE and the main power of DG, as given in the Act, may be outlined as follows:

- Identification of different types and causes of environmental degradation and pollution;
- Instigating investigation and research regarding environmental conservation, development, and pollution.
- Power to close down the activities considered harmful to human life or the environment.
- Power to declare an area affected by pollution as an Ecologically Critical Area. Under the Act, operators of industries/projects must inform the Director-General of any pollution incident. In the event of accidental pollution, the Director-General may take control of the operation, and the respective operator is bound to help. The operator is responsible for the costs incurred and possible payments for compensation.

#### *4.1.4 Environment Conservation Rules (ECR) 1997 amended 2003*

58. These are the first set of rules promulgated under the Environment Conservation Act 1995. Among other things, these rules set (i) the National Environmental Quality Standards for ambient air, various types of water, industrial effluent, emission, noise, vehicular exhaust, etc., (ii) requirement for and procedures to obtain Environmental Clearance, and (iii) requirements for IEE/EIA according to categories of industrial and other development interventions.

59. However, the rules provide the Director-General a discretionary authority to grant ‘Environmental Clearance’ to an applicant, exempting the requirement of site/location clearance, provided the DG considers it to be appropriate.



60. Presently, "EIA Guidelines for Industries" published by the Department of Environment and the "Environment Conservation Rules 1997" are the formal documents providing guidance for conducting Environmental Assessment. Any proponent planning to set up or operate an industrial project is required to obtain an "Environmental Clearance Certificate" from the Department of Environment (DoE) under the Environment Conservation Act 1995 amended in 2002.
61. Rule 7 of Environment Conservation Rules (ECR) has classified the projects into following four categories based on their site conditions and the impacts on the environment; (a) Green, (b) Orange A, (c) Orange B, and (d) Red.



62. Various industries and projects falling under each category have been listed in schedule 1 of ECR 1997. According to the Rules, Environmental Clearance Certificate is issued to all existing and proposed industrial units and projects, falling in the Green Category without undergoing EIA. However, for category Orange A and B and Red projects, require location clearance certificate and followed by issuing of Environmental Clearance upon the satisfactory submission of the required documents. Green listed industries are considered relatively pollution-free, and therefore do not require site clearance from the DoE. On the other hand, Red listed industries are those that can cause 'significant adverse' environmental impacts and are, therefore, required to submit an EIA report. These industrial projects may obtain an initial Site Clearance on the basis of an IEE based on the DoE's prescribed format, and subsequently, submit an EIA report for obtaining Environmental Clearance.

#### 4.1.5 *Environment Court Act, 2000*

63. The aim and objective of the Act are to materialize the Environmental Conservation Act, 1995, through judicial activities. This Act established Environmental Courts (one or more in every division), set the jurisdiction of the courts, and outlined the procedure of activities and power of the courts, right of entry for judicial inspection and appeal, as well as the constitution of Appeal Court.

#### 4.1.6 *Industry Policy, 2016*

64. The important and underlying objectives of the Industrial Policy 2016 include sustainable and inclusive industrial growth through the generation of productive employment to create new entrepreneurs, mainstreaming women in the industrialization process, and international market linkage creation. To this end, special emphasis is being laid on Small and Medium Enterprise (SME) development.
65. The key determinants of National Industrial Policy 2016 are infrastructural transformation, diversification of the economic base, accelerated economic growth, employment generation, increasing income level, and development of livelihood of the people. The important and underlying objective of the policy is to contribute to Bangladesh's transition to the mid-income country by 2021. Proper strategies have been set out in the industrial policy to implement this objective. Combined efforts are being taken to implement the policy. A time-bound Action Plan has been framed in consultation with concerned ministries and other stakeholders to achieve the desired industrial growth.

#### 4.1.7 *Energy Efficiency and Conservation Master Plan up to 2030 (2015)*

66. Energy Efficiency and Conservation Master Plan up to 2030 focuses on energy efficiency and conservation in industrial, commercial, and residential sectors and sets seven programs. Along

with this, private sector investments will be encouraged by giving subsidy, low-interest loans, or other incentives. Also, initiatives will be taken by the Government to promote energy efficient purchasing during public procurement. The Plan focuses on data collection on the energy sector for better planning, implementation, and monitoring. Additionally, emphasis will be given on capacity building and awareness-raising activities on the science behind global warming and climate change impacts caused by these issues, and the importance of taking energy efficiency measures.

#### *4.1.8 Public Procurement Rule (PPR), 2008*

67. This is the public procurement rules of Bangladesh, and this rule shall apply to the Procurement of Goods, Works, or Services by any government, semi-government, or any statutory body established under any law. The rule includes the adequate measure regarding the “Safety, Security and Protection of the Environment’ in the construction works. This clause includes mainly, the contractor shall take all reasonable steps to (i) safeguard the health and safety of all workers working on the Site and other persons entitled to be on it, and to keep the Site in an orderly state and (ii) protect the environment on and off the Site and to avoid damage or nuisance to persons or property of the public or others resulting from pollution, noise or other causes arising as a consequence of the Contractors methods of operation.

#### *4.1.9 Bangladesh Labor Act, 2006*

68. This Act pertains to the occupational rights and safety of factory workers and the provision of a comfortable work environment and reasonable working conditions. In chapter VI of this law, safety precaution regarding explosive or inflammable dust/ gas, protection of eyes, protection against fire, work with cranes and other lifting machinery, lifting of excessive weights are described. And in Chapter VIII, provision safety measures like appliances of first aid, maintenance of safety record books, rooms for children, housing facilities, medical care, group insurance, etc. are illustrated.

#### *4.1.10 Bangladesh Labour Rules 2015*

69. Bangladesh Labour Rules 2015 emphasizes on the security and safety of the workers. Given below is the brief of the contents of the rules:

- Conditions of appointment and service, the rule has provision for ‘Workers’ Social Security Fund’ and special instructions for sudden natural disaster or disasters out of human control or emergency (Second chapter of Rules)
- Adolescents can’t be appointed in hazardous work declared by the government as per the section 39(1) and 40 and the dangerous works mentioned in the sections 39(3) and 40 and no adolescent can be appointed in the dangerous operations mentioned in the rule- 68. (Third chapter)
- Pregnancy Welfare Benefits mainly focuses on the responsibilities of the owner and other workers to the pregnant workers and explanation for what leave she is entitled to get. (Fourth Chapter)
- Health & Hygiene, Cleanliness, Ventilation, Temperature, Lighting, Drinking Water, Washroom & Toilets, Safety, Waste Management etc. (Fifth Chapter)
- The security of the building, machineries and other structures, adopting cautions regarding the fire incident, security-related warning, installation of equipment and rout, safety measures for protection etc. (Sixth Chapter)
- Health, Health Rules, and Safety further elaborate on the impacts of hazardous activities, safety measures and steps to follow in case of any accidents (Seventh Chapter)

#### *4.1.11 Bangladesh Climate Change Gender Action Plan 2013*

70. To achieve the objective of more climate-resilient infrastructure requires both an in-depth understanding of the impacts of climate change, as well as for this understanding to become an

integral part of how infrastructure is planned, designed, built and maintained in sectors such as energy, ICT, transport, water, and others.

71. Long-term policy documents such as “Vision 2021” and the Sixth Five Year Development Plan (2011-2015, therefore, emphasize climate-resilient and low carbon development based on the four buildings blocks of the Bali Action Plan: adaptation to climate change, mitigation, technology transfer and the adequate and timely flow of funds for investments within an inviolate framework of food, energy, water, livelihoods, and health security.
72. Solar power, wind energy, and biogas will be major interventions for RETs (Renewable Energy Technologies). Promoting energy-efficient bulbs will be one of the major interventions as electricity technologies, which would help in reducing pressure on electricity supply. It could involve electricity, which is generated from renewable resources and clean sources better for human health and the environment. The objective is to maximize the use of renewable energy sources to lower GHG emissions and ensure energy security. The scope for developing renewable energy supplies (e.g., solar, wind, and sustainable biomass technologies) has not been explored well in Bangladesh.

#### *4.1.12 National Women Development Policy 2011*

73. National Women Development Policy 2011 focuses on the inclusion of women in development activities and ensuring their rights. The policy highlights the following issues:
  - Elimination of all forms of violence to women, including physical and mental abuse and sexual harassment, rape, dowry, family abuse, and acid throwing in family, society, and the workplace.
  - To ensure the participation of women in decision making regarding environmental management and pollution control and program implementation.
  - To ensure the gender-equal rate of wages, increase participation of women in the labor market, equal opportunity at the workplace, ensured security and removal of disparities in employment.
  - To motivate all employment agencies to give women all kinds of equal opportunities under government quota and employment policy.
  - To create the necessary environment to promote access of women to employment areas at an increasing rate, their position as such and continue their advancement.
  - To make necessary reforms of all concerned law, rule, and policy for wider employment of women.
  - In recognition of the contribution of women in the management of natural resources conservation and a safer environment to give them the opportunity of equal participation in environment preservation policy and programs reflecting a women's perspective.
  - To undertake all-out initiative for the employment of the educated and illiterate women labor. To increase quota at entry at all levels to ensure increased employment of the women and ensuring its effective implementation.

## **4.2 Other Relevant Policies, Acts, Rules, and Strategies**

### *4.2.1 World Bank Environmental and Social Safeguard Policies*

74. The objective of these policies is to prevent and mitigate undue harm to people and their environment in the development process. Safeguard policies provide a platform for the participation of stakeholders in project design and act as an important instrument for building ownership among local populations.
75. The Safeguard policies documents include Operational Policies (OP) are the statement of policy objectives and operational principles, including the roles and obligations of the Borrower and the

Bank, whereas Bank Procedures (BP) is the mandatory procedures to be followed by the Borrower and the Bank in accordance with the Ops.

76. The World Bank has ten environmental, social, and legal safeguard policies. The same are listed below and description for the policies that can be relevant to the constituent projects are described below:

***Environmental policies:***

**a. OP/BP 4.01 Environmental Assessment**

77. This policy is the umbrella safeguard policy to identify, avoid, and mitigate the potential negative environmental and social impacts associated with Bank lending operations. The borrower is responsible for carrying out the EA, and the Bank advises the borrower on the Bank's EA requirements. The Bank classifies project into three major categories, depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts:

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

**b. OP/BP 4.04 Natural Habitats**

78. Policy which ensures bank-financed projects undertake natural resource management to ensure opportunities for environmentally sustainable development and avoid significant conversion or degradation of critical natural habitats

**c. OP/BP 4.09 Pest Management**

79. Policy aims to minimize and manage the environmental and health risks associated with pesticide use and promote and support safe, effective, and environmentally sound pest management like use of biological or environmental control methods and reduces reliance on synthetic chemical pesticides.

**d. OP/BP 4.11 Physical Cultural Resources**

80. Physical, cultural resources are defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. The Bank assists countries to avoid or mitigate adverse impacts on physical cultural resources from development projects that it finances and hence, the impact on this area is assessed as well.

**e. OP/BP 4.36 Forests**

81. Forest is defined as an area of land of not less than 1.0 hectare with tree crown cover (or equivalent stocking level) of more than 10% that has trees with the potential to reach a minimum height of 2 meters at maturity in situ. The Bank's forests policy recognizes the importance of forests to reduce poverty in a sustainable manner integrates forests effectively in economic development, aims to reduce deforestation, promote afforestation and enhance the environmental contribution of forested areas.

*f. OP/BP 4.37 Safety of Dams*

**Social Policies:**

**g. OP/BP 4.10 Indigenous Peoples**

82. The term “Indigenous Peoples” is used in a generic sense to refer to a distinct, vulnerable, social, and cultural group possessing the following characteristics in varying degrees:

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

83. The Bank provides project financing only where free, prior, and informed consultation results in broad community support to the project by the affected Indigenous Peoples. Such Bank-financed projects include measures to (a) avoid potentially adverse effects on the Indigenous Peoples’ communities, or (b) when avoidance is not feasible, minimize, mitigate, or compensate for such effects. Bank-financed projects are also designed to ensure that the Indigenous Peoples receive social and economic benefits that are culturally appropriate and gender and inter-generationally inclusive.

**h. OP/BP 4.12 Involuntary Resettlement**

84. The policy aims to avoid involuntary resettlement to the extent feasible or to minimize and mitigate its adverse social and economic impacts. It promotes participation of displaced people in resettlement planning and implementation, and its key economic objective is to assist displaced persons in their efforts to improve or at least restore their incomes and standards of living after displacement. The policy prescribes compensation and other resettlement measures to achieve its objectives and requires that borrowers prepare adequate resettlement planning instruments prior to Bank appraisal of proposed projects

**2. Legal Policies**

- a. OP/BP 7.50 International Waterways
- b. OP/BP 7.60 Disputed Areas

**4.2.2 Performance Standards (PSs) by the International Finance Corporation (IFC)**

85. The International Finance Corporation (IFC) is the part of the World Bank Group that lends to private companies. The IFC Performance Standards (PSs) are widely recognized as good practice in the business community. The Performance Standards consist of one overarching standard (PS 1) and seven standards covering specific issue areas (PS 2-8). PS 1 covers the elements that need to be in place to help ensure that the remaining seven standards are implemented. Together these elements are called the environmental and social management system (ESMS). The following topics are covered in IFC’s PS 1-8.

**OVERARCHING (ESMS)**

86. PS1: Assessment and Management of Environmental and Social Risks and Impacts

- Policy (or equivalent documents)
- Process for identifying risks & impacts
- Management program
- Organizational capacity & competency

- Process for monitoring & evaluation
- External communications

#### **SUBJECT SPECIFIC**

PS2: Labor and Working Conditions

PS3: Resource Efficiency and Pollution Prevention

PS4: Community Health, Safety, and Security

PS5: Land Acquisition and Involuntary Resettlement

PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

PS7: Indigenous Peoples

PS8: Cultural Heritage

87. The GCF adopted the International Finance Corporation (IFC) Performance Standards as its safeguard standards on an interim basis until 2017. So, while conducting ESIA, these standards should be followed strictly to ensure all requisite areas are adequately evaluated.

#### **4.2.3 The World Bank's (WB's) Environmental Health and Safety (EHS) Guidelines**

88. The Environmental Health and Safety Guidelines (also known as "EHS Guidelines")<sup>10</sup> are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP). This GIIP is considered to be achievable in new facilities at reasonable costs by existing technology. For existing facilities, achieving these may involve the establishment of site-specific targets with an appropriate timetable to achieve these.

89. When host country regulations differ from the levels and measures presented in the EHS Guidelines, projects will be required to achieve whatever is more stringent. If less stringent levels or measures than those provided in the EHS Guidelines are appropriate in view of specific project circumstances, a full and detailed justification must be provided for any proposed alternatives through the environmental and social risk and impact identification and assessment process.

90. The EHS Guidelines consist of guidelines for various industrial sectors as well as General Environmental, Health & Safety Guidelines, which cover a wide range of issues and applies to all industrial and also the sector-specific guidelines. The General EHS Guidelines contain information on cross-cutting environmental, health and safety issues potentially applicable to all industry sectors. They are designed to be used together with the relevant industry sector guideline(s).

- Environmental (air emissions and ambient air quality, energy conservation, wastewater, and ambient water quality, water conservation, hazardous materials management, waste management, noise, and contaminated land)
- Occupational Health and Safety (general facility design & operation, communications & training, physical hazards, chemical hazards, biological hazards, radiological hazards, personal protective equipment, special hazard environments, and monitoring, etc.)
- Community Health and Safety (water quality and availability, the structural safety of project's infrastructure, life and fire safety, traffic safety, transport of hazardous materials, disease prevention, emergency preparedness & response, etc.)
- Construction and Decommissioning (environment, occupational health & safety, community health & safety)

91. It should be noted that these Industry Sectors' EHS Guidelines and the General EHS Guideline are intended to identify recognized good practice, particularly in the absence of comparable national or local legislation. Moreover, they are designed to cover a wide range of topics, especially in the case of the General EHS Guideline, some or many of which specific topics may not be relevant or applicable to the project enterprise seeking a loan. The EHS Guidelines will be used by the financial institutions as useful tools in the screening and reviewing process to determine whether

environmental and social risks associated with the project enterprise have been appropriately identified and managed.

92. The GoB and the World Bank have their own policies and guidelines which are triggered by the environmental and social issues of projects. The ESMS by IDCOL is assessed with these policies being considered as a benchmark. IDCOL will commit to applying the World Bank Group Exclusion List, to the extent it may be applicable to the subprojects. These exclusions are provided in **Annex 11**.

#### *4.2.4 JICA Environmental and Social Safeguard Policies*

93. JICA's Guidelines for Environmental and Social Considerations (ESC Guidelines) is a guide that sets forth JICA's responsibilities and required procedures, together with obligations of partner countries and project proponents, in order to put ESC into practice. The current ESC Guidelines (2010) integrates JICA's former ESC Guidelines (2004) and Japan Bank for International Cooperation Guidelines for Confirmation of Environmental and Social Considerations (2002) and covers Technical Cooperation, Loan Aid and Grant Aid. The ESC Guidelines (2010) applies to projects that were proposed on and after July 2010.
94. JICA's partners, including host countries, borrowers, and project proponents (herein referred to as "project proponents, etc."), bear the primary responsibility for ESC. JICA's role is to examine the ESC undertaken by the project proponents etc. in their development projects and to provide the necessary support to ensure that the appropriate ESC is put into practice and that adverse impacts are avoided or minimized to an acceptable level. Procedures taken by JICA include the following:
- Confirmation of ESC JICA
  - Reinforcement of ESC JICA
  - Advisory Committee for Environmental and Social Considerations
  - Objection Procedures
  - Information Disclosure

#### *4.2.5 ADB Environmental and Social Safeguard Policies*

95. The Safeguard Policy Statement describes common objectives of ADB's safeguards, lays out policy principles, and outlines the delivery process for ADB's safeguard policy.
96. The Safeguard Policy Statement (SPS) builds upon the three previous safeguard policies on the environment, involuntary resettlement, and indigenous peoples, and brings them into one single policy that enhances consistency and coherence, and more comprehensively addresses environmental and social impacts and risks.
97. The SPS aims to promote sustainability of project outcomes by protecting the environment and people from projects' potential adverse impacts by avoiding adverse impacts of projects on the environment and affected people, where possible; minimizing, mitigating, and/or compensating for adverse project impacts on the environment and affected people when avoidance is not possible; and helping borrowers/clients to strengthen their safeguard systems and develop the capacity to manage environmental and social risks.

#### *4.2.6 ADB Indigenous People Policy*

98. For the development interventions it supports or assists, ADB will ensure that affected populations and persons are at least as well-off as they would have been in the absence of the intervention, or that adequate and appropriate compensation be provided. Policy implementation should ensure equality of opportunity for Indigenous Peoples to participate in decision making

and benefit-sharing. Implementation must also ensure that bank-financed interventions affecting Indigenous Peoples are:

- Consistent with the needs and aspirations of affected Indigenous Peoples
- Compatible in substance and structure with affected Indigenous Peoples' identity, culture, and social and economic institutions
- Conceived, planned, and implemented with the informed participation of affected communities
- Equitable in terms of development efforts and impact; and
- Not imposing the negative effects of development on Indigenous Peoples without appropriate and acceptable compensation and their approval.

99. Consultation with Indigenous Peoples is the key to developing an effective, accurate, responsive Indigenous Peoples Plan.

#### 4.2.7 GCF Environmental and Social Safeguard Policies

100. GCF establishes this overarching Environmental and Social Policy (hereafter Policy) that articulates how GCF integrates environmental and social considerations into its decision making and operations to effectively manage environmental and social risks and impacts and improve outcomes.

101. In carrying out its mandate of promoting a paradigm shift towards low-emission and climate-resilient development pathways in the context of sustainable development, GCF will effectively and equitably manage environmental and social risks and impacts and improve outcomes of all GCF-financed activities. This policy presents the commitments of GCF and articulates the principles and standards to which GCF will hold itself accountable. Through this policy, GCF will require that all GCF-supported activities will commit to:

- Avoid, and where avoidance is impossible, mitigate adverse impacts to people and the environment;
- Enhance equitable access to development benefits; and
- Give due consideration to vulnerable and marginalized populations, groups, and individuals, local communities, indigenous peoples, and other marginalized groups of people and individuals that are affected or potentially affected by GCF-financed activities.

102. The policy will apply to all GCF-financed activities and both public and private sector entities. The activities supported by GCF may include programs, projects, and subprojects. The financial instruments may vary and may include grants, concessional loans, guarantees, and equity investments.

103. The Environment and Social Policy apply to three engagement areas:

*At the strategic and institutional level:* The policy responds to the mandate expressed in the Governing Instrument and links to other operational strategies and policies including internal structures and governance frameworks of GCF;

*At the entities level:* The policy sets out the requirements for accredited entities working with GCF to establish and maintain robust, systematic, accountable, inclusive, gender-responsive, participatory and transparent systems to manage risks and impacts from GCF-financed activities, pursuant to this policy and the ESS standards adopted by GCF. These requirements complement the accreditation framework and are considered in the accreditation and reaccreditation processes; and

*At the activity level:* The policy establishes the requirements for environmental and social risk assessment and management to be aligned to GCF ESS standards ensuring that due diligence is undertaken for all GCF-financed activities, including subprojects financed from GCF-funded



programs or through financial intermediaries, regardless of the financial instruments used or whether these are solely supported by GCF or co-financed by other institutions.

104. The following principles shall guide how GCF will implement the ESMS and achieve the objectives of this policy:

#### **Integration of environmental and social sustainability**

105. The ESMS and the policy provide an opportunity for GCF to incorporate environmental and social considerations in ways that not only include safeguard measures of “do no harm,” but also improve environmental and social outcomes and generate co-benefits to the environment and the communities, including indigenous peoples, that depend on it. Within the parameters of the ESMS, this is translated into the operations of GCF, such as accreditation, investment criteria, ESS application, monitoring and accountability, information disclosure, gender mainstreaming, incorporation of considerations related to indigenous peoples, stakeholder engagement, and the redress mechanism.

#### **Equality and non-discrimination**

106. In meeting the ESS standards, all activities financed by GCF will require that, where they are unavoidable, adverse impacts do not fall disproportionately on vulnerable and marginalized groups and individuals that are affected or potentially affected by GCF-financed activities, and avoid prejudice and discrimination in providing access to development resources and benefits;

#### **Mitigation hierarchy**

107. The GCF adheres to the mitigation hierarchy as an overall principle to managing environmental risks and impacts suitable for all instances of GCF-financed activities. The mitigation hierarchy aims to:

- (i) Anticipate and avoid adverse risks and impacts on people and the environment; (Where avoidance is not possible, adverse risks and impacts are minimized through abatement measures;
- (iii) Mitigate any residual risks and impacts; and
- (iv) Where avoidance, minimization or mitigation measures are not available or sufficient, and where there is sufficient evidence to justify and support viability, design and implement measures that provide remedy and restoration before adequate and equitable compensation of any residual risks and impacts;

#### **Coherence and links with relevant policies and practices of GCF**

108. The Environmental and Social Policy is an overarching policy that shall be consistent and linked with the relevant policies and practices of GCF, such as those related to accreditation, monitoring and accountability, the redress mechanism, information disclosure, gender, and others, as appropriate, including those relevant policies that are still to be developed;

#### **Continuous improvement and best practices**

109. The ESMS will be continuously reviewed and updated in a transparent and participatory manner to sustain its relevance and responsiveness to the prevailing organizational, social, economic, and political conditions. The ESMS will also be consistently aligned with international best practices and applicable standards, reflecting the experiences and lessons learned by accredited entities and other relevant institutions, as well as including recommendations made by the GCF independent accountability units. In updating the ESMS, GCF will provide guidance to accredited entities on the implications of such updates on their environmental and social management systems and their application to ongoing GCF-financed activities.

### **Stakeholder engagement and disclosure**

110. The ESMS requires that there is broad multi-stakeholder support and participation throughout the lifecycle of GCF-financed activities, including the development of measures to mitigate, manage, and monitor environmental and social risks and impacts. The process to build support shall be inclusive, gender-responsive and culturally aware, and will be supported by the disclosure of relevant information pursuant to the GCF Information Disclosure Policy;

### **Gender-sensitive approach**

111. GCF will contribute to gender equality and inclusiveness by ensuring that the methods and tools to promote gender equality and reduce gender disparities in climate actions are established and implemented. In designing activities for GCF-funding, GCF will require accredited entities to adequately assess the gender risks and impacts (as part of social risks and impacts assessments), and link the corresponding gender risk management measures to the activity-level gender action plans;

### **Knowledge-sharing**

112. GCF will lead and promote the sharing of lessons and experiences in applying ESS and in implementing the ESMS among entities and stakeholders, and will integrate these lessons with capacity development, communications, and outreach activities of GCF and the entities.

### **Harmonized application of environmental and social requirement**

113. GCF will promote the harmonized application of environmental and social safeguards to reduce multiple and overlapping requirements for activities through the development of a common approach that considers the requirements of other co-financing institutions while providing the highest level of environmental and social protection required among the parties, with at least the level of protection by GCF being required.

### **Compliance with applicable laws**

114. GCF will not support activities that do not comply with applicable laws, including national laws and/or obligations of the country directly applicable to the activities under relevant international treaties and agreements, whichever is the higher standard.

### **Labor and working conditions**

115. All activities financed by GCF will promote decent work, fair treatment, non-discrimination and equal opportunity for workers, guided by the core labor standards of the International Labor Organization.

### **Indigenous people**

116. The overall objective of this Policy is to provide a structure for ensuring that activities of GCF are developed and implemented in such a way that fosters full respect, promotion, and safeguarding of indigenous peoples so that they (a) benefit from GCF activities and projects in a culturally appropriate manner; and (b) do not suffer harm or adverse effects from the design and implementation of GCF-financed activities. All GCF-financed activities will support the full and effective participation of indigenous peoples and recognize their contribution to fulfilling the GCF mandate throughout the entire life cycle of the activities. The design and implementation of activities will be guided by the rights and responsibilities outlined in the United Nations Declaration on the Rights of Indigenous Peoples including, of particular importance, the right to free, prior and informed consent, which will be required by GCF in applicable circumstances.

### **Human rights**

117. All activities supported by GCF will be designed and implemented in a manner that will promote, protect, and fulfill universal respect for, and observance of, human rights for all

recognized by the United Nations. GCF will require the application of robust environmental and social due diligence so that the supported activities do not cause, promote, contribute to, perpetuate, or exacerbate adverse human rights impacts; and

### **Biodiversity**

118. All GCF-financed activities will be designed and implemented in a manner that will protect and conserve biodiversity and critical habitats, ensure environmental flows of water, maintain the benefits of the ecosystem.

#### *4.2.7.1 General requirements as per GCF Environmental and Social Safeguard Policies*

### **Requirements of Accredited Entities**

119. GCF operates through accredited entities, including those functioning as financial intermediaries. These entities are tasked to deliver upon the objectives of GCF through the supported activities while ensuring that the fiduciary, environmental, and social standards of the GCF are met. According to GCF's policies, accredited entities will have in place environmental and social management systems that specify their capacities, standards, and processes for screening, identifying, assessing, managing, and monitoring the potential environmental and social risks and impacts pursuant to the ESS standards of GCF and this policy.
120. The accreditation of entities will be conducted pursuant to the accreditation framework, under which adequacy of the applicant's environmental and social management system, track record of implementing such a system and institutional capacity to undertake environmental and social risks and impacts assessment and management is assessed

### **Requirement of Environmental and social management system**

121. The environmental and social management system of the accredited entities will appropriate to its role as an implementing entity (which may include a project execution role), an intermediary entity, or both. The accredited entities will maintain and continuously improve the environmental and social management system on which their accreditation was approved. The level of detail and complexity of the management system, and the staff and financial resources allocated to it, will be adequate to manage the expected level of risks and impacts of the activities to be financed. The staff of the accredited entities, including those who may be part-time or externally acquired (e.g., consultants), will have the necessary expertise in all areas covered by the ESS standards of GCF to carry out their responsibilities.
122. If the entities have been accredited to have an intermediary function, their environmental and social management system will include the policies, procedures, and resources to conduct due diligence and oversight over executing entities and ensuring that the executing entities have the capacity and environmental and social management systems to fulfill the activity-level requirements discussed in sections V, VI and VII of this policy and line with the ESS standards of GCF.

### **Requirements of Environmental and social assessment**

123. The environmental and social assessment will be in a manner that follows good international industry practices; identifies best alternatives; allows for an integrated and balanced view of the environmental and social risks and impacts pursuant to GCF standards and requirements of the accredited entities; considers environmental and social factors that can affect the achievement of intended results; include upstream and downstream environmental and social risks and impacts on ecosystems and identifies opportunities to enhance the positive environmental and social outcomes and benefits.

124. The scope and depth of the environmental and social assessment will be proportional to the level of risks and impacts and determined in the screening and by the specific requirements of the applicable environmental and social safeguards pursuant to the ESS standards of GCF and Environmental and Social Policy.
125. For Category A, activities that are anticipated to have significant environmental and social, including transboundary risks and impacts, a full and comprehensive ESIA and ESMP will be required.
126. For Category B activities with limited impacts, a fit-for-purpose ESIA, and an ESMP, with a more limited focus as may be appropriate, that describes the potential impacts, as well as appropriate mitigation, monitoring, and reporting measures will be required.
127. For Category C activities should have no expected significant environmental and social impacts and, therefore may not require any assessments, although a pre-assessment or screening should confirm that the activities are indeed in Category C.

#### **Requirements of Environmental and social management plan**

128. GCF will require and ensure that the accredited entities develop ESMPs that contain the measures to manage and mitigate the identified risks and impacts, pursuant to the ESS standards of the GCF and this policy. If an accredited entity is acting in an intermediary function, the GCF will require the accredited entity to take all necessary measures to ensure that the executing entities fulfill the activity-level ESMP requirements discussed in this section, and the accredited entity will conduct the necessary due diligence and oversight to ensure that these requirements are fulfilled.
129. Based on the results of the environmental and social assessment, the ESMP for an activity will be designed such that the appropriate measures to address adverse environmental and social risks and impacts including health and safety, as well as opportunities to pursue and enhance positive environmental and social outcomes, are adequately described, roles defined, and the corresponding timelines and resources identified. Where transboundary risks and impacts are potentially involved, ESMP should include a modality to demonstrate that the concurrence of stakeholders is agreed in the ESMP. Where activities involve existing facilities, environmental and social audits may be required with an ESMP, which may include remediation, recompense, or management of any residual environmental and social issues.
130. The ESMP will be integrated into the overall planning, design, resourcing, and execution of the GCF-financed activities and reflected in the accredited entities' environmental and social management system. Where gaps exist in the capacity of accredited entities to implement the mitigation measures exist, GCF will work with the accredited entities to build or enhance the institutional capacity and address the gaps before the activities necessitating such mitigation measures are going to be implemented.
131. GCF will require and ensure that activities are screened, including component subprojects of program and activities requiring financial intermediation, for any potential adverse impacts on the promotion, protection, and respect for gender equality in accordance with the GCF Gender Policy and Action Plan and compliance with national laws and/or obligations of the country directly applicable to the activities under relevant international treaties and agreements through a comprehensive gender risk and impact assessment. Supporting and mitigating actions are to be described and cost in the activity-specific gender action plans and/or MPs, as part of the considerations for GCF funding.
132. For activities requiring financial intermediation, GCF will require and ensure that the accredited entities in an intermediary function develop an operational program- or project-level environmental and social management system or framework to identify and manage the risks associated with their portfolio and delegated activities on an ongoing basis. The complexity of the

program- or project-level environmental and social management system or framework will vary according to the risk exposure that the intermediary is expected to manage. The environmental and social management system or framework will be designed and implemented to meet the environmental and social safeguards of the accredited entities, pursuant to the ESS standards of GCF and this policy.

### **Monitoring and reporting**

133. GCF, through its Secretariat, will carry out monitoring and reporting functions related to the environmental and social performance of the accredited entities and the supported activities as required in the GCF monitoring and accountability framework.<sup>11</sup> The monitoring will be a continuous process that allows disclosure pursuant to the monitoring and accountability framework and the Information Disclosure Policy. The extent of monitoring will be based on the type and level of risks identified, including environmental and social risks.
134. GCF will monitor the compliance of accredited entities with the applicable environmental and social safeguards requirements, pursuant to the ESS standards and the monitoring and accountability framework of GCF. On an annual basis, the accredited entities will provide GCF with a self-assessment of their compliance with the applicable environmental and social safeguards pursuant to the ESS standards of GCF. Halfway through the five-year accreditation, the Secretariat will undertake a mid-term review of the compliance performance of the accredited entities. Annually, the Secretariat will report to the Board the consolidated results of the annual self-assessments, mid-term reviews, and any ad hoc reviews that were conducted.

### **Information disclosure, stakeholder engagement, and grievance redress**

135. The Governing Instrument affirms that GCF will operate in a transparent and accountable manner, guided by the principles of efficiency and effectiveness. The GCF Information Disclosure Policy operationalizes this commitment by ensuring transparency, public access to information, and stakeholder participation in all its activities. The Information Disclosure Policy requires that relevant information, including with respect to environmental and social issues, is made available to the affected and potentially affected communities and external stakeholders.
136. The information will be made available in accordance with the provisions of the Information Disclosure Policy, allowing the stakeholders time to review, seek further information, and provide inputs on a proposed activity, including ways to improve the design and implementation of its environmental and social safeguards. The information in the form of environmental and social reports, including additional
137. The accredited entities will also disclose, in the same manner, and time frame as the safeguard documents, a summary of the activities, along with the environmental/social information, including the following at a minimum: (
- a) The purpose, nature, and scale of the activities, and the intended beneficiaries;
  - (b) The duration of proposed activities;
  - (c) A summary of stakeholder consultations and the planned stakeholder engagement process; and
  - (d) The available grievance mechanism(s).
138. GCF will require accredited entities (AE), executing entities (EE), implementing entities (IE) and other intermediaries, to ensure the effective engagement of communities and individuals, including transboundary, vulnerable, and marginalized groups and individuals that affected or potentially affected by the activities proposed for GCF financing. The stakeholder engagement plan will describe the disclosure of information, meaningful consultation and informed participation in a culturally appropriate and gender-responsive manner, and, in certain circumstances, free, prior informed consent, as required pursuant to the ESS standards of GCF. The disclosure of information, meaningful consultation, and informed participation will be

designed and undertaken in a manner that takes into consideration the risks and impacts, including where appropriate transboundary impacts as well as opportunities to enhance environmental and social outcomes of the proposed activities, starting from the design and development of activities and will continue throughout the lifecycle of the activities.

139. The approach of GCF is to provide for grievance and redress at GCF, accredited entity, and activity levels. GCF requires that accredited entities inform the communities affected, or likely to be affected, by the GCF-financed activities about the grievance and redress mechanisms at all three levels, at the earliest opportunity of the stakeholder engagement process and in an understandable format and all relevant languages. The details for sending complaints containing the contact information and the appropriate modes by which these will be received will be provided by the accredited entities to the communities and disseminated with other involved institutions.
140. The ESS standards of GCF establish the requirements for setting up of a grievance redress mechanism at the activity level to receive and facilitate the resolution of concerns and grievances about the environmental and social performance of GCF-financed activities. These mechanisms will seek to resolve complaints in a manner that is satisfactory to the complainants and other relevant parties, that will be identified, depending on the nature of the complaint. To this end, GCF will require accredited entities to identify, where this already exists at the activity-level grievance redress mechanism, or establish and maintain appropriate and effective mechanisms to receive complaints and facilitate the resolution of such in connection with the GCF-financed activities.

#### **Implementation arrangements and resource provision**

141. The Environmental and Social Safeguards Policy is an essential component of the overall management framework described as the ESMS of GCF. The implementation of this policy will be through the processes and procedures developed as part of the ESMS, taking into account other relevant policies and the ESS standards of GCF. GCF will have staff with appropriate expertise and will allocate responsibilities and adequate resources to support the effective implementation of this policy.

#### **Requirements of Effective date and review**

142. The Environmental and Social Safeguards Policy will apply to ongoing activities to the extent reasonably possible and those that will be approved after the effective date. GCF will review and evaluate the overall environmental and social performance based on the objectives of this policy and the ESS standards, as discussed in the next paragraph. Appropriate amendments to this policy will be considered, based on the results of such review and evaluation, changes to the ESMS, including updates on and development of the ESS standards. In amending this policy, GCF will provide guidance to accredited entities on the implications of such amendments on the accredited entities' environmental and social management systems and their application to ongoing GCF-financed activities. A review of the policy will be undertaken five years after the effective date in order to assess the effectiveness of GCF in achieving the objectives of the policy. This review will include a stakeholder consultation and will be supplemented by annual and mid-term operational reviews and reporting, which may lead to improvements in the ESMS, as required.

#### **4.2.8 IFC Environmental and Social Safeguard Policies**

143. The Environmental, Health, and Safety (EHS) Guidelines of the World Bank Group (WBG)/International Finance Corporation (IFC), 2008 is the safeguard guidelines for the environment, health, and safety for the development of the industrial and other projects. They contain performance levels and measures that are considered to be achievable in new facilities at reasonable costs using existing technologies. When host country regulations differ from the levels and measures presented in the EHS Guidelines, projects are expected to achieve whichever is

more stringent. If less stringent levels or measures than those provided in these EHS Guidelines are appropriate, in view of specific project circumstances, a full and detailed justification for any proposed alternatives is needed as part of the site-specific environmental assessment. This justification should demonstrate that the choice for any alternate performance level is protective of human health and the environment.

144. The section 4 of EHS Guidelines for “Construction and Decommissioning” provides additional, specific guidance on prevention and control of community health and safety impacts that may occur during new project development, at the end of the project life-cycle, or due to expansion or modification of existing project facilities.

#### *4.2.9 IDCOL Environmental and Social Safeguard Policies*

145. IDCOL’s Environmental & Social policy statement emphasizes IDCOL’s sensitivity and concern to environmental and social issues, commitment towards legal compliance, and responsiveness towards E&S requirements of its development partners and is communicated to all its stakeholders. The E&S Policy of IDCOL provides the necessary direction for the implementation of the operational framework of the ESSF.

146. IDCOL has a mandate of financing private sector for developing medium to largescale infrastructure and renewable energy projects in Bangladesh. IDCOL recognizes the significance of environmental, health/safety, and social considerations in infrastructure development and beliefs in sustainable development. In order to achieve the above, IDCOL is committed to:

- Mainstream environmental, health/safety and social (E&S) considerations in appraising and financing infrastructure projects to avoid/minimize adverse impacts and risks to the environment and people that may be affected
- Ensure compliance with all relevant E&S policy and legislative requirements and laws of the lands with which it engages and remain responsive to the E&S requirements of international best practices
- Avoid/minimize land acquisition and resettlement through the selection of appropriate locations and design of projects
- Where the land acquisition is unavoidable, compensate replacement value of such acquired land/property will be paid before displacement or replace with the land having equal value and quality together with other facilities such as housing and basic infrastructure facilities
- Ensure protection of vulnerable groups, such as the economically and socially disadvantaged, women, children, physically handicapped and indigenous people and take appropriate measures to restore their livelihood as relevant.

147. In order to meet all the requirements described in the preceding sections, IDCOL’s ESSF has been structured to reflect the following:

1. Integrated E&S policy
2. Screening: Project Screening based on List of Prohibited activities and E&S Risk Rating for the Project
3. Operational Procedures for Risk Mitigation and Control
4. Institutional structure for operation of the ESSF including allocation of roles and responsibilities
5. Advisory Panel of Experts to guide the ESSMU
6. Capacity development plan at IDCOL for continued strengthening
7. Annual E&S auditing and reporting
8. Updating of the ESSF based on feedback and experience of its application to projects

148. Risks and impacts assessment and management is one of the prime principles of the ESMS. The principal entails:

- To identify and evaluate environmental and social risks and impacts of the project;
- To adopt a mitigation hierarchy to anticipate and avoid, or where avoidance is not possible, minimize, and, where residual impacts remain, compensate/offset for risks and impacts to workers, affected communities, and the environment;
- To promote improved environmental and social performance of project sponsors through the effective use of management systems;
- To ensure that grievances from affected communities and external communications from other stakeholders are responded to and managed appropriately;
- To promote and provide means for adequate engagement with affected communities throughout the project cycle on issues that could potentially affect them and to ensure that relevant environmental and social information is disclosed and disseminated.

#### **Principle on Environmental Health & Safety**

149. Environmental health and safety are one of the most important principles of the ESSF. The organization highly emphasizes on maintaining compliance to the relevant environment laws and acts of the Peoples' Republic of Bangladesh and also rules set by the donors including the following:

1. Any environmental degradation is to be avoided and/or (if not avoided) minimized to the minimal extent;
2. The availability and use of personal protective equipment are to be ensured and be closely monitored continuously;
3. Personal protective equipment is to be made readily available and all defective equipment is to be replaced promptly;
4. Presence of safety equipment and training to the building users on fire safety plan is to be ensured;
5. ISO 14001:2004 (Environmental Management Standard) and OHSAS 18001:2007 (Occupational Health Safety Standard) compliances
6. Environmental Health & Safety (EHS) compliance is to be monitored regularly;
7. Awareness raising programs and training for the staff of the projects are to be arranged.

#### **Principle on Gender Equality & Social Inclusion**

150. Mainstreaming gender equity and empowerment is always a focus area for IDCOL. In the activities related to livelihood and restoration, women's needs are to be especially addressed. Gender analysis is to be a part of the social assessment and the basis of the analysis will be findings from gender specific queries during the primary data collection process and available secondary data in the ESIA preparation. The quantitative and qualitative analysis are supposed to bring out sex disaggregated data and issues related to gender disparity, needs, constraints, and priorities as well as understanding whether there is potential for gender based inequitable risks, benefits and opportunities. Based on the analysis, the specific interventions are to be designed and if required, gender action plan need to be prepared. The overall monitoring needs inclusion of sex disaggregated indicators and gender relevant indicators. The participation of beneficiaries and focus on poverty reduction are two other key determinants of the effectiveness and sustainability of any project. Any project must address the constraints on women's participation in project design, construction and monitoring and evaluation (M & E).

151. Three major tools are to be used to identify and deal with gender issues in the project cycle: gender analysis, project design, and policy dialogue. Gender analysis must be an integral part of the initial social assessment at the screening stage itself. The issues identified need to be scaled



up during the feasibility and detailed analysis should be carried out during the project preparation stage. The project designs should be gender responsive based on the gender analysis and should be included in the ESIA. The findings and recommendations from the gender analysis during project planning and feedback from beneficiaries during implementation must be discussed thoroughly to determine the need for further action.

#### **Principle on Stakeholder Engagement**

152. Implementation of the principle must adhere to the following guidance:
1. Information must be relevant to stakeholders and reveal not only general information about the project (e.g., purpose, duration, scale, proposed activities), but also potential risks for communities and planned mitigation measures.
  2. Disclosure of information must occur in a reasonable timeframe to allow stakeholders to process this information and – if applicable – raise concerns.
  3. The form of disclosure must be targeted to the audience (particularly to affected groups) in the appropriate language and channels of communication.
  4. Consultation must be carried out in a culturally appropriate, non-discriminatory and gender-sensitive manner, free of external manipulation, intimidation or coercion.

#### **Monitoring indicators**

153. The following are some of the relevant parameters and indicators that can be used to measure ESSF process, mitigation plans and performance:
1. Have project resulted in better living standards for the community?
  2. How has the adoption of the ESMS requirements improved the environmental health and biophysical state of the proposed area?
  3. Has ESMS adoption resulted in sustainable use of energy and improved efficiency?
  4. Are periodic monitoring reports being completed and sent to DoE & Funded Partners?
  5. Are processes defined in the ESMS working well?
  6. How many complain/grievances have been received regarding the
  7. project?
  8. Based on the results of monitoring, what (if any) changes to the ESMS
  9. are needed? Should there be additional training/capacity building resources to increase performance?

### **4.3 Implications of the Environmental and Social Policies to the Program**

154. The program aims to promote energy efficiency measures which implies lower GHG emission, leading to an overall environmental benefit. However, implementation of the measures should not create an adverse environmental or social impact. While, adherence to the prevailing regulations is necessary to undertake such a program, the alignment of the program design with the policies stated above will ensure the positive environmental impacts are realized. Also, since funding is coming from GCF, the standards set by GCF should also be adhered to.
155. In this regard, each policy provides particular guidance in designing the program. National Environmental Policy 1992 supports ensure sustainable, long term and environmentally sound base of natural resources. The International Finance Corporation (IFC), a member of the World Bank Group, promotes sustainable growth in private-sector development by investing in critical industrial and commercial infrastructure resource efficiency projects. The EE & C Master Plan 2030 promotes Energy efficiency and conservation (EE & C) programs for Large Industrial Energy Consumers including finance in EE & C through low interest loan, subsidy and other incentive mechanisms.

156. The BNBC, PPR 2008, Bangladesh Labor Act 2006 outlines guidelines for ensuring worker's health and safety during construction works, which would have direct implications in the project. It would be the responsibility of the contractors/RMG authority to make sure that these guidelines are followed in the workplace environment.

157. In view of the sub-projects' nature, the program can be classified as Medium level of intermediation, I2 under the environmental and social risk categories as defined in the ESS standards of the GCF. An intermediary's existing or proposed portfolio includes, or is expected to include, substantial financial exposure to activities with potential limited adverse environmental or social risks and impacts that are few, generally site-specific, largely reversible and readily addressed through mitigation measures; and includes no activities with potential significant adverse environmental and social risks and impacts that, individually or cumulatively, are diverse, irreversible or unprecedented.

158. Considering the IFC Performance standards (PS), the following PSs will be applicable for the sub-projects:

#### Overarching (ESMS)

PS1: Assessment and Management of Environmental and Social Risks and Impacts

- Policy (or equivalent documents)
- Process for identifying risks & impacts
- Management program
- Organizational capacity & competency
- Process for monitoring & evaluation
- External communications

#### Subject Specific

PS2: Labor and Working Conditions

PS3: Resource Efficiency and Pollution Prevention

PS4: Community Health, Safety, and Security

159. PS5: Land Acquisition and Involuntary Resettlement, PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources, PS7: Indigenous Peoples and PS8: Cultural Heritage will not be applicable for this project as the project activities will not address or adversely impact any of these mentioned issues.

160. The entities will ensure that all GCF-financed activities meet applicable laws related to managing environmental and social risks and impacts, including national laws, regulations and standards, and obligations of the country directly applicable to the project under relevant international treaties and agreements. The compliance with applicable laws will be reflected in the screening process indicating these national requirements and how these will be met through the management programs and plans.

## 4.4 Policy Gap Analysis and Mitigation Measures

161. The national policies and regulatory frameworks in Bangladesh mentioned in this document addresses environmental and social issues associated with project implementation. Also, the EE & C Master Plan focuses on creation of new markets for investments in energy efficient equipment and appliances and green buildings. However, the policies do not address the environmental and social impacts caused by repairing/replacement of machineries or equipment within an already existing RMG factory. Repairing/ replacement works can cause potential environmental damage by generating wastes, noise and air pollution. These issues were not included in the ECR 1997 as well. Also, there is no guideline on ensuring environmental health and safety measures and gender inclusion at project level. The national policies also do not address the monitoring and evaluation

procedure and grievance redressal mechanism (GRM) for which there is no common guidelines to adopt. The GCF and accredited entity's environmental and social safeguards policies and standards (e.g. GCF environmental and social safeguards standards, Environmental and Social Policy and Indigenous Peoples Policy) also does not mention any particular guidelines on the environmental and social impacts caused due to repair/replacement of energy efficiency within an existing facility. However, these gaps can be mitigated through adequate measures adopted in the ESMS.

162. The ESMS should address the potential environmental and social impacts of the energy efficiency measures on the people working in the factories as well as the surrounding communities. As there is no existing guideline or national policy addressing the issue, the ESMS should identify the potential environmental and social risks during the environmental and social screening procedure. The safeguard indicators should be developed in alignment with the national policies and regulations as well as the GCF and accredited entity's environmental and social safeguards policies and standards and the findings from the screening.

163. Considering the existing policies and practice regarding environment and social safeguards in Bangladesh, the following issues should be considered in the ESMS.

**a) Risk of inadequate environmental and social assessment of individual projects**

164. The ECR 1997 does not require EIA for repairs/retrofitting or capacity expansion of existing factories. However, those activities may generate construction and chemical wastes that can adversely impact health and environment both in the factories and surrounding communities. Thus, waste generation due to repair/retrofitting needs to be addressed in the ESMS and ToR of ESIA of individual sub-projects.

**b) Risks relating to labor and working conditions**

165. The RMG sector in Bangladesh have potential issues on worker's rights (i.e. gender based discrimination for overtime, inadequate leave and long working hours); discrimination against women in terms of tasks assignments, promotions and decision making; employment of minors; unsafe, unhealthy and overcrowded workplace with inadequate amenities; and poor accommodation. Thus, labor and working conditions need to be addressed in the ESMS and ToR of ESIA of individual sub-projects.

**c) Reputational risk from suppliers**

166. Suppliers of construction materials and raw materials for the operations of garment factories, may be produced with questionable labor and environmental standards. Companies receiving financing from the program may need to require their suppliers to show certain evidences or certifications that it meets certain standards.

**d) Risk from water pollution**

167. The largest portion of pollution for RMG sector stems from its Washing, Dyeing, and Finishing (WDF) units or as known in Bangladesh - dyeing, printing, and finishing. Washing involves cleaning textiles or apparel with water and chemicals; dyeing involves coloring or printing substrates; finishing involves the superficial treatment of textiles or apparel at the wet or dry stage. Also, hot water is discharged in the environment which comes from washing clothes and cooling of the machineries. If an industry is located near a natural water source then it might cause sever environmental damage (i.e., reduced oxygen level, increase toxicity, kill aquatic species) unless necessary precaution is taken. Thus, risks associated with water and chemical pollution need to be assessed.

**e) Resource efficiency**

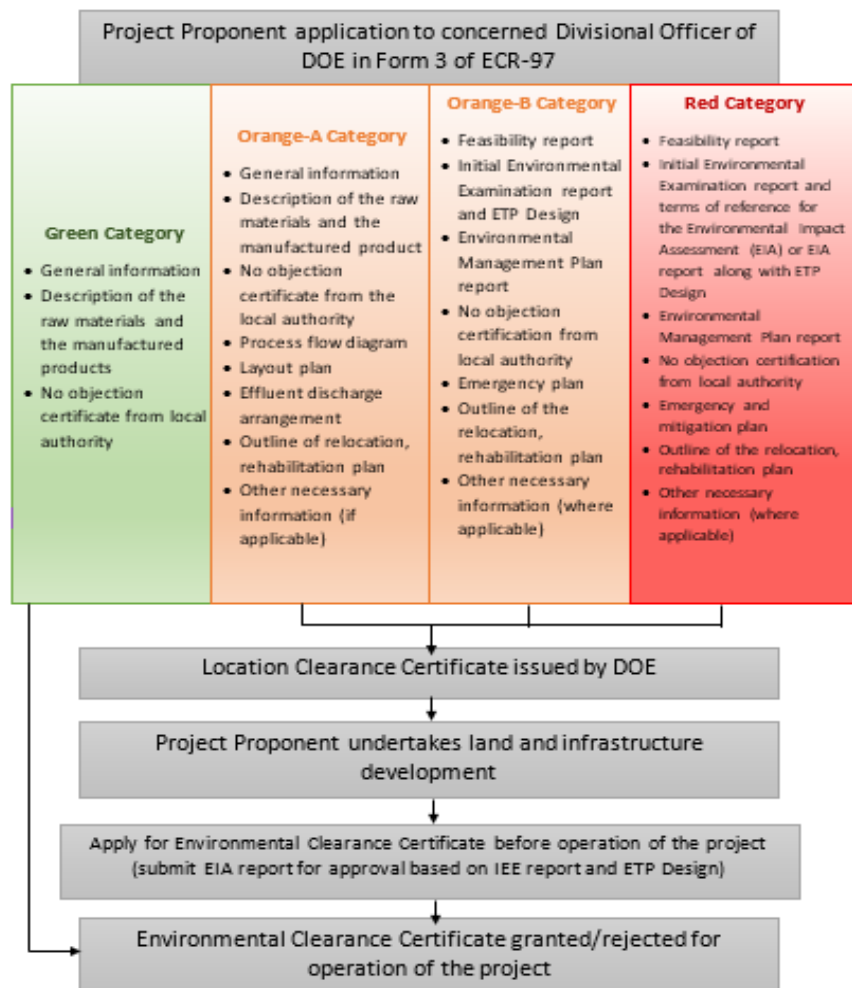
168. In Bangladesh especially, reductions in water use also lead to savings in energy and chemicals because factories typically extract water from their own tube wells and treat it before use. Water and chemical efficiency can be achieved by introducing efficient machineries and metering system. Using energy efficient machineries and equipment will help to reduce thermal and electrical energy that will result in less GHG emission. The ESMS should identify adequate measure for resource efficiency and encourage the RMG units to adopt those measures.

**f) Risk from legacy issues**

169. Companies/factory establishments that would receive financing support from the program could have pending or unresolved environmental and social compliance issues in its operations or construction activities. Thus, the due diligence shall cover not only new expansion or operations to be funded but also the existing operations of the factory establishments. An environmental and social compliance audit of existing facilities and preparation of corrective measures may need to be done.

### 4.5 Environmental Clearance Procedure

170. The legislative bases for EIA in Bangladesh are the Environmental Conservation Act 1995 (ECA'95) and the Environmental Conservation Rules 1997 (ECR'97). Department of Environment (DOE), under the Ministry of Environment and Forest (MOEF), is the regulatory body responsible for enforcing the ECA'95 and ECR'97. It is the responsibility of the proponent to conduct an EIA of development proposal, the responsibility to review EIA for the purpose of issuing Environmental Clearance Certificate (ECC) rests on DOE.

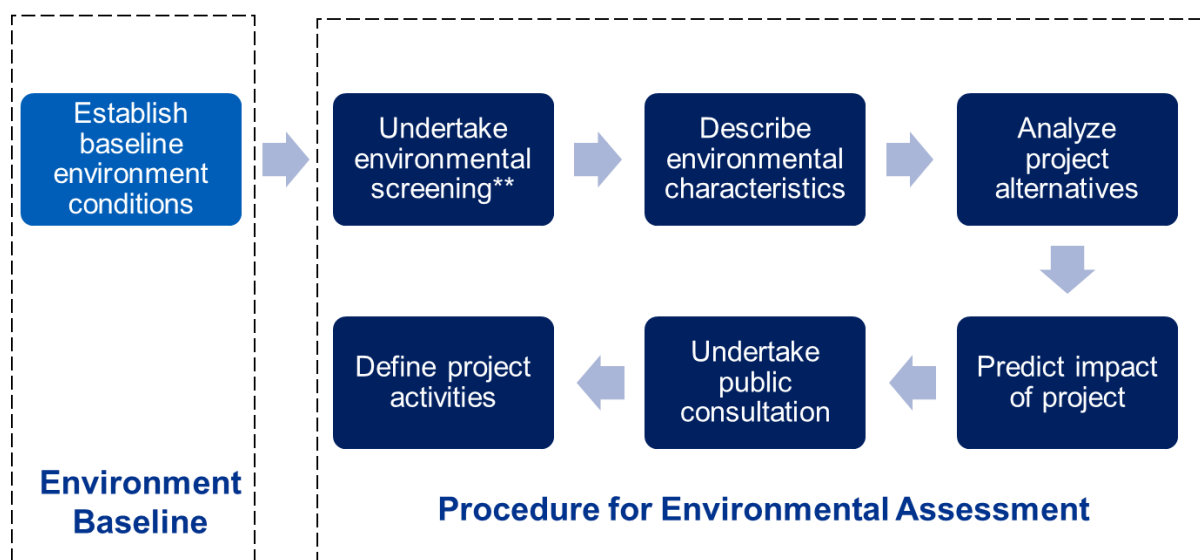


**Figure 4-1 GOB process for obtaining EC Certificate from DoE**

171. Garments sector falls in the Orange-B category and hence the requisite steps for the category should be adhered to ensure compliance with National regulations. The End Borrowers are advised to refer to the Department of Environment directives to note any changes in the category, procedure, requirements for Environmental Clearance before proceeding with the project.

## 5 ENVIRONMENTAL ASSESSMENT

172. Process for conducting Environmental Assessment, include the steps given in the following diagram:



**\*\*Environmental Screening Checklist given in Annex 3**

173. Each of these steps are elaborated in the subsequent sub-sections. The assessment framework for environmental impacts, given subsequently, has been devised based on IFC's Performance Standards, with particular focus to **PS3 i.e. Resource Efficiency and Pollution prevention**. Based on the principles given in PS3, framework to evaluate impact of project activities on pollution, wasteful use of resources and green-house gas emissions is provided.

### 5.1 Environmental Baseline

174. Baseline condition of environment indicates the current status of different components of environment in absence of a particular project. The main objective of examining the current environment is to provide an environmental baseline against which potential impacts from construction and operational phases of any project can be compared. Another important function of establishing a baseline for parameters is to ensure that any problems arising from existing sources are not erroneously attributed to the project under study. In the present study, various physico-chemical, biological and socio-economical environmental components such as: climate, rainfall, relative humidity, wind speed, ambient air temperature, water quality, air quality, geology/seismology, noise level, soil, flora and fauna, fisheries, agriculture, land use, economic development etc. has been taken into consideration for investigation to set a baseline conditions of the project area.

175. For carrying out "overall environmental assessment", field surveys, consultations with different stake holders, Focus Group Discussions (FGDs), review of EA reports of relevant projects were made. Field visits were conducted in 20 selected RMG units in Gazipur, Narayanganj and Chottagram district. Table 4-1 shows the name of the visited sites.

*Table 5-1: Sites Visited*

176. No.	177. Factory Name	178. Location	179. Key Products
1.	180. Denim Expert Ltd.	181. Chattogram	182. Woven (Bottom)
2.	183. Chittagong Asian Apparels Ltd.	184. Chattogram	185. Shirt, pants, shorts, jacket, skirt
3.	186. Crown Wears (Pvt) Ltd.	187. Mymensingh	188. Shirt, Bottom
4.	189. Designtex Knitwear Ltd.	190. Gazipur	191. Sweater
5.	192. Mars Sports Wear Ltd.	193. Chattogram	194. Female Sportswear
6.	195. Far East Knitting & Dyeing Ind. Ltd.	196. Gazipur	197. Knitted tops, bottoms, hoodies
7.	198. Designer Fashion Ltd.	199. Savar	200. Five Pocket Bottom
8.	201. Marma Composite Ltd.	202. Ashulia	203. Men's and Women's Knitwear
9.	204. Dekko Designs Ltd.	205. Ashulia	206. Men and women's woven bottom
10.	207. SQ Station	208. Mymensingh	209. Knitwear
11.	210. Fair Apparels Ltd.	211. Narayanganj	212. Knitwear (Men, women, child)
12.	213. Century Apparels Ltd.	214. Narayanganj	215. Knit garments
13.	216. UHM Limited	217. Narayanganj	218. Knit garments
14.	219. Remi Holdings Ltd.	220. Narayanganj	221. Woven (bottom)
15.	222. Simba Fashions Limited	223. Narayanganj	224. Woven (Men's, Women's)
16.	225. Kwun Tong Apparels Ltd.	226. Narayanganj	227. Woven (Jeans and gabardine)
17.	228. Seacotex Fabrics Ltd.	229. Narayanganj	230. Men's Knitwear, Men's woven
18.	231. PSA Fashions Ltd.	232. Gazipur	233. Women's knitwear, Men's and Women's woven
19.	Gramtech KDFGI Ltd.	234. Narayanganj	235. Women's and Men's knitwear,
20.	Ocean Sweater Ind. (Pvt.) Ltd.	236. Gazipur	237. Women's and Men's Sweater

238. During field visits, discussions were held with the different stakeholders on different issues; discussions on Energy Efficiency practices; proposed sub-projects to be implemented; and capacity and institutional arrangement for environmental management of the proposed sub-projects. Key Informant Interviews (KII) were held with workers during these field visits to identify issues and problems to enable the institution to corrective measures and to identify lessons and

opportunities to enhance project implementation mechanism. Discussions also have been held with the facility managers on different aspects of project implementation and management, particularly focusing on existing capacity and institutional arrangement for environmental management of the proposed sub-projects. Also, KII was conducted with representatives from government, NGO, INGO, development partners, academicians, financial institution, monitoring agencies for RMG sector etc.

239. In order to develop a comprehensive Environmental Management Framework (EMF) for the project, an environmental baseline study was carried out in areas within and surrounding of these visited sites. The specific objectives of the baseline study were to gather information on the existing physical and ecological surveys and other studies (e.g., physical infrastructures, water supply and sanitation, solid waste management, water quality, and noise level measurements) of the areas within and around the project sites, and to assess peoples' perception on different aspects of the proposed project. The data and information gathered during the baseline study provide a detailed description of the existing conditions of physical and biological environment in and around the project areas. The possible environmental impacts of the sub-projects will be evaluated against these baseline environmental conditions.

## 5.2 Environmental Assessment Procedure

### 5.2.1 Environmental Screening

240. The purpose of the environmental screening is to get relevant concerns addressed early during the appraisal of the sub-project by the LFI's according to the screening format annexed with this ESMF and to ensure that actions to mitigate environmental impacts or enhance environmental opportunities are budgeted for. Screening should be done by the Banks initially during project appraisal to identify the environmental & social impacts at the sub-project level (i.e., in the RMG units).

241. The environmental screening would involve: (i) reconnaissance of the sub-project area and its surroundings; (ii) identification of the major sub-project activities; (iii) preliminary assessment of the risks and impacts of project activities on the ecological and physico-chemical environment of the sub-project surrounding areas; (iv) identify applicable environmental safeguard standards / IFC PSs; (v) determine the category of the subproject; and, (vi) determine the specific instrument/s to be prepared for each subproject. The procedure is detailed in **Annex 4**. The participation and consultation with local communities are important identifying the potential impacts of the project interventions.

242. The Financial Institutions can include initial screening and categorization of financial transactions (loans) based on their risks, review of safeguard documents, site inspections, monitoring the clients' ES performance, and documentation.

### 5.2.2 Description of the Environment

243. For proper environmental assessment (as a part of IEE or EIA), it is very important to adequately define the "environmental baseline" against which environmental impacts of a particular sub-project would be subsequently evaluated. The characteristics of "environmental baseline" would depend on:

- Nature of the sub-project location,
- Nature/ extent of a sub-project and its likely impact,
- Level of environmental assessment (e.g., screening versus full scale EIA)



244. For example, felling of vegetation/tree, water quality, ambient air quality and noise level are important parameters for describing baseline scenario for the sub-project's construction under MDSP, because these parameters are likely to be impacted by the project works.
245. The base line description collection should take into account the existing and proposed developments in the area. Based on the field visit baseline data needs to be collected from secondary and primary sources to describe the baseline conditions. Environmental baseline should include collection and interpretation of information on the status and trends of the environment that are likely to be affected by the development action.
246. The base line description collection should take into account the existing socio-economic condition, physical environment of selected indicators and proposed developments in the area so that cumulative impacts can be assessed. On the field visit baseline data needs to be collected from secondary sources (consult FRE) and public consultation (FGD) to describe baseline condition. The following sections provide guideline on identification of important features/parameters and collection of sub-project specific environmental baseline data:
247. **Physical Environment**-The description should include information on:
- Climate: Temperature, rainfall, humidity wind speed and direction, air quality etc.
  - Topography and land/soil type
  - Noise and dust
  - Flooding and drainage pattern: If and when the area is flooded by normal flood and any river is around the project that may represent a risk of flooding.
248. **Protected area, physical and cultural Heritage**-Information should be gathered from both published sources as well as public consultation. Mention if the sub-project falls under protected, or is in heritage area.
249. **Water Quality and Quantity**-Baseline data of the intake water quality is necessary. In addition, given the competing water usage of the river water, availability of enough water during the lean season needs to be assessed as part of the baseline data collection. Arsenic contamination has been reported in the ground water exploited from the shallow layers by pump wells and salinity is a common phenomenon in surface water especially in river water.
250. **Biological/Ecological Resources-**
- Fisheries: There may be fishing in the river stretch adjacent to the project which may get disrupted by the intake and discharge of the construction disposals. Hence the nature and scale of fisheries around the project area will need to be assessed.
- Aquatic and Terrestrial Biology (Flora and Fauna): Any flora and fauna of importance that include terrestrial flora (forests) especially any endangered species, sensitive habitats and species of commercial importance, wetland flora, terrestrial fauna (sensitive habitat/Wildlife and coastal resources).
- Trees: Number and species of existing trees and plants in the proposed shelter sites must be reported. The felling of tree/s because of the shelter construction must be reported mentioning the number and species.
251. **Flooding and Drainage**-If any river is around the project this may represent a risk of flooding, historical hydrological data needs to be reviewed to ensure that the project is flood proofed. The 50-year project flood level should ideally be taken as the plinth level when leveling/filling the site. Drainage situation in and around the shelter site must be described with connection to outfall or river system.

252. **Socio-economic Condition**-This would include beneficiary population, housing status, literacy and education, distribution of income by occupation, annual income and gender issues. This is to be compiled from the Strategic Research and Innovation Agenda (SRIA) reports and partly from FGD with summary of discussions.
253. **Economic Development**-Information to be gathered should include infrastructure facilities like water supply, power source etc., transportation such as road type, net-work, accessibility etc., industries including cottage industries and tourism Facilities
254. **Agricultural Development**-Briefly describes the major crops grown, crop type, cropping intensity and land use pattern.

### 5.2.3 Analysis of Alternatives

255. The primary objective of the “analysis of alternatives” is to identify the location/design/technology for a particular sub-project that would generate the least adverse impact and maximize the positive impacts.
256. Project alternative is applicable when and if the impacts of environmental components and issues have significant changes to the area and also the capacity of adaptation to the changes is widely varied with selection of technology and materials in construction or rehabilitation of shelters and connecting roads. ***In the case of the program under consideration, this section will not be applicable.***

### 5.2.4 Major Sub-Project Activities

257. In order to assess environmental impacts, it is very important to identify the major sub-project activities during both construction and operational phases. The Initial Environmental Assessment (IEE) and the Environment Monitoring Plan (EMP) will be dependent on the sub-project activities.

### 5.2.5 Assessment and Prediction of Impacts

258. The impact of textiles and clothing industry on the environment go beyond emissions. Dyes used to produce toxic chemicals pollute waterways. Gathering the materials for wood-based fabrics like rayon, modal and viscose contributes to deforestation. Popular polyester fabrics washed in domestic washing machines shed plastic microfibers make their way to into drinking water and aquatic food chains (including in fish and shellfish eaten by humans). Cotton, another eminently popular material, is a pesticide and water-intensive crop; according to the World Resources Institute, the amount of water required to make one cotton t-shirt is the same as one person drinks in two-and-a-half years. The specific standards (as per Environmental Conservation Rules 1997) of various environmental parameters (such as air, water, sound, Waste from Industrial Units or Projects Waste, Sector-wise Industrial Effluent or Emission etc.) is mentioned in **Annex 13**.
259. After identification of the sub-project activities, the next step in the IEE/EIA involves assessment/ prediction of the impacts of these activities on the baseline environment. The impacts can be sub divided in pre-installation, installation and operation & maintenance phase. The following sections will describe environmental impacts in different phases due to the subproject activities.

#### 5.2.5.1 Pre-Installation Phase

260. **Loss of Land**- The installation does not require any land acquisition or trigger loss of any agricultural land as these will be installed in the existing institutes.
261. **Setting up of Labor Camps**: Although it is temporary, improper site selection for labor camp may affect the environment.

#### 5.2.5.2 Installation Phase

262. **Surface Water Pollution**-Nearby water body may be polluted due to disposal of construction/installation wastes or wastes from labor camps of the project.
263. **Ground Water Pollution**-Septic tank and soak-well deepened up to underground water table may act as media to pollute water.
264. **Air Pollution**-Air pollution may be triggered from a wide range of installation activities, including movement of vehicles, operation of construction equipment and generators.
1. **Drainage Congestion**-Temporary drainage congestion often results from obstruction to natural flow of drainage water due to the storage of materials, piled up excavated material/soil, and temporary embankments constructed to keep the work area dry. Improper dumping shall impact natural drainage courses.
265. **Soil Erosion**-Temporary Soil erosion can occur due to movement to heavy vehicle and movement of machineries.
266. **Noise Pollution**- Excessive noise can be generated from movement of vehicles, operation of construction/installation equipment and generators. movement and installation of heavy machineries.
267. **Increased Vehicular Traffic**-Vehicular traffic is expected to be increased.
268. **Disruption of natural systems**- Increased noise, pollution, traffic etc. is expected to impact on natural systems. This is a very temporary impact and will eventually decrease or stop after the ending of the phase.

#### 5.2.5.3 Operation and Maintenance Phase

269. **Surface Water Pollution**-Energy efficient technology is expected to reduce all kinds of waste including, solid waste, hazardous waste, waste water etc. Thus, it is expected to reduce surface water pollution due to less disposal of wastes or washing away of wastes into nearby surface water sources. The energy efficient machinery will require less water for cooling purpose.
270. **Air Pollution**- Air pollution is expected to be lowered down by reduction of dust emission and reduced use of waste fuels, heat, Particulate Matter (PM) (PM<sub>2.5</sub> and PM<sub>10</sub>), Sulphur di oxide gas (SO<sub>2</sub>), oxide of nitrogen gas (NO<sub>x</sub>), Carbon monoxide (CO), Volatile organic components (VOCs). The overall air quality of the project area and inside the factory premises will also improve.
271. **Drainage Congestion**-Temporary drainage congestion situation occurred in the installation phase is expected to be improved.
272. **Soil Erosion**- Soil erosion is expected to be reduced due to reduction of solid and hazardous wastes and proper maintenance of the generated wastes.
273. **Noise Pollution**- New installed machineries are expected to generate less sound resulting in reduction of noise pollution. The temporary increased noise generation on installation phase will also stop.
274. **Natural Systems**- The energy efficient machineries and practices will require less consumption of natural resources resulting resource sustainability. Reduced noise and pollution are expected to impact positively on natural systems. This is a massive step toward environmental sustainability.

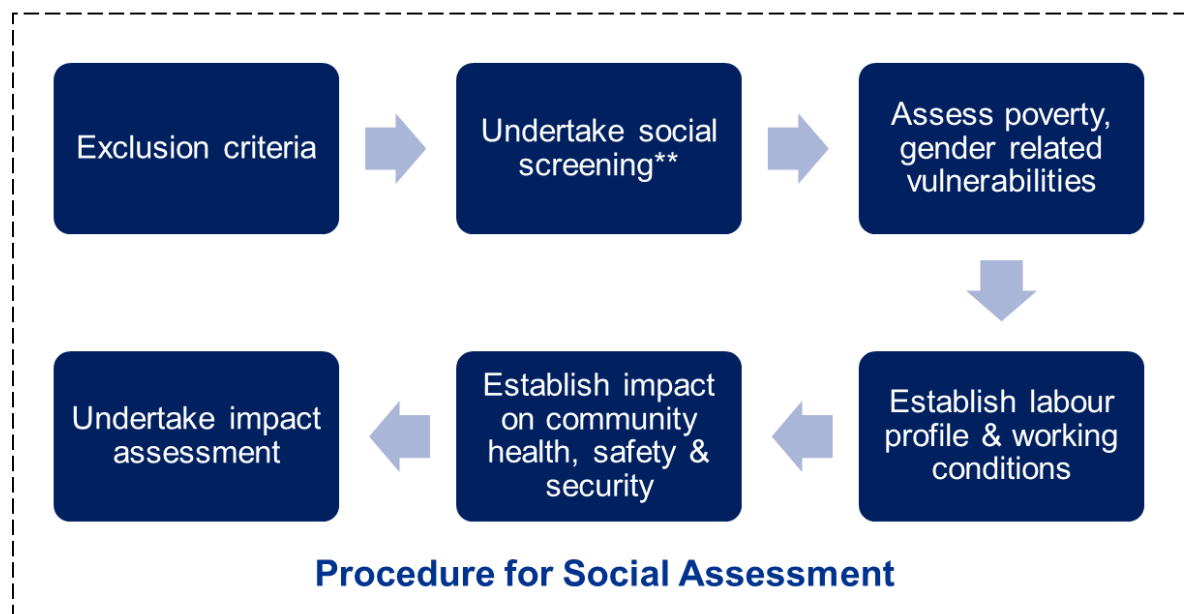
#### 5.2.6 Required Documentation

275. During the sub-project preparation stage, extensive consultation should be arranged during the conduct of the IEE/EIA surveys. During the surveys the following steps need to be followed.

1. LFIs will first screen the project site based on the screening format prepared under this ESMF.
2. Based on the outputs of the screening the LFIs will appraise the project. If the project is approved by the LFIs then the borrowers will prepare ESIA. (Third party consultant can be appointed to prepare the ESIA if required).
3. The ESIA report will consist of ESMP. ESMP will be followed during the implementation phase for regular monitoring.

## 6 SOCIAL ASSESSMENT

276. Process for conducting Social Assessment, include the steps given in the following diagram:



**\*\*Social Screening Checklist given in Annex 9**

277. Each of these steps are elaborated in the subsequent sub-sections. The social impact assessment framework has been developed based on IFC's Performance Standards, particularly **PS2 (Labour and working conditions) and PS4 (Community health, safety and security)**.

### 6.1 Social Assessment Procedure

278. Project will screen each component to identify potential safeguards compliance issues and social impacts, in order to determine applicability of the social compliance includes wages and benefits, hazards and safety, health and environment, etc. Where adverse impacts cannot be avoided entirely, design and implement the project in accordance with the following guidelines:

#### 6.1.1 Exclusion Criteria

279. To ensure that the project meets its overall objectives, and that the national legal as well as safeguard requirements are met, the following will constitute criteria for the exclusion of subproject sites from project finance:

- Negative effects on in the labor force participation occur as a result of large-scale technological developments that accompany this phenomenon, which will reduce the demand on unskilled labor in Ready Made Garments sector in Bangladesh.
- Interruptions on Supply Chain Management (SCM) that is coordinated set of techniques to plan and execute all steps in the global network used to acquire raw materials from vendors, transform them into finished goods, and deliver both goods and services to customers. It includes chain-wide information sharing, planning, resource synchronization and global performance measurements.

#### 6.1.2 Social Screening

280. Social screening will be carried out for exclusion criteria and assessing feasibility of the sites. The social screening will provide a rapid assessment of the project characteristics, its beneficiaries, the socioeconomic dimensions of the garment sector, and its potential impacts and risks including

impact on environment. It will also identify potential need for energy efficiency technological interventions and the methods of obtaining those interventions sustainable. Results of the social screening will determine whether or not qualifies for project financing and if detailed Social Impact Assessment (SIA) is required. A social screening report will be prepared with all findings and recommendations for further process. Other environment friendly interventions without social safeguard compliance issues will be considered for detailed preparation and a Social Management Plan (SMP) will be prepared for management of social issues during the implementation. Detailed procedure and checklist provided in **Annex 4B**.

### 6.1.3 Poverty, Gender and Vulnerability

#### 6.1.3.1 Poverty

281. Poverty is an economic condition in which one is unable to enjoy a minimum standard of living. Poverty refers to various forms of economic, social and psychological deprivation among the people who lack adequate resources, control or access to power for achieving a minimum level of living. Poverty can be earmarked by income level of the households. The concept of absolute poverty is the minimum level of income that is needed for physical survival. Thus, a poverty line can be defined as the minimum level of household income that can be able to purchase a bundle of goods and services to satisfy the basic needs of the household. The Household Income and Expenditure Survey (HIES) 2010 used the Cost of Basic Needs (CBN) method to measure poverty incidence in the country. The HIES 2010 have measured two types of poverty: moderate poverty and extreme poverty. Extreme poverty line is the minimum income to support basic foods and the moderate poverty line is the income to support basic food and non-food expenses.

282. Bangladesh has made remarkable progress in poverty reduction through its sustained economic growth. However, the country has 22 million people still living below the poverty line which creates challenges for sustainable development.<sup>16</sup> There is an effort to combat poverty, both Government of Bangladesh and non-government organizations (NGOs) have been implementing a number of programs, such as, microfinance, vulnerable group development (VGD), and vulnerable group feeding (VGF), employment generation program, and other foods and cash transfers.

#### 6.1.3.2 Gender Issues

283. The World Bank defines gender as culturally based expectations of the roles and behaviors of males and females. Gender distinguishes the socially constructed from the biologically determined aspects of being male and female. Unlike the biology of sex, gender roles and behaviors can change historically, sometimes relatively quickly, even if aspects of these roles originated in the biological differences between the sexes. Because the religious or cultural traditions that define and justify the distinct roles and expected behaviors of males and females are strongly cherished and socially enforced, change in gender systems often is contested.

#### 6.1.3.3 Gender discrimination and vulnerability

284. Gender discrimination may encompass sexism and is discrimination towards people based on their gender identity or their gender or sex differences. Gender inequality acknowledge that men and women are not equal and that gender affects an individual's living experience.

285. In a patriarchal society women often face discrimination and deprivation from their rights.<sup>17</sup> This is not different for Bangladesh as well. Women in Bangladesh experience greater deprivation

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<sup>16</sup> World Bank (2018). Bangladesh: Reducing Poverty and Sharing Prosperity. <https://www.worldbank.org/en/results/2018/11/15/bangladesh-reducing-poverty-and-sharing-prosperity>

<sup>17</sup> The Independent (2020). Gender discrimination: The Bangladesh perspective. <http://www.theindependentbd.com/printversion/details/230522>

and vulnerability to poverty and socioeconomic adversity due to their low status in society.<sup>18</sup> However, women in Bangladesh are gradually coming forward in national development endeavors getting pace in social sector in terms of equity and empowerment. Despite credible successes in poverty reduction and gender equity, significant gender disparity still exists in income-poverty. First, there is the general incidence of extreme poverty for women headed, women managed and women-supported households. Second, women workers earn considerably less than men workers do. It is often observed that women are working at the lowest level of the job's hierarchy with little employment security.<sup>19</sup> Third, lower average consumption for women is also evident from persistent gender inequality in severe malnutrition, mortality and morbidity.

286. Women in the country still face discrimination, exclusion and injustice and have negligible influence in decision making processes.<sup>20</sup> Discriminatory laws and policies hinder formal equality and socio-political conditions prevent women from exercising their rights. In Bangladesh, women's contribution to the national economy is much lower than it could be, as a result of their low participation in the labor market.<sup>21</sup>

287. However, in recent times the country is making remarkable progress to close gender gap. Bangladesh has closed over 72 percent of its overall gender gap in 2018.<sup>22</sup> But still a widening gender gap in terms of labor force participation remains in Bangladesh.

#### 6.1.4 Labour and Working Conditions

288. Bangladesh is the second largest exporter of readymade garments worldwide having 4,500 clothing factories employing 4.1 million workers.<sup>23</sup> However, the sector faces challenges for maintaining labor rights and favorable working conditions. Safe working environment is a basic right for the workers. A society that seeks for social justice has to ensure decent workplace, not undermine self-respect and social standing. A decent and standard working environment provides opportunity to perform efficiently and increase productivity. In addition to, safe working environment is vital for maintaining good health and free from work related injury. Illness and injury lead to expand more money for health purpose that limits individual access to other basic needs.<sup>24</sup>

289. Occupational Health and Safety (OHS) in the garment sector relates to: temperature, noise, light, ventilation, machine, chemical, electrical, and fire safety; and ergonomics. Both employers and workers have responsibilities to contribute to a working environment free of health and safety hazards. There is no OHS training applies to both mid-level management and workers to raises awareness and reduces workplace-related accidents, injuries and diseases. Poor wastage management practice which is a set of characteristic activities includes collection, transport, treatment and disposal of waste is warming for our environment. There is no act upon to prevention of waste production through in-process modification, reuse and recycling which is a formulation of reuse or material recovery.<sup>25</sup>

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<sup>18</sup> <https://bangladesh.unfpa.org/en/topics/gender-equality-13>

<sup>19</sup> ILO (2017). Equality and discrimination in Bangladesh.

<https://www.ilo.org/dhaka/Areasofwork/equality-and-discrimination/lang--en/index.htm>

<sup>20</sup> <https://www.wvi.org/bangladesh/gender-equality>

<sup>21</sup> [https://asiafoundation.org/wp-content/uploads/2018/12/EDIG-Female-employment-stagnation-i-Bangladesh\\_report.pdf](https://asiafoundation.org/wp-content/uploads/2018/12/EDIG-Female-employment-stagnation-i-Bangladesh_report.pdf)

<sup>22</sup> Global Gender Gap Report 2018, World Economic Forum.

<sup>23</sup> Dhaka Tribune (2019). <https://www.dhakatribune.com/business/2019/01/29/nearly-5-000-garment-workers-sacked-over-bangladesh-strikes>

<sup>24</sup> Mausumi, N. (2016). Recent developments in 'labor rights' and 'safety at workplace' of Bangladesh RMG industries. Textile Today. <https://www.textiletoday.com.bd/recent-developments-labor-rights-safety-workplace-bangladesh-rmg-industries/>

<sup>25</sup> Mohibullah ATM, Takebira UM, Moni KN, Rahman M (2018) Social Compliance, Occupational Health and Environmental Safety Management Practice in the Apparel Industry of Bangladesh: An Overview. J Textile Sci Eng 8: 342. doi: 10.4172/2165-8064.1000342

290. The new amended labor law incorporates provisions including forming trade unions without informing owners, safeguarding safety measures for employees in their workplaces. Provision of safety committees and the establishment of workplace health centers are also included in the law. Inspection is an integral part of the law. According to the law, inspectors can enter any factory to measure compliance with the law, and can apply penalties for breaches of the law (Amended Labour Law 2013). In addition to this, many initiatives have been taken to promote workers' rights. For example:

- Accord arranged training for safety committees. Alliance has completed safety committees' training in 34 factories.
- Alliance claimed to finish 1.2 million workers training to empower workers and bringing positive change.
- Accord has developed a safety and health complaint system, where workers can complaint about the safety issues that are not properly addressed by the management. In addition, workers preserve the right to refuse unsafe work.
- Likewise, to Accord, Alliance also installed 24-hour workers helpline in 770 factories to report safety concern anonymously. The helpline called Amader Kotha or Our voice receives an average 1700 call per month (Alliance Second Annual Report, 2015).

291. During assessment it should be monitored that the following issues are ensured:

- Establish and maintain good worker- management relationship
- There should be no discrimination in wage based on gender, race or age and equal opportunity for every worker.
- Compliance with national labor and employment laws
- No child labor or forced labor in the workplace.
- Proper occupational health and safety of the workers need to be ensured.
- Internal healthcare system should be strengthening.
- Effective Safety Committees ensuring equal participation of labors of all class, gender and race.

#### *6.1.5 Community Health, Safety and Security*

292. The project activities, equipment or infrastructure can increase the risk of the local community due to increased exposure. The community living near any industry or factory often face negative impacts due to pollution of air, water, soil, noise etc. which ultimately causes different health issues. Moreover, due to the movement of large number of workers every day the local community may face security issues sometimes. During the assessment, community related health, safety and security issues should also need to be examined as well. The purpose of this assessment is to avoid adverse impacts on health, safety and security of the community during the project lifetime and minimize the risks. The assessment will focus on the following issues and their impacts on community:

- Infrastructure and equipment
- Hazardous materials, chemicals and wastes
- Ecosystem services
- Exposure to disease
- Emergency preparedness and response

#### *6.1.6 Social Impact Assessment*

293. Social Impact Assessment (SIA) will be carried out for proposed projects when social screening will identify potential social safeguard issues. The principal opportunity of the SIA involves



identifying viable alternatives; identifying potential social impacts, including direct or indirect; permanent or temporary; physical or economic, assessing their significance; designing least-cost mitigation measures and monitoring requirements; formulating institutional arrangements; and ensuring meaningful private consultation and information disclosure procedures.

294. The relevant beneficiaries will be consulted during the risk assessment to understand the risks and options for devising mitigation of social impacts. To ensure that social concerns are adequately addressed, specific social analyses will include: (i) Socio-economic analysis; (ii) Stakeholder analysis. The assessment will identify and estimate impacts, risks and opportunities and suggest measures to avoiding or minimizing, mitigating and managing, and compensating adverse social impacts.
295. The SIA will utilize a well-planned and all-inclusive communication and consultation strategy and survey methodology to lay out a detailed socioeconomic survey covering the prevailing status of income, employment, education, age, skills and other socioeconomic aspects along with cultural and community aspects in the areas. The following methodology may be adopted.
1. The SIA will be carried out for each activity with social safeguards compliance issues in accordance with the feasible period.
  2. Community/stakeholder consultations with relevant stakeholder groups and documentation of such consultation.
  3. Focus group discussions with beneficiaries.
  4. Assimilation and analysis of data and information to address key issues following SMF.
  5. The information gathered shall be recorded and computerized, and photograph will be used to document existing technologies and equipment's and other impacts in the corridor of impact.
  6. All data will be disaggregated by gender, age and ethnicity where necessary. A gender analysis will also be undertaken.
296. Inclusion and participation will be included with the SMP where social screening and SIA will identify tribal peoples among the beneficiaries.

## 7 SPECIFIC PROJECTS & IMPLEMENTATION PROCEDURES

297. While the energy savings opportunity is present across the various industrial sub-sectors, the RMG sector in particular provides substantial scope of savings. The combined RMG and textile sector account for approximately 27% of the energy consumption in the industrial sector, with RMG sector accounting for 15%<sup>26</sup>. There is a considerable scope for adopting energy efficiency (EE) measures along with the benefits of adopting such measures in the RMG sector. There are also several obstacles, however, which prevent the implementation of EE initiatives on a large scale, thus delaying the realization of the benefits that result from it. The proposed program seeks to overcome these main obstacles by providing financial and market resources to support entrepreneurs and companies in the textile sector to take advantage of investment opportunities for improvements to energy-saving technology. The project developer Infrastructure Development Company Limited (IDCOL) has sought financial support from the Green Climate Fund (GCF) to facilitate the implementation of the plan.

### 7.1 Adoption of energy saving technologies and equipment for Garment sector of Bangladesh

298. The Program will drive transformation of the RMG sector from being most energy intensive to energy efficient, thus reducing use of fossil fuels (mainly natural gas, grid electricity and oil & coal) and GHG emission. Multiple studies related to industrial energy consumption has concluded the RMG sector has a potential to reduce energy consumption by nearly 30%<sup>27,28</sup>. The Program, besides optimizing the use of funding available in order to leverage private sector co-financing and sustainability, will also develop market instruments required to manage risks among market actors.

299. The GoB is committed to the following contributions under the UN Paris climate framework, that are also part of the INDC (Intended Nationally Determined Contributions) of Bangladesh<sup>29</sup>:

- An unconditional contribution to reduce GHG emissions by 5% from Business as Usual (BAU) levels by 2030 in the power, transport and industry sectors, based on existing resources.
- A conditional 15% reduction in GHG emissions from BAU levels by 2030 in the power, transport and industry sectors, subject to appropriate international support in the form of finance, investment, technology development and transfer, and capacity building.

300. Improved energy efficiency in production and consumption of energy is one of the key mitigation programs envisaged in the country's INDC. In this regard, GoB aims to achieve 10% of energy consumption reduction in the industry sector by 2030 compared to the business as usual<sup>30</sup>. Further GoB expects to achieve its target of 20% improved energy intensity (national primary energy consumption per gross domestic product/GDP) by 2030 compared to the 2013 level<sup>31</sup>. This program will boost private sector investments in energy saving technologies promoting an ecosystem level movement in the key energy intensive sectors of the economy, including industry, thus contributing directly to achieve the above national goals and strategies.

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<sup>26</sup> Source: [Information derived from EE & Conservation Master Plan upto 2030 \(DANIDA, 2017\)](#)

<sup>27</sup> Source: [Bangladesh: Industrial Energy Efficiency Program \(ADB website, 2014\)](#)

<sup>28</sup> Source: [Energy Efficiency & Conservation Masterplan 2030 \(SREDA, 2015\)](#)

<sup>29</sup> Source: [INDC of Bangladesh \(UNFCCC, 2015\)](#)

<sup>30</sup> Source: [INDC of Bangladesh \(UNFCCC, 2015\)](#)

<sup>31</sup> Source: [Energy Efficiency & Conservation Masterplan 2030 \(SREDA, 2015\)](#)

301. Under the EE&C Master Plan, three EE&C programs will be promoted, namely, Energy Management Program, EE Labeling Program and EE Buildings Program, which will be targeted at large energy consuming entities and equipment in the industrial, residential and commercial sectors. During the period between 2015 and 2030, a total of 5.3 Mtoe/ year or the energy savings of approx. BDT 100 billion/year can be achieved through the adoption and implementation of the three EE&C Programs<sup>32</sup>.

302. In addition, the Government considers it important to provide EE Finance Program to raise EE awareness among the power end users and boost their investments in EE products. Low interest loans are one of the key financial incentives envisaged to lessen the financial burden (initial costs) of end users who will purchase high energy efficient electric appliances and industrial equipment. Besides, subsidies and preferential tax will also be provided to further reduce the burden.

303. Based on findings of Energy Audit (conducted as part of the feasibility study) and subsequent intervention prioritization process, following measures were identified to provide optimized benefits to implementing entities<sup>33</sup>:

*Table 7-1:List of energy savings solutions for RMG sector*

No.	Measure	Savings Potential
1.	Installation of Steam Condensate Recovery System	10%
2.	Install Servo Motors in place of Clutch motors in sewing section	60%
3.	Replace old stenter machine with new efficient stenter machine	50%
4.	Replace the old inefficient gas boiler with new energy efficient gas boiler	30%
5.	Replacement of old IE1/IE2 class motors by energy efficient IE3 class motors	20%
6.	Improve existing lighting systems by energy efficient lamps	50%
7.	Installation of Waste Heat Recovery System with Jet dying machine (1.5KL/day)	18%
8.	Installation of Waste Heat Recovery System in Stenter	14%
9.	Waste Heat Recovery Through Economizer from Boiler	10%
10.	Replacement of ordinary pumps with energy efficient pumps in Jet Dyeing Machine	5%
11.	Replacement of Reciprocating Compressor with Screw Compressor	18%
12.	Installation of Energy Conservation Turbine (ECT)	21%

304. Given the context and description of the project as given above, there are specific areas which need attention while developing the Environmental and Social Management Plans. While the previous sections provide the overall methodology for conducting environmental and social impact assessment, areas relevant to the project requiring special attention are discussed in subsequent sub-sections below.

<sup>32</sup> Source: [Energy Efficiency & Conservation Masterplan 2030 \(SREDA, 2015\)](#)

<sup>33</sup> Source: Feasibility Report developed by Project Team

## 7.2 Impact Identification Process and Methodology

305. The project, especially the installation phase involves significant environmental and health safety impacts. Therefore, it is required ISO 14001:2004, OHSAS 18001:2007, ISO 9001:2015 and SA 800 certifications.
306. The ESMS establishes a mechanism to determine, assess, mitigate and manage future potential environmental and social impacts from the activities of the proposed projects during implementation as well as operation. In this regard, IDCOL will follow the safeguards policies and disclosure policy as per the ESMS.
307. The project will not impact any building of heritage significance (for example, mosque, heritage sites or cultural sites) in Bangladesh or cause any loss to biodiversity or natural habitats. Besides, this project does not create any significant impact on the physical environment like air, water (surface & ground water) and noise; however, some impacts can be seen in the installation phase which will eventually reduce after the completion of the phase.
308. Given the perceived level of social and environmental impact, it has been observed that 3 of the 8 performance standards (PS) are applicable for the program, one related to environmental standards (**PS3 i.e. Resource Efficiency and Pollution prevention**) and two related to social standards (**PS2 (Labour and working conditions) and PS4 (Community health, safety and security)**). Based on the elements comprising these standards, the following areas are recommended for examination to assess social and environmental impact:

### 7.2.1 Air Emissions

309. The project is a cleaner energy generation option than the diesel-powered generators used for production in the industries. Although the pre-implementation/pre-installation phase of the project will be emission free, temporary emission may cause from a wide range of installation activities, including movement of vehicles, operation of construction equipment and generators. After the ending of the phase, is expected to be lowered down by reduction of dust emission and reduced use of waste fuels, heat, Particulate Matter (PM) (PM<sub>2.5</sub> and PM<sub>10</sub>), Sulphur di oxide gas (SO<sub>2</sub>), oxide of nitrogen gas (NO<sub>x</sub>), Carbon monoxide (CO), Volatile organic components (VOCs). The overall air quality of the project area and inside the factory premises will also improve.

### 7.2.2 Noise Emissions

310. Compared with wind and other forms of renewable energy, there will be less noise emissions from the project. However, the installation stage may involve some noise and disturbances to surrounding project areas.

### 7.2.3 Resource Efficiency

#### Water Efficiency

311. Efficient use of water is essential to reduce the apparel-related pollution in Bangladesh. Water efficiency can be achieved by introducing efficient machineries and metering system. Moreover, efficient use of resources will reduce production cost and promote circular economy practices. For water efficiency, metering needs to be done for irrigation, indoor plumbing fixtures and fittings, domestic hot water, boilers, reclaimed water, and other process water. For plumbing fixtures, dual-flush toilets, low-flow urinals, and sensor fitted faucets can be introduced to save water.

#### Chemical Efficiency

312. In most of the industries in Bangladesh chemical is not used following proper dosing. To reduce excess chemical usage, improved chemical application techniques and use of correct

measurements should be followed. Also, chemicals should be stored following proper safety measures and avoid using carcinogenic, foaming and toxic chemicals as much as possible.

### **Energy Efficiency**

313. Energy efficiency can be achieved by energy conservation during usage and using energy efficient machineries and equipment. For thermal energy efficiency, heat recovery, increasing combustion efficiency, improve boiler efficiency, reduce excessive boiler blow down, condensate recovery, hot process water recovery, etc. can be introduced. Also, using LED lights, energy efficient motors and generators can reduce electricity consumption.

#### *7.2.4 Heat or Light Reflection*

314. Neighboring properties may be affected with intensified lighting arrangements at the installation phase which includes movement of vehicles, operation of construction equipment and generators etc. If it affects the neighbors for a prolonged period of the year, it may become a source of grievance.

#### *7.2.5 Impacts on Bio-diversity*

315. As the project will be implemented within the existing factory premises will generally not have any adverse impacts on terrestrial or marine bio-diversity. Furthermore, inside the industrial area where there are very few, if any, recorded fauna. However, if the adjoining properties have trees that obstruct the installation works, it may need to be cut down. There are also possible impacts on bio-diversity from improper disposal of waste materials unless appropriate national guidelines and processes are put in place for the safe disposal.

#### *7.2.6 Cultural Heritage*

316. It will be important to ensure that the proposed project does not have an effect on a place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical or social significance or other special value for present and future generations. Impact is non-existent in case of program, since adequate safeguards are already in place to national regulations to prevent building of manufacturing plants in cultural heritage sites.

#### *7.2.7 Employment*

317. The project is a source of temporary and permanent employment which includes both skilled and unskilled workers.

#### *7.2.8 Social Resettlement/Tribal People*

318. The replacement, installation works of the project will take place inside the different RMG factories. Therefore, there will be no land acquisition resulting in involuntary resettlement. As such, there will be no problems faced by the tribal people, if any, and thus, will not create any social conflicts.

#### *7.2.9 Environmental Health and Safety Compliances*

319. The availability and use of personal protective equipment would need to be closely monitored continuously during both the installation and operational phases. In order to ensure that personal protective equipment is always readily available, all defective equipment will be promptly replaced. During the operational phase, risks such as fires are possible. Therefore, presence of safety equipment and training to the building users on fire safety plan is to be ensured.

### 7.3 Environmental & Social Screening and Measures

320. An initial environmental and social screening will be carried out in accordance with the provisions of the funding partners' safeguard policy and EHS Guidelines by using the Environmental and Social checklist enclosed in **Annex 4**.

321. The ESA report is expected to meet the requirement of IFC Performance Standards (PS) and the project proponents will duly inform the DoE the nature of business.

## 8 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

322. Based on the results of the site-specific assessment, the ESMP will be designed such that the measures are adequately described, roles defined and the corresponding timelines and resources identified. Where the sub-project involves existing facilities, an environmental and social audit may be required, and the corresponding ESMP may include remediation, recompense or management of any residual environmental and social issues. The ESMP has the following content:
- a) Sub-project description including log frame and project activities, location and geographic extent of the sub-project; potential negative impact on environment and society due to sub-project activities.
  - b) Brief reference to the legal framework of the country, GCF's and IDCOL's framework related to environmental and social management and how the sub-project ensures compliance;
  - c) Complete list of identified negative effects that specific sub-project activities may cause and their significance;
  - d) Planned measures to avoid adverse environmental and/or social impacts, to minimize them to acceptable levels or to compensate for them; including responsibilities (staffing) and schedule for implementing the mitigation measures, their technical feasibility, cultural appropriateness, expected effectiveness in providing mitigation to all affected groups;
  - e) Reference to plans required by the IFC Performance Standards and whether mitigation measures have been included or not in the ESMP;
  - f) Cost estimates for the proposed mitigation measures and for ensuring compliance, to be included in the budget of the sub-project proposal;
  - g) Description of the executing entities' capacity to implement the ESMP; where needed, provide for capacity building measures (to be included in the ESMP budget).

### 8.1 Environment Management Plan

#### 8.1.1 Introduction

323. Industry is the second most energy-intensive sector after residential sector in Bangladesh consuming 24% of the country's total energy demand<sup>34</sup>. The combined RMG and textile sector consumes about 27% energy among the total industrial energy consumption<sup>35</sup>. The share of energy consumption by the Industries has gradually increased, and the residential sector has decreased, highlighting the growing energy needs of Bangladesh's industries. However, increased consumption does not necessarily mean energy efficiency in the industrial sector. According to the Energy Efficiency and Conservation Master Plan developed by the Government of Bangladesh up to 2030, implementing energy efficiency and conservation (EE&C) measures in the industrial sector can help reduce energy consumption in the sector by 30%<sup>36</sup>. While the potential for energy savings is present across the various industrial sub-sectors, the RMG sector provides significant savings reach in particular.

324. This ESMF report has been developed to facilitate the project. It includes all the actions to be undertaken to limit, reduce or eliminate the potential negative impacts identified. These actions concern the mitigation measures, control and monitoring measures to be applied as well as the necessary support measures for awareness raising and capacity building.

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<sup>34</sup> Source: [Energy Efficiency & Conservation Masterplan 2030 \(SREDA, 2015\)](#)

<sup>35</sup> Source: [Information derived from EE & Conservation Master Plan upto 2030 \(DANIDA, 2017\)](#)

<sup>36</sup> Source: [Energy Efficiency & Conservation Masterplan 2030 \(SREDA, 2015\)](#)

### 8.1.2 General Environmental Policies and Management Practices

325. The most commonly used standards for environmental management are ISO 14001 that sets out the requirements for an environmental management system is an internationally agreed standard. It is internationally accepted guideline for organizations to improve environmental performance through more efficient use of resources and reduction of waste, gaining a competitive advantage and the trust of stakeholders. The ISO 14000 family of standards provides practical tools for companies and organizations of all kinds looking to manage their environmental responsibilities. ISO 14001:2015 and its supporting standards such as ISO 14006:2011 focus on environmental systems to achieve this. The other standards in the family focus on specific approaches such as audits, communications, labelling and life cycle analysis, as well as environmental challenges such as climate change.
326. An environmental management system is very useful for organizations to identify, manage, monitor and control environmental issues in a holistic manner. ISO 14001 is acceptable for organizations of all types and sizes, be they private, not-for-profit or governmental. It considers all of the environmental issues relevant to its operations, such as air pollution, water and sewage issues, waste management, soil contamination, climate change mitigation and adaptation, and resource use and efficiency of an organization with details activity.
327. ISO 14001:2015 sets out the criteria for an environmental management system and can be certified to. It maps out a framework that a company or organization can follow to set up an effective environmental management system. It can be used by any organization regardless of its activity or sector. Using ISO 14001:2015 can provide assurance to company management and employees as well as external stakeholders that environmental impact is being measured and improved.

### 8.1.3 Environmental Management Plan

328. Environmental management plan aims to record environmental impacts resulting from the sub-project activities and to ensure implementation of the “mitigation measures” identified earlier in order to reduce adverse impacts and enhance positive impacts from project activities. Apart from general monitoring of mitigation/enhancement measures, important environmental parameters to be monitored during the construction phase of the sub-projects include air quality, noise level, water quality, drainage congestion, and traffic problems. However, the requirement and frequency of monitoring would depend on the nature of sub-project and field situation. The parameters and their frequency of monitoring should be provided along with cost of management plan and institutional arrangements for conducting monitoring.
329. As given in Section 6.3, elements comprising 3 Performance Standards (**PS3 i.e. Resource Efficiency and Pollution prevention, PS2 i.e. Labour and working conditions and PS4 i.e. Community health, safety and security**), which are applicable for the program, will be assessed to understand social and environment impact of the program. Based on the observations made for these elements the Environmental and Social Management Plan needs to be prepared. Accordingly, Table 9-1 provides the Environmental Management Plan for the parameters assessed in compliance with IFC’s Performance Standards:



**Table 9-1 Environmental Management Plan**

Phase	Issues	Potential Impact	Mitigation/ Enhancement Measures	Responsible Organization	
				Implement	Monitor
<b>Pre-Installation Phase</b>	Thermal energy used by factory	<ul style="list-style-type: none"> <li>CO<sub>2</sub> and GHG emission</li> </ul>	<ul style="list-style-type: none"> <li>Energy conservation through recourse management and behavioral change</li> </ul>	PIU of the end borrower	PIU of the LFI
	Electricity used by factory	<ul style="list-style-type: none"> <li>CO<sub>2</sub> and GHG emission</li> </ul>	<ul style="list-style-type: none"> <li>Energy conservation through recourse management and behavioral change</li> </ul>	PIU of the end borrower	PIU of the LFI
	Surface and ground water pollution	<ul style="list-style-type: none"> <li>Water pollution due to disposal of waste and chemicals form industry</li> </ul>	<ul style="list-style-type: none"> <li>Water quality test</li> <li>Proper waste management</li> </ul>	PIU of the end borrower	PIU of the LFI
	Air/Dust pollution	<ul style="list-style-type: none"> <li>Emission of pollutants from dismantle/ deconstruct/ disassemble of existing equipment/ machineries.</li> <li>Emission of pollutants from production</li> </ul>	<ul style="list-style-type: none"> <li>Baseline information on air quality parameters</li> <li>Sampling at different points in the RMG unit and nearby areas which are expected to be impacted.</li> </ul>	PIU of the end borrower	PIU of the LFI
	Noise pollution	<ul style="list-style-type: none"> <li>Employees and communities exposed to high noise level due to dismantling of existing machineries</li> </ul>	<ul style="list-style-type: none"> <li>Baseline information on noise quality parameters</li> <li>Sampling at different points in the RMG unit and nearby areas which are expected to be impacted.</li> </ul>	PIU of the end borrower	PIU of the LFI

Phase	Issues	Potential Impact	Mitigation/ Enhancement Measures	Responsible Organization	
				Implement	Monitor
		<ul style="list-style-type: none"> <li>Noise generated from machineries during production</li> </ul>			
	Solid/ Hazardous Waste Management	<ul style="list-style-type: none"> <li>Solid waste generated from demolition, construction activities containing potentially hazardous materials</li> </ul>	<ul style="list-style-type: none"> <li>Baseline information on waste quality parameters</li> <li>Sampling at different points in the RMG unit and nearby areas which are expected to be impacted.</li> </ul>	PIU of the end borrower	PIU of the LFI
	Suppliers' compliance with labor and environmental standards	<ul style="list-style-type: none"> <li>Non-compliant labor and equipment can lead to additional hazard</li> </ul>	<ul style="list-style-type: none"> <li>Verify standard certification before hiring</li> </ul>	PIU of the end borrower	PIU of the LFI
Installation Phase	Thermal energy used by factory	<ul style="list-style-type: none"> <li>CO<sub>2</sub> and GHG emission</li> </ul>	<ul style="list-style-type: none"> <li>Using energy efficiently machineries/equipment</li> <li>Energy conservation through resource management and behavioral change</li> </ul>	PIU of the end borrower	PIU of the LFI
	Electricity used by factory	<ul style="list-style-type: none"> <li>CO<sub>2</sub> and GHG emission</li> </ul>	<ul style="list-style-type: none"> <li>Using energy efficiency machineries/equipment</li> <li>Energy conservation through recourse management and behavioral change</li> </ul>	PIU of the end borrower	PIU of the LFI
	Noise	<ul style="list-style-type: none"> <li>Employees and communities exposed to high noise level</li> </ul>	<ul style="list-style-type: none"> <li>Installation of sound insulation.</li> </ul>	PIU of the end borrower	PIU of the LFI

Phase	Issues	Potential Impact	Mitigation/ Enhancement Measures	Responsible Organization	
				Implement	Monitor
		<ul style="list-style-type: none"> <li>Disturbance of school and education activities during construction works</li> </ul>			
	Air Quality	<ul style="list-style-type: none"> <li>Emission of pollutants from mobile (vehicles) and stationary (mixers, generators etc.) sources.</li> <li>Air pollution from burning of demolition wastes e.g. wood, paper etc.</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of dust reduction measures in construction sites</li> <li>Safety measures put in place</li> </ul>	PIU of the end borrower	PIU of the LFI
	Water Quality	<ul style="list-style-type: none"> <li>Potential pollution of surface and ground water through runoff of pollutants e.g. chemical, lubricating oil, diesel fuel etc. from workshop areas etc.</li> <li>Water pollution due to seepage from tanks (diesel, sanitary wastes etc)</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate containment measures for all operational areas and proper disposal of used lubrication oil.</li> <li>Work sites Installed far from waterways</li> <li>Regular collection of work sites wastes for proper disposal</li> <li>Liquid waste discharged at designated outfalls after effluent treatment to protect water resources</li> </ul>	PIU of the end borrower	PIU of the LFI
	Solid/ Hazardous	<ul style="list-style-type: none"> <li>Solid waste generated from demolition, construction activities</li> </ul>	<ul style="list-style-type: none"> <li>Quick sorting, collection and disposal of waste removed from the sites in</li> </ul>	PIU of the end borrower	PIU of the LFI

Phase	Issues	Potential Impact	Mitigation/ Enhancement Measures	Responsible Organization	
				Implement	Monitor
	Waste Management	containing potentially hazardous materials	accordance with applicable regulations.		
<b>Post Installation Phase</b>	Thermal energy used by factory	<ul style="list-style-type: none"> <li>Reduced CO<sub>2</sub> and GHG emission</li> </ul>	<ul style="list-style-type: none"> <li>Proper monitoring and maintenance to maintain the improved condition</li> <li>Encourage employees towards energy efficiency</li> </ul>	PIU of the end borrower	PIU of the LFI
	Electricity used by factory	<ul style="list-style-type: none"> <li>Reduced CO<sub>2</sub> and GHG emission</li> </ul>	<ul style="list-style-type: none"> <li>Proper monitoring and maintenance to maintain the improved condition</li> <li>Encourage employees towards energy efficiency</li> </ul>	PIU of the end borrower	PIU of the LFI
	Surface and ground water pollution	<ul style="list-style-type: none"> <li>Reduced water use</li> </ul>	<ul style="list-style-type: none"> <li>Proper monitoring and maintenance to maintain the improved condition</li> </ul>	PIU of the end borrower	PIU of the LFI
	Air/Dust pollution	<ul style="list-style-type: none"> <li>Reduced dust pollution</li> </ul>	<ul style="list-style-type: none"> <li>Proper monitoring and maintenance to maintain the improved condition</li> </ul>	PIU of the end borrower	PIU of the LFI
	Noise pollution	<ul style="list-style-type: none"> <li>Reduce noise/ vibration</li> </ul>	<ul style="list-style-type: none"> <li>Proper monitoring and maintenance to maintain the improved condition</li> </ul>	PIU of the end borrower	PIU of the LFI
	Waste disposal/ Management	<ul style="list-style-type: none"> <li>Reduced waste generation</li> </ul>	<ul style="list-style-type: none"> <li>Proper monitoring and maintenance to maintain the improved condition</li> </ul>	PIU of the end borrower	PIU of the LFI
	Operation and Maintenance	<ul style="list-style-type: none"> <li>Reduced need for engineering controls</li> <li>Lowered cooling requirements</li> <li>Increased facility reliability</li> </ul>	<ul style="list-style-type: none"> <li>Proper monitoring and maintenance to maintain the improved condition</li> </ul>	PIU of the end borrower	PIU of the LFI

Phase	Issues	Potential Impact	Mitigation/ Enhancement Measures	Responsible Organization	
				Implement	Monitor
		<ul style="list-style-type: none"> <li>▪ Reduced wear and tear on equipment/machinery</li> <li>▪ Reductions in labor requirements</li> </ul>			
	Working Environment	<ul style="list-style-type: none"> <li>▪ Improved lighting</li> <li>▪ Reduced noise levels</li> <li>▪ Improved temperature control</li> <li>▪ Improved air quality</li> </ul>	<ul style="list-style-type: none"> <li>▪ Proper monitoring and maintenance to maintain the improved condition</li> </ul>	PIU of the end borrower	PIU of the end borrower

#### **8.1.4 Grievance Redressal Mechanism**

330. The Grievance Redressal Mechanism is a system that allows anyone to file complaints, principally from local residents that live near the facility. It is a system that will enable the authority to make fully-fledged environmental improvements for local residents and also lead to environmental improvements within plants. The structure of GRM implementing body and the process for grievance redressal is provided in **Section 11**.

#### **8.1.5 Climate Risk Management Plan**

331. Climate Risk Management (CRM) is the process by which climate threats are assessed, addressed and managed adaptively. Climate risks are potential negative effects due to changing climatic conditions on programs or operations. CRM's goal is to work more climate resilient (i.e., better able to anticipate, prepare and adapt to changing climatic conditions and resist, respond and recover quickly from disruptions) and avoid maladaptation (i.e., development efforts that inadvertently increase climate risks). By using climate risk assessments to guide decision-making at the level of policy, plan, and operation, it is easier to manage climate threats and fulfill the goal of overcoming extreme poverty and fostering stable, democratic societies thereby pursuing our security and prosperity more effectively.

##### **8.1.5.1 Objectives of Climate Risk Management Plan**

332. The main objective of preparing an analysis and a framework is to provide a guidance for achieving environmental sustainability throughout the project cycle under the CRM monitoring on the activities and interventions taken by the project.

##### **8.1.5.2 Methodology**

333. The structure of the framework for CRM was designed by retaining and evaluating the requirements and resources of USAID Climate Risk Screening and Management Tool. In addition, during the recognition and analysis of climate risk as well as management options, a semi-structured questionnaire was created and used (Table 9.2).

334. The diagram outlines the climate risk screening and project development planning system as illustrated in the USAID Climate Risk Screening and Management Tool. The project managers and support staff must begin by building on strategy-level climate risk screening and feedback from management (e.g. reported in a CDCS). The next step is to determine climate risks at an appropriate level of detail to establish approaches/strategies to tackle medium and high climate risks adequately. The following steps include defining solutions for climate risk management; determining next steps; if possible, acknowledging climate risks; and reporting the effects.

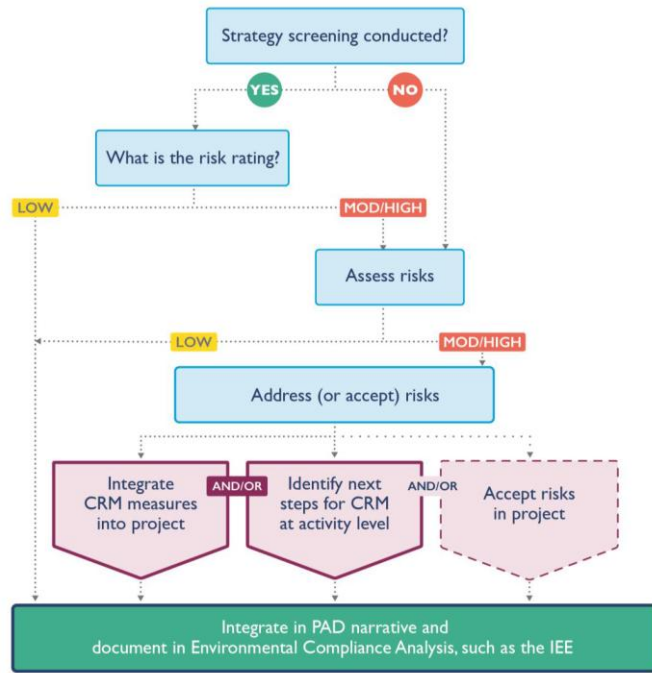


Figure 9-1: Climate Risk Screening and Management Tool for Project Design  
Source: USAID Climate Risk Screening and Management Tool

### 8.1.5.3 Climate Risk Management Plan

335. The following diagram describes the steps of preparing CRM Plan:

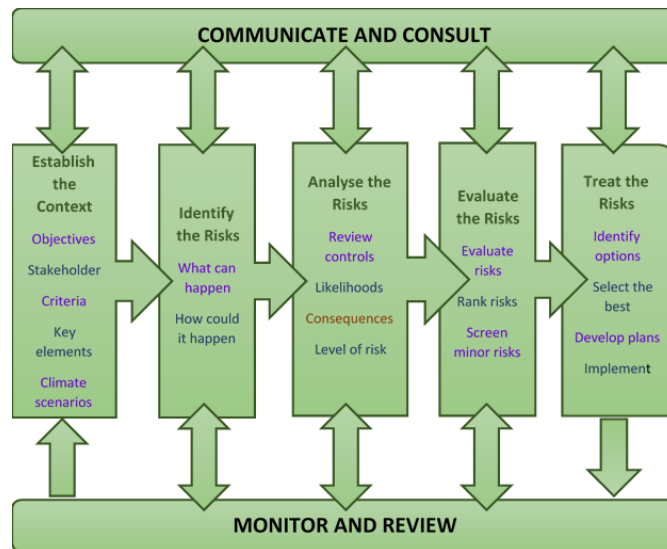


Figure 9-2: Steps of Climate Risk Management Plan

### 8.1.5.4 Identify climate threats and opportunities

336. The three key tasks during this stage are to identify recent, severe weather impacts, explore current vulnerability to climate change and identify critical thresholds

#### Current vulnerability to extreme weather and climate

337. Vulnerability is defined as ‘the degree to which a system is susceptible to or unable to cope with, adverse impacts of climate change, including climate variability and extremes’ (IPCC 2007).

338. The consequences of weather and climate risks are not exempt to us. A table listing previous weather events that affected the business, its consequences and the mechanisms to cope with them (see Table 9.2) has been done. This allows to develop a profile of vulnerability to recent weather and climate. The main consequence of these impacts has been delayed service delivery and disruption to supply chains, increase in health and safety incidents leading to staff downtime and insurance claims, negative press and reputation among customers and shareholders, and overall loss of revenue.

#### *Recent climate trends and projected climate change*

339. In the Fifth Assessment Report of the International Panel for Climate Change (IPCC), the globally averaged combined land and ocean surface temperature data, as calculated by a linear trend, show a warming of 0.85 (0.65 to 1.06) °C, over the period 1880 to 2012. There is considerable debate and variations in projected future global climate change and parameters for Bangladesh. However, there is consensus that global warming will increase and so will be the case for Bangladesh. The IPCC used the RCP instead of previous Special Report on Emission Scenarios (SRES) to project global warming.

340. The region-wise seasonal changes in temperature and rainfall during 2030 are presented in **Annex 14**. Analysis shows that the temperature will rise in all regions in future in a similar trend with the global pattern. So, it can be estimated that due to climate change temperature might rise in the country in a range of 0.8 to 1.1°C by 2030 (Table 9). Further rise in temperature is expected in the latter half of the century. The rainfall pattern is going to be more variable and erratic in the future. There is an indication that pre monsoon and monsoon rainfall will increase (**Error! Reference source not found.**).

#### *8.1.5.5 Assess climate risks*

341. Threats and opportunities were categorized using six business areas: markets, processes, logistics, people, premises and finance. The physical and non-physical, direct and indirect threats and opportunities arising from climate change has also been considered.

##### **Markets**

342. There is an opportunity to become more competitive as competitors are struggling to cope with current weather and not thinking about climate change.

##### **Process**

343. There is limited time for maintenance due to unsuitable weather (too hot/cold/windy).

##### **Logistics**

344. Heavy rainfall, flood, extreme weather events blocks roads and railways preventing fuel/material/stock delivery.

##### **People**

345. Extreme weather poses a risk to health and safety of staff getting to and from work.

##### **Premises**

346. Buildings cannot withstand rainfall and storm damage resulting in repair or refitting costs.

##### **Finance**

347. Heavy rain and flooding cause delays resulting in regulatory fines at year end.



**Table 8.2: CRM for scope with Key vulnerabilities of the Urban Areas Hotspot**

Vulnerability from	Business Area	Consequences
1. Urban sprawl, unplanned settlements and development	Premises	<b>Moderate Risk:</b> <ul style="list-style-type: none"> <li>• Construction/ maintenance of factories located in hazardous areas such as high flood risk areas, riverbeds, coastal flood plains, cyclone and storm surge risk areas, and eroding areas along the rivers and coasts doubles the probability of accidents</li> <li>• Increasing risk of waterlogging while installation and pre-installation phase</li> <li>• Breakdown of basic services – water supply, sanitation, waste disposal; increase in water borne diseases among workers</li> <li>• Contamination of surface waters</li> </ul>
	Logistics	<b>Moderate Risk:</b> <ul style="list-style-type: none"> <li>• Serious disruption to transportation network. As a result, time extension may need for construction or repair and refurbishment due to delay in machineries, raw materials delivery</li> <li>• Problem in Vehicle Movement due to narrowing down of the roads/blocking of roads unplanned construction on the sides of the road network</li> </ul>
	Finance	<b>Moderate Risk:</b> <ul style="list-style-type: none"> <li>• During the repair and refurbishment climate induced disaster may increase repair cost</li> </ul>
2. Lowering of groundwater levels and prolonged dry periods	Premises	<b>Low Risk:</b> <ul style="list-style-type: none"> <li>• Delay in construction or repair and refurbishment due to less freshwater available for industrial use</li> <li>• Decline of industrial output</li> </ul>
	Logistics	<b>Low Risk:</b> <ul style="list-style-type: none"> <li>• Delay in receiving materials for construction/installation due to reduction in production as a result of lack of water availability</li> </ul>
	Finance	<b>Low Risk:</b> <ul style="list-style-type: none"> <li>• During the repair and refurbishment climate induced disaster may increase repair cost</li> </ul>
3. Sea level rise and increasing precipitation	Premises	<b>Low Risk:</b> <ul style="list-style-type: none"> <li>• Risk of permanent inundation; increasing flood risks; breakdown of disaster-risk management structures</li> <li>• Increasing risk of waterlogging while installation and pre-installation phase</li> <li>• Premature deterioration of structures/equipment/building/ materials from salt water intrusion</li> </ul>
	Finance	<b>Low Risk:</b> <ul style="list-style-type: none"> <li>• During the repair and refurbishment climate induced disaster may increase repair cost</li> </ul>

Vulnerability from	Business Area	Consequences
4. Rise in Temperatures	Premises	<b>High Risk:</b> <ul style="list-style-type: none"> <li>• Formation of Heat stress due to increasing temperature</li> <li>• Premature deterioration of structures/equipment/building materials from thermal stress due to increased temperatures</li> <li>• Delay in installation/ maintenance due to excessive heat production</li> <li>• Delay in working process due to heat stress related sickness of workers</li> </ul>
	Finance	<b>High Risk:</b> <ul style="list-style-type: none"> <li>• During the repair and refurbishment climate induced disaster may increase repair cost</li> </ul>
5. Cyclones	Premises	<b>Moderate Risk:</b> <ul style="list-style-type: none"> <li>• Damage of the temporary shades/workstation/workers residence resulting disruption in installation, replacement and maintenance</li> <li>• Raw materials/ machineries can be damaged</li> <li>• Time extension may need for construction or repair and refurbishment</li> </ul>
	Logistic	<b>Moderate Risk:</b> <ul style="list-style-type: none"> <li>• Problem in Vehicle Movement</li> </ul>
	Finance	<b>Moderate Risk:</b> <ul style="list-style-type: none"> <li>• During the repair and refurbishment climate induced disaster may increase repair cost</li> </ul>
6. Excessive Rainfall	Premises	<b>Moderate Risk:</b> <ul style="list-style-type: none"> <li>• Time extension may need for construction or repair and refurbishment</li> <li>• Damage of the temporary shades/workstation/workers residence resulting disruption in installation, replacement and maintenance</li> <li>• Raw materials/ machineries can be damaged</li> </ul>
	Logistic	<b>Moderate Risk:</b> <ul style="list-style-type: none"> <li>• Problem in Vehicle Movement</li> </ul>
	Finance	<b>Moderate Risk:</b> <ul style="list-style-type: none"> <li>• During the repair and refurbishment climate induced disaster may increase repair cost</li> </ul>

### 8.1.5.6 CRM Framework

348. CRM framework includes the adaptation capacity, opportunity, future plans addressing climatic vulnerabilities etc. These may vary from project to project. A sample CRM framework is mentioned in **Annex 12**.

### 8.1.6 Method of Estimation of Cost for EMPs

349. Some activities included in EMPs have certain monetary involvement. The cost of the environmental mitigation measures in the EMP will be estimated and. Cost of implementing environmental management plan (EMP) including monitoring activities needs to be estimated as a part of the preparation of EMP and will be included in the bill of quantities of bid document. Many of the activities to be carried out as a part of EMP would not involve any additional direct cost e.g., employing local work force, where appropriate; keeping sub-project vehicles in good operating condition; scheduling deliveries of materials/ goods in off-peak hours; use of fuel; etc. On the other hand, several activities would require additional cost. Environmental monitoring during both construction and operational phases would involve direct cost. At the same time, a number of mitigation measures (including health and safety measures) would also require additional cost; these include of installation of septic tank/sanitary latrine/portable toilets, installation of health and safety signs, awareness documents (signs/ posters), plantation etc. The generic method of determining the cost of the EMP is outlined below:

**Table 8-3:Method/ basis of estimation of cost of Monitoring**

Monitoring:		Testing Agencies
Air Quality (SPM or PM10 or PM2.5) *	Prevailing rate (per unit)	<ul style="list-style-type: none"> <li>• Department of Environment (DoE),</li> <li>• Bangladesh University of Engineering and Technology (BUET)</li> <li>• Military Institute of Science and Technology (MIST),</li> <li>• Bangladesh Council of Scientific and Industrial Research (BCSIR)</li> </ul>
Noise level	Prevailing rate (per unit per day)	
Water quality (pH, color, temperature, turbidity, suspended solids, total alkalinity, electric conductivity, dissolve oxygen, BOD <sub>5</sub> /COD, chloride, nitrate, phosphate, metals)	Prevailing rate (per sample)	
Installation of septic tank/ sanitary latrine/ portable toilet	Prevailing rate/ Latest PWD/ LGED rates	
Health/ safety signs (size and number)	Prevailing PWD/ LGED rate / Lump sum	
Protective gear	Contractor to quote rate of items of works considering provision of adequate protective gear for workers, in accordance to work	
Plantation (including protection/ fencing and conservation during project period)	Prevailing rate (per plant)	

**Sample test rate schedule is provided in Annex 14 & 15.**

### 8.1.7 General Principles for Environmental Management

350. The Environmental Management Procedure establishes the criteria to identify the level of Environmental Assessment (EA) and the processes involved, their sequence to conduct the EA studies for various subprojects under this project including their legal requirements and implications.

- The End Borrower will be responsible for the environmental compliance monitoring and oversight to ensure overall project environmental compliance. The TA component of the program will contain training programs for building capacity in end-borrowers for monitoring compliance and adequately supplemented by templates provided as Annexures in this document.
- The End Borrower will follow the related government rules (laws, ordinances, acts etc.) and GCF Operational Policies and Guidelines. This EMF would serve as the basis for ensuring this compliance.
- The implementing entity will submit the EMF to the Department of Environment (DOE) for their review and concurrence.
- The implementing entity will ensure the participation of local community in planning and implementation of sub-projects.
- No project activities will be carried out in and nearby the environmental protected and critical areas as well as in disputed lands or lands restricted for development.
- All the activities proposed under the project will abide by existing Environmental Code of Practices (ECP).
- The implementing entity will ensure that proper environmental screening will be done by the design consultant.
- Design consultant will ensure that environmental considerations are given sufficient attention. To this end, it will carry out Environmental Management Plan (EMP) with cost estimate for all subprojects based on screening criterion.
- LFI and borrower will monitor environmental and social impacts as per the ESMP.

351. To facilitate the monitoring of activities for compliance with established environmental guidelines, an **Environmental Monitoring Checklist (Annex 6)** and a format for **Half-yearly/ yearly Environmental and Social Monitoring Report (Annex 7)** is provided.

## 8.2 SOCIAL MANAGEMENT PLAN

### 8.2.1 *Social Development Guidelines*

352. The local government acts and the Right to Information Act (2009) recognize that stakeholders can exercise their rights to access information in context of development programs and the public institutions are obligated to place information in public domain. This creates an enabling environment to develop trust among implementing partners and builds in checks and balances to strengthen the system. Project information will be disclosed in public domain including the social screening/assessment report, social management plan.
353. The project will implement social accountability tools to improve citizen participation and transparency. Strengthened transparency and accountability includes display of information of all activities including cost, at prominent places in the intervention areas, participation of stakeholders in monitoring and evaluation, and use simple formats for reporting findings at planning and implementation stages. Specific measures will be designed on (i) consultation, feedback and grievance-redress mechanisms to alert project staff to problems identified by beneficiaries, and other stakeholders; (ii) participatory planning to ensure the project meets the needs of beneficiaries; and (iii) participatory monitoring and evaluation for identification of problems.

### 8.2.2 *Communication and Participation Strategy*

354. The communication and participation strategy promote a two-way communication, exchanging knowledge and skills for adoption of sustainable energy saving technologies as well as equipment with facts on the ground.
355. Communication and participation process will include (i) disclosure and consultation meetings, (ii) need based field visits during planning, design and implementation. Feedback from consultation process will be given due consideration for beneficiary selection, project design, and implementation.
356. Beneficiary participation and their feedback through consultation will be the key to success of effectiveness of the adoption of energy saving technologies by promoting private sector investment.

### 8.2.3 *Grievance Redressal Mechanism*

A mechanism for redressal of any grievances related to any social issues and non-compliance of the project with GCF social safeguards policies will be established. The grievance redressal mechanism (GRM) will answer to queries, receive suggestions and address complaints and grievances about any irregularities in application of the guidelines adopted in this framework for inclusive project design, and assessment and mitigation of social and environmental impacts. The structure of GRM implementing body and the process for grievance redressal is provided in Section 11.

## 9 INSTITUTIONAL ARRANGEMENT FOR SAFEGUARD COMPLIANCE AND CAPACITY BUILDING

### 9.1 Institutional Arrangement for Safeguard Compliance

357. In order to effectively monitor the compliance with the stipulations given under ESMF (including monitoring compliance with developed ESMP), a robust institutional arrangement should be present. There will be two types of project implementation units (PIU), one for the LFIs and another for the end borrowers.

#### **Local Financial Institutions:**

358. Each of the LFIs will have their own PIU. There will be 5-10 members in the PIU. The committee shall be formed by employees of the LFIs who would have exposure in environment, social and gender issues. Moreover, the PIU should be gender balanced and ensure female participation. The LFIs follow the Bangladesh Banks's 'Guidelines for Green Banking' which include environmental protection, environmental liabilities, renewable and recycled materials used, energy consumption, defined benefit plan obligations, structure and composition of the board, competencies of members of highest governing body, tenure of governance body, conflicts of interest and more. Thus, the LFIs have capacity on environment, social and gender issues within their organizational structure.

#### **End Borrowers:**

359. For the end borrowers, the PIU will have 4-5 members. The head of the PIU can be from general manager level. Human resource department representative will be responsible for social compliance, safety and security department representative will be responsible for ensuring occupational health and safety issues and finance department representative will be responsible for the finance related issues. There will be a technical representative for the energy efficiency and environmental issues. The PIU will receive technical support from the LFIs if they face difficulties in assessing environmental or social issues. Each of the sub-projects will include a monitoring and evaluation plan to ensure proper implementation of the activities.

360. While it is recommended to personnel within the organization be chosen, the end borrower can also hire an external agency exhibiting proven experience in social and environmental management (including undertaking impact assessments, preparing management plans and conducting monitoring of compliance with environmental and social management plans), instead of an internal team.

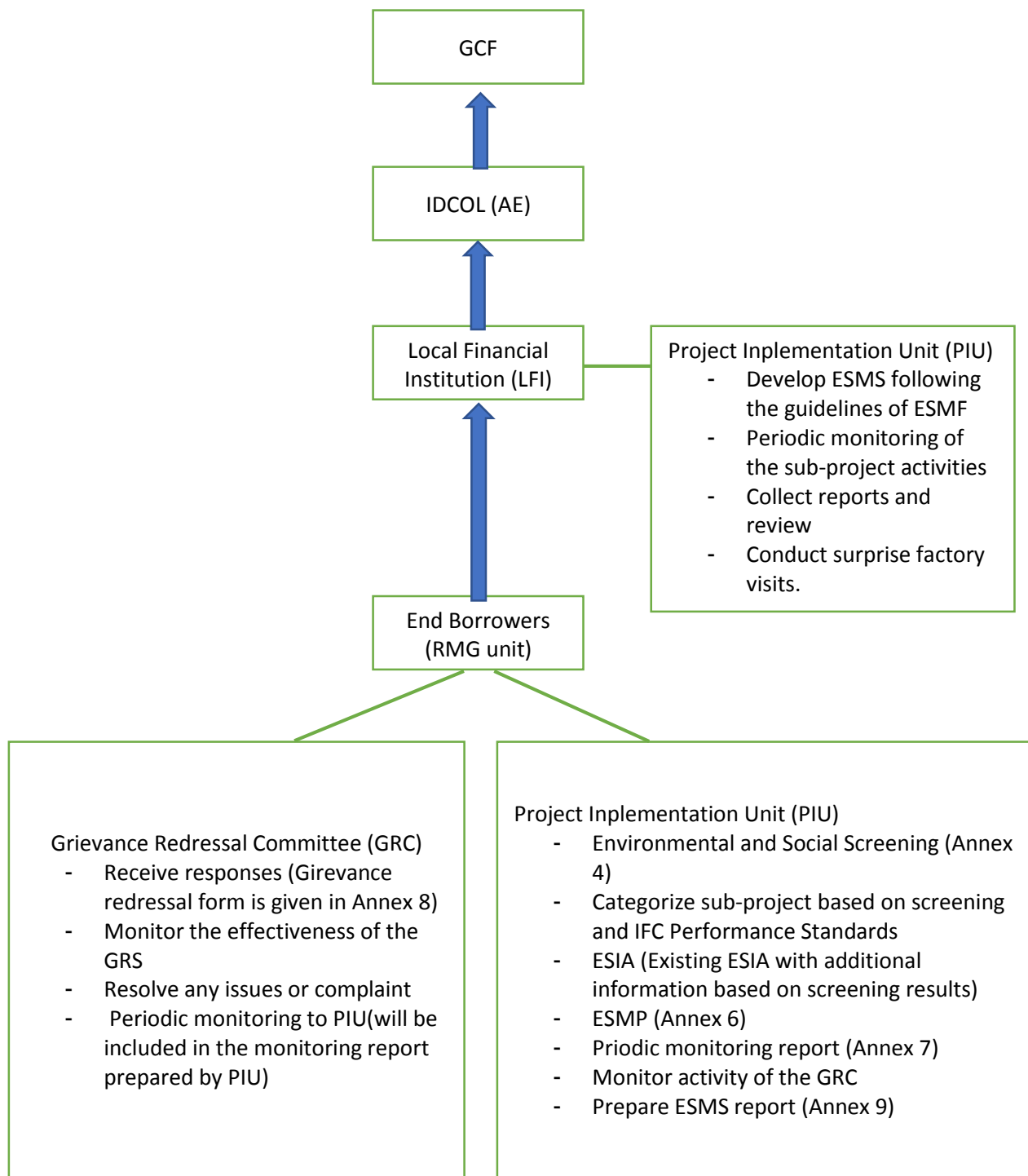
361. The team will develop site-specific indicators for the environment and social issues mentioned in the ESMS and baseline values of each of the indications will be collected (a sample monitoring and evaluation plan will be attached in the annex). A monitoring report will be submitted half-yearly/yearly after the project implementation.

### 9.2 Monitoring, Evaluation and Reporting

362. The ESMP needs to be monitored to track the progress in implementing the agreed mitigation measures. This should be done half yearly/annually based on the template provided on environment and social monitoring checklist in **Annex 6**.

363. The PIU at the sub-project level will be responsible for the monitoring of the ESMP. Given below is the list of the activities the Environmental and Social Monitoring team is expected to perform:

1. The team will review all environmental and social screening, assessment, mitigation measures and costing along.
  2. Prepare a brief environmental supervision manual in the beginning of their contract to confirm the environmental supervision procedures and systems parties during the sub-project implementation. The manual will be continuously updated or modified throughout the implementation period to document the best operation/ construction environmental management process.
  3. Conduct routine monitoring of the compliance of EMP. A checklist for field monitoring is shown in **Annex 6**.
  4. Submit the overall half-yearly/ yearly progress report on environment and social compliance as per format given in **Annex 7**.
  5. Monitoring of community engagement, social screening and impact assessment, the process of obtaining lands for sites, and preparation and implementation of ESMP.
  6. Provide inputs on environment and social management in the project progress reports
  7. Provide clarifications related to social and environmental issues of the project as identified during independent monitoring commissioned by accredited entity or implementing entity (if any) and also during periodic missions of GCF, as requested.
364. The LFIs will be responsible for periodic monitoring of the sub-project activities, collect reports and may conduct surprise factory visits. During monitoring, the LFIs will also review the worker's right and workplace environment issues in light of the benchmark set by GCF. If any deviations observed, LFIs would recommend actions. Further, the LFIs will monitor that certain standards are followed at the clients end for selecting their suppliers to avoid questionable labor and maintain environmental standards.
365. A diagram of the institutional arrangement for safeguard compliance is showed in Figure 10-1.



*Figure 9-1 Institutional Arrangement for Safeguard Compliance*



### 9.3 Training and Capacity Building Requirements

366. During the field visits for Environmental Baseline, it was observed that officials of RMG units have limited or no exposure to environmental assessment and management. Since the officials of the End Borrowers will be responsible for carrying out compliance monitoring, as per guidelines of the ESMF, there is need to develop in-house capacity for performing such functions.
367. Capacity development in End-borrowers for effective monitoring and evaluation of compliance with the ESMP will be undertaken as part of the Technical Assistance (TA) program. Under the TA component, training on regulatory requirements, environmental impacts, and procedure for environmental assessment and management will be provided. As part of the procedure, monitoring templates given in this document as Annexures, will also be explained and method of filling up the templates will also be provided.

### 9.4 Disclosure and Access to Information

368. This would include disclosure procedures for safeguard instruments for sub-projects /sub-activities to comply with the AE's and GCF's Information Disclosure Policy as well as the requirements of the GCF Environmental and Social Policy on disclosure of subprojects. As per GCF's policy, in the case of Category A/B subprojects, the ESIA and an Environmental and Social Management Plan (ESMP) will be disclosed at least 120/30 days in advance of the approving authority's decision. The safeguard reports will be available in both English and the local language (if not English). The reports will be submitted to GCF and made available to GCF via electronic links in both the AE and the GCF's website as well as in locations convenient to affected peoples in consonance with requirements of GCF Information Disclosure Policy and Section 7.1 of (Information Disclosure) of GCF Environmental and Social Policy.
369. The PIU will be responsible to translate the ESIA and ESMP reports into Bengali language and disseminated to all the concerned stakeholders. Both the English (full-version) and Bengali (summarized-version) copies will be made available to the public, through both the website of the AE and the GCF's website and any other suitable online public platform. During the implementation stage, periodic compliance monitoring reports need to be made publicly available, as given in the process above.

## 10 Stakeholder Consultation

370. The objectives of consultation and access to information are to generate public awareness by providing information about a sub-project to all stakeholders, particularly the sub-projects affected persons (PAPs) in a timely manner, and to provide opportunity to the stakeholders to voice their opinions and concerns on different aspects of the project. The opinions and suggestions of the stakeholders would assist in taking appropriate decisions for effective environmental management of the sub-projects. It would help facilitate and streamline decision making whilst fostering an atmosphere of understanding among individuals, groups and organizations, who could affect or be affected by the sub-projects.

### 10.1 Objective of Consultation

371. An effective public consultation and access to information plan (PCAIP) needs to be developed. The specific objectives of PC are:

- To keep stakeholders informed about the sub-projects at different stages of implementation,
- To address the environmental and social concerns/ impacts, and device mitigation measures taking into account the opinion/ suggestions of the stakeholders,
- To generate and document broad community support for the sub-projects,
- To improve communications among interested parties, and
- To establish formal complaint submittal / resolution mechanisms.

372. Such consultations will continue to be ensured during further design and implementation stage of the project. These will be undertaken at a minimum, at selection of the sub-projects, during environmental screening, and assessment, if undertaken, and while formulating the EMPs. A comprehensive framework for the participatory consultation including an effective feedback mechanism and information disclosure should be developed and incorporated for implementation during the entire duration of the project.

### 10.2 Consultation Process

373. A critical element in planning a participation and consultation program is associated with the selection of participation techniques to meet desired objectives. The sub-projects will impact the employees of the RMG units mostly. Thus, the following participation techniques needs to be followed:

- There will 2 stakeholder consultations at sub-project level which will involve the employees of RMG units.
- Information dissemination and information sharing techniques should be used to inform the stakeholders regarding the action being taken in a program area through personal communication to make them aware about the project as well as to incorporate users input at different stages of the project.
- Focused Group Discussion (FGDs) should be conducted covering different components of the project to increase awareness about the forthcoming project as well as to incorporate their views, needs, priorities considering different positive and negative impact of the project.
- The focus group discussions (FGDs) must have representations from the cross-sections of the stake-holders of various professions and categories like RMG workers and officials for the respective industries, business persons, vulnerable groups (women, minority group etc.)

## 11 GRIEVANCE REDRESSAL MECHANISM (GRM)

374. Grievance Redress Mechanism (GRM) is a valuable tool which will allow affected people to voice concerns regarding environmental and social impacts for sub-project activities through a predictable, transparent, and credible process, resulting in outcomes that are seen as fair, effective, and lasting.<sup>37</sup> GRM allows to improve the response efficiency and accountability level to the project beneficiaries, ensuring the prompt complaints and feedback consideration and processing, as well as problems identification and finding their solutions together with the stakeholders. By increasing transparency and accountability, GRM seeks to reduce the project risk that unintentionally adversely affects citizens/beneficiaries and serves as an important feedback mechanism that can help to improve the sub-project impact.

375. A grievance redress mechanism (GRM) should have a clear set of goals and objectives and a well-defined scope for its interventions:

- What is the necessity of establishing a GRM?
- What are the expectations from the GRM in short- and long-term period?
- What issues are needing to be addressed in the GRM?

376. The approach of GCF is to provide for grievance and redress at GCF, accredited entity, and activity levels:

377. *GCF Level:* At the GCF level, the independent Redress Mechanism will address the grievances and complaints filed by people and communities who may be or have been affected by the adverse impacts in connection to the potential failures of the GCF-financed activities to implement measures pursuant to the operational policies and procedures of GCF, including its ESS standards. In the event of a complaint being filed with the independent Redress Mechanism, the accredited entities will cooperate with the independent Redress Mechanism and GCF.

378. *Accredited Entity Level:* GCF requires that accredited entities inform the communities affected, or likely to be affected, by the GCF-financed activities about the grievance and redress mechanisms at all three levels, at the earliest opportunity of the stakeholder engagement process and in an understandable format and in all relevant languages. The details for sending complaints containing the contact information and the appropriate modes by which these will be received will be provided by the accredited entities to the communities and disseminated with other involved institutions.

It is also required that accredited entities identify whether an activity-level grievance redress mechanism exists and ensure appropriate redressal mechanisms are established at activity-level.

If the accredited entities are acting in an intermediary function, the accredited entities will require the executing entities to fulfil the activity-level grievance mechanism requirements discussed in this section while maintaining responsibility for its own grievance redress mechanism and will conduct the necessary due diligence and oversight to confirm that these requirements are fulfilled

379. *Activity Level:* The ESS standards of GCF establish the requirements for setting up of a grievance redress mechanism at the activity level to receive and facilitate the resolution of concerns and grievances about the environmental and social performance of GCF-financed activities. These

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<sup>37</sup> Office of the Compliance Advisor/Ombudsman for the International Finance Corporation (CAO). 2008. Advisory Note: A Guide to Designing and Implementing Grievance Mechanisms for Development Projects, Washington, D.C.

mechanisms will seek to resolve complaints in a manner that is satisfactory to the complainants and other relevant parties, that will be identified, depending on the nature of the complaint. To this end.

380. GCF recognizes that local or sub-project level grievance mechanism can provide an effective and direct remedy to complainants and encourages the use of such mechanisms whenever possible. This recognition does not limit in any way the ability of complainants to access the GCF independent Redress Mechanism directly. Persons who allege that they have been affected by activities that do not comply with the accredited entities' own policies and procedures should access the accredited entities' own grievance redress mechanisms and/or those at the project or activity level, if separate. It is the responsibility of the accredited entities to require and ensure that their grievance mechanisms and the activities' grievance mechanisms are functioning effectively, efficiently, legitimately, and independently in a manner that is accessible, equitable, predictable, transparent, rights-based, and that allows for continuous learning.
381. The accredited entities' and/or executing entities' mechanism should be scaled to the risks and impacts of the activities. The mechanism will facilitate the resolution of grievances promptly through an accessible, fair, transparent and constructive process. It will also be culturally appropriate and readily accessible, at no cost to the public, and without retribution to the individuals, groups, or communities that raised the issue or concern. The mechanism will not impede the access to the independent Redress Mechanism of GCF or to judicial or administrative remedies that may be available through the country systems acknowledging that these localized systems may provide more robust information and reflect better the context of the issues on the ground. The mechanism will take into account the "effectiveness criteria" for non-judicial grievance mechanisms outlined in the United Nations Guiding Principles on Business and Human Rights in order to maximize effectiveness.
382. In this project the End Borrower would ensure that grievance redress procedures are in place and would monitor those procedures to ensure that grievance are handled properly. The End Borrower will establish a procedure to answer sub-project-related queries and address complaints, disputes, and grievances about any aspect of the sub-project, including disagreements regarding the assessment and mitigation of environmental and social impacts. Generally, the grievance redress committees (GRC) are of two types (i) formal courts of appeal and (ii) a locally constitutes GRC for dispute resolution. The second may not totally avoid but may reduce the problem significantly. The GRC will ensure proper presentation of complaints and grievances, as well as impartial hearings and transparent decisions. The GRCs will meet periodically to discuss the merit of each case and fix a date for hearing and notify the aggrieved persons to submit necessary documents in proof of her/his claim/case; resolve grievances within one month of receipt of complaint. Additional details regarding the functioning of GRC is presented in the SMF.

## 11.1 Objectives of GRM

383. The structure of the GRM will be designed in a way that it will-
- Create opportunity for all the stakeholders to share their comments/concerns. The project will establish a grievance response mechanism (GRM) to answer to queries, receive suggestions and address complaints and grievances about any irregularities in application of the guidelines adopted in this framework for inclusive project design, and assessment and mitigation of social and environmental impacts.
  - Provide a structured system to manage comments, responses and grievances, and allow monitoring of the effectiveness of the mechanism. Based on consensus, the procedure will help to resolve issues/conflicts amicably and quickly, saving the aggrieved persons from having to

resort to expensive, time-consuming legal action. The procedure will however not pre-empt a person's right to go to the courts of law.

- Ensure transparency of comments, responses, and grievances and the handling is done in a fair manner. In this regard, a Grievance Redress Committee (GRC) will be formed for each sub-project activity and will be authorized to deal with all suggestions and complaints at the subproject level.

## 11.2 Grievance Redress Committee (GRC) and Focal Point

384. Grievance Redress Committee (GRC) will be formed and established at each sub-project site. Grievance response focal point will be available at each sub-project site for instant response to an aggrieved person, receiving written complaints or suggestions, produce them to the GRC for hearing and resolution. The GRC will be created with 3-5 members from managerial position and 2 representatives from workers (one male and one female). This GRC will be responsible for periodically reporting to the LFIs and IDCOL.

## 11.3 Grievance Resolution Process

385. All complaints and suggestions will be received formally in the RMG unit by the GRC Member Secretary. The complaints will largely be channeled through the GRC focal points, but aggrieved persons can also lodge the complaints and produce suggestions directly to the Member Secretary. A format for receiving grievances is given in **Annex 8**.

386. An intake register will be maintained at the office of the member secretary. The intake registration will have data/information columns including (i) Case no., (ii) date of receipt, (iii) name/type of complaint/grievance, (iv) sex, (v) father's name/husband's name, (vi) complete address of the person raises the complaint/grievance, (vii) main objection (loss of land/property or entitlement), (viii) detailed complaint story, (ix) expectation with documentary evidence and previous records of similar grievances will be documented in the intake register.

387. No GRC members can be contacted by the aggrieved persons in advance. Rather, the concerned persons are informed to attend formal hearings at an appointed date. The GRC committee will site for hearing at the Member Secretary's office and pays patient hearing to the aggrieved persons. The GRC will record salient points to be presented by the aggrieved person and will examine their documentary evidences to be submitted during informal hearings.

388. A resolution register will be maintained at the GRC secretariat. Resolution register will contain (i) serial no., (ii) case no., (iii) name of complaint, (iv) complaint story and expectation, (v) date of hearing, (vi) date of field investigation (if any), (vii) results of hearing and field investigation, (viii) decision of GRC, (ix) progress (pending, solved) and (x) agreement or commitments. Besides, closing register will also be used. Closing register keeps records, such as, (i) serial no., (ii) case no., (iii) name of complaint, (iv) decision and response to complaints, (v) mode and medium of communication, (vi) date of closing, (vi) confirmation of complaints' satisfaction and (vii) management actions to avoid recurrence.

389. Based on consensus, the procedure will help to resolve issues/conflicts amicably and quickly, saving the aggrieved persons from having to resort to expensive, time consuming legal action. The procedure will however not pre-empt a person's right to go to the courts of law. The convener of the concerned GRC will have the authority to do the following things:

- Reject a grievance redress application with any recommendations written on it by a GRC member or any other person giving sufficient documentary evidence in favor of rejection of the grievance redress application,

- Remove a recommendation by any person that may separately accompany the grievance application,
- Disqualify a GRC member who has made any recommendation on the application or separately before the formal hearing,
- Appoint another person as GRC member for replacing the disqualified GRC member. The new GRC member will be appointed in consultation with the Superintending Engineer and keep the Project Coordinator informed of the replacement, and
- The Convener will also ensure strict adherence to the compensation rates determined through market price surveys following approved procedure.

## 11.4 Recommendations to Enhance GRM

390. In a global review of World Bank GRMs, Brown et al. (2013)<sup>38</sup> highlight a series of recommendations to enhance the impact of grievance redress mechanisms and, more broadly, to improve service delivery and risk management on projects:

- **Create diagnostic tools to support GRM implementation:** It is important to support and strengthen existing country institutions for grievance redress. Practical diagnostic tools would help this. Other material of use would be case studies of GRM implementation, evaluations of existing GRMs, material on linking a GRM to existing country systems, and a manual of basic GRM principles and procedures.
- **Improve risk assessment:** This is important for projects that have potential adverse environmental impacts on human populations or environmentally important areas, so as to prevent and avoid conflict.
- **Use feedback received via GRMs to prioritize supervision:** Real-time information from local citizens on project implementation can help target and prioritize limited supervision budgets, especially over geographically-dispersed projects and/or projects with large numbers of beneficiaries.
- **Create incentives for monitoring and improving GRMs during implementation:** Require all projects with a GRM to track the existing indicators related to grievances in project status and completion reports.
- **Improve internal handling of complaints on projects:** Donors, such as the World Bank, can improve the handling of their own complaints by encouraging all complaints to be routed to the project leader. There would need to be clear timetables for responses, and putting in place corporate tracking to ensure all grievances are responded to and addressed (if not ultimately resolved) in a timely manner.

391. The following issues should be considered for developing a successful, easily accessible and user friendly GRM:

- **User manual:** An easy to understand instruction document should be provided for the GRM for the general user wishing to avail the proposed central GRM.

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<sup>38</sup> Brown, M., Jenkins, B., Leon, P. and Seyedin, A. (2013). Global Review of Grievance Redress Mechanisms in World Bank Projects. Washington, D.C.: World Bank.  
<http://siteresources.worldbank.org/PROJECTS/Resources/40940-1366729852427/GlobalReviewofGRMs.pdf>

- **User friendliness:** The system should not be too complicated either in technical terms or in language for the general public irrespective of education background.
- **End-to-end tracking:** Tracking of grievance both by the complainant and the authority for grievance redressal is very important.
- **Confidentiality, security and anonymity:** Keeping complainant's identity a secret is very important for security reasons. Ensuring that the system provides an option to complainants for lodging their grievances anonymously would also ensure confidentiality and security.
- **Progress monitoring:** Grievance should be addressed within 7 days of receiving. A grievance redress system is no good if the grievances are not addressed regularly. When the grievances are not addressed for a long time then the employees will lose faith from the system and stop sharing their issues.
- **Feedback option:** There should be a feedback option to measure client satisfaction and collect opinions on the effectiveness of the system.

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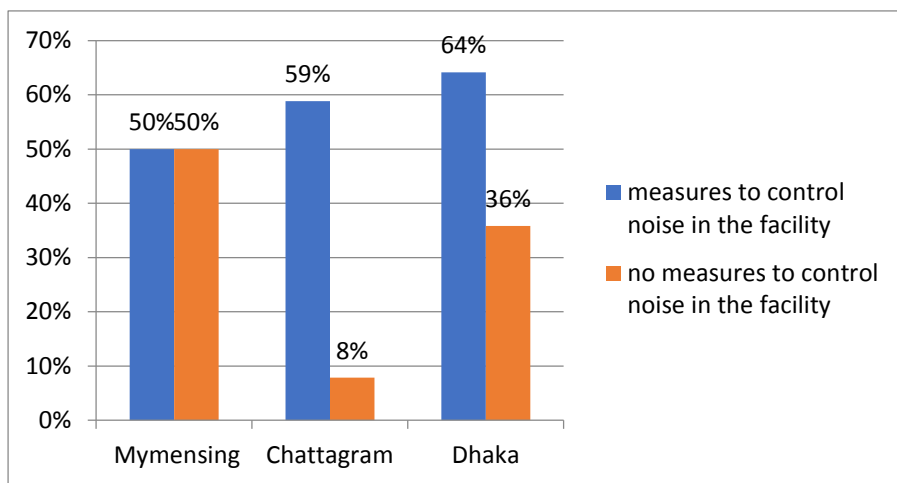


## Annex 1: An Assessment Report on HH Survey

The study team conducted surveys 150 Household around the selected garment factories for social impact assessment of the project. Analyzing the data, the following results were generated:

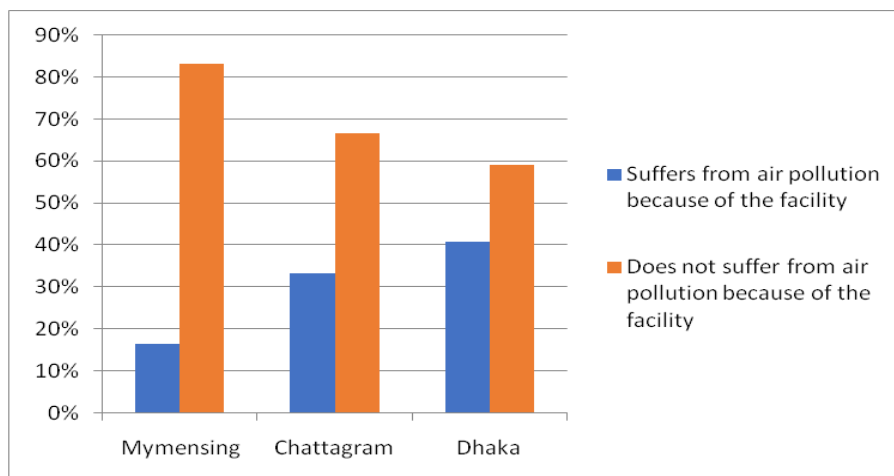
### Noise Control

Among the households sampled in Mymensingh, 50% responded that there were measures to control sound and the other half responded in the negative. On the other hand, 59% from Chattogram said that there were measures for controlling noise and 8% said there weren't. The remaining portion of the respondents did not have any knowledge about noise control measures. Similarly, almost two-thirds of the respondents from Dhaka said there were measures for noise control and the remaining third responded in the negative.



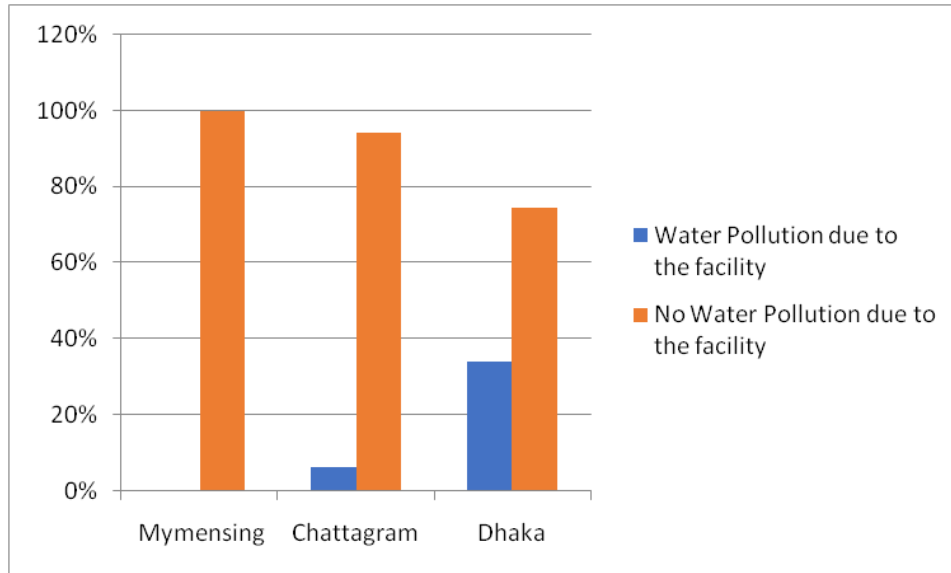
### Air Pollution

17% of the respondents from Mymensingh suffer due air pollution brought about by the facility whereas, more than 30% suffer in Chattogram. The highest percentage of respondents suffers in Dhaka which is at about 40%.



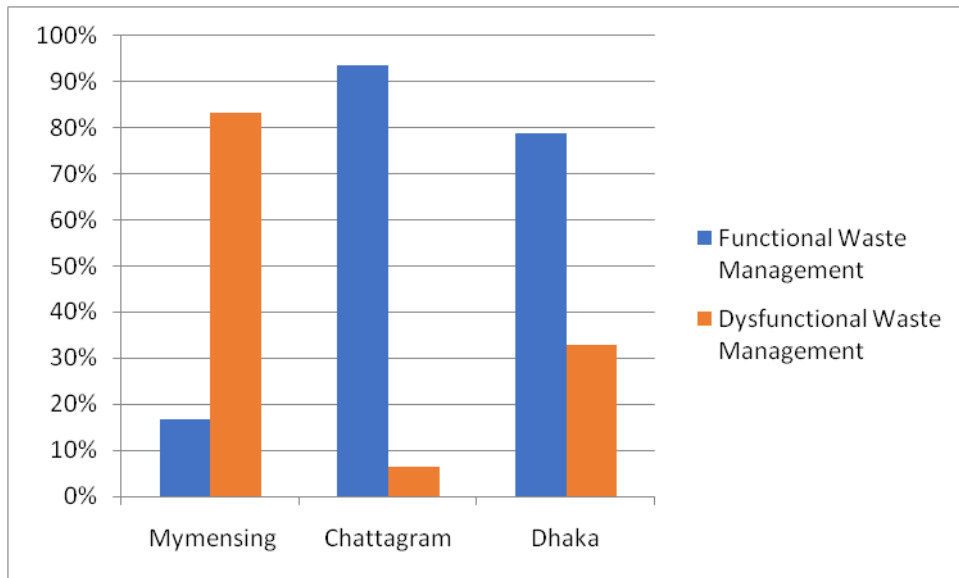
## Water Pollution

No respondent from Mymensingh suffer due to water pollution by the facility and only a small portion of the respondents from Chattogram suffers from water pollution by the facility. However, more than 35% of the respondents suffer from water pollution caused by the facility.



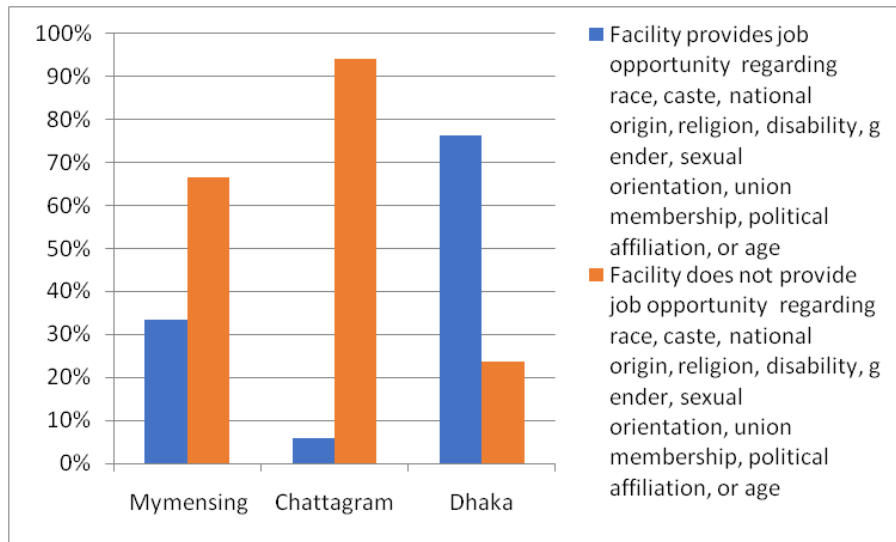
## Waste Management

About 80% and 90% of the respondents from Dhaka and Chattogram respectively said that there was proper waste management system in place in their respective regions. On the contrary, more than 80% of the respondents said that the waste management system was dysfunctional.



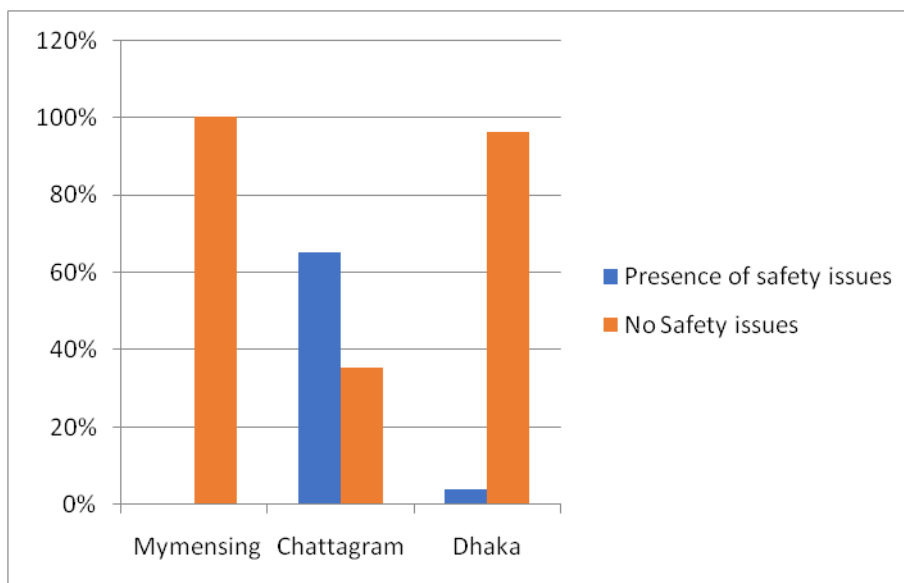
## Job Facility

Less than 10% of the respondents from Chattogram responded that the facility created job opportunities regarding race, caste, national origin, religion, disability, gender, sexual orientation, union membership, political affiliation, or age. In contrast, more than 30% and about 75% of respondents from Mymensingh and Dhaka respectively said that the facility provided such job opportunities.



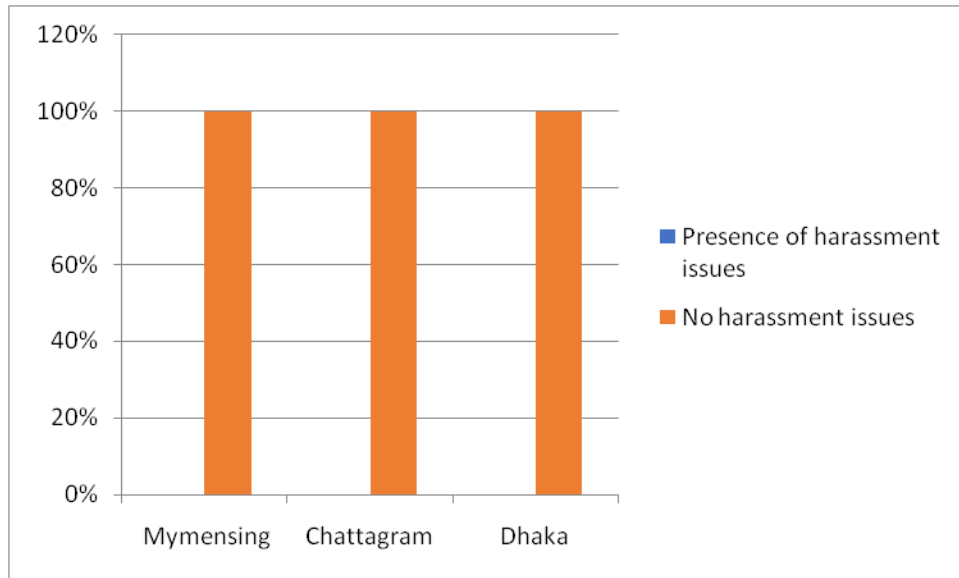
## Safety Issues

All the respondents from Mymensingh and most from Dhaka said that there were no safety issues created by the facility. However, more than 60% percentage of the respondents believes that safety issues were created by the facility.



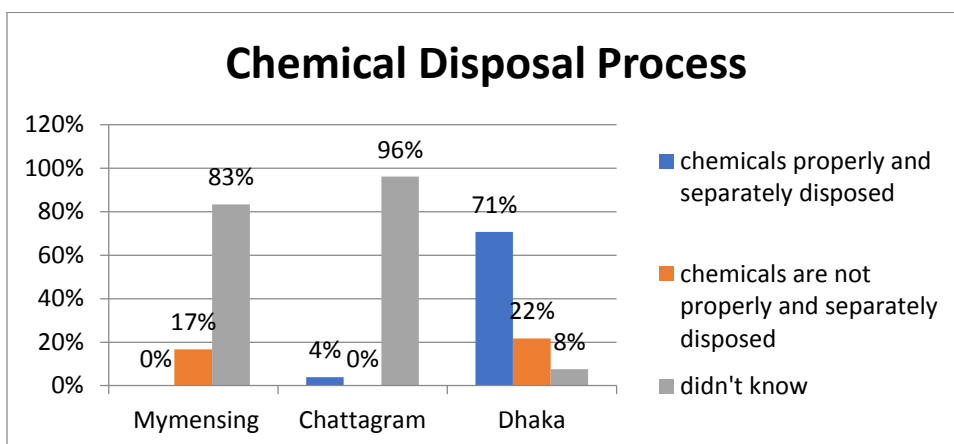
## Harassment

All the respondents in all the three divisions responded in the negative regarding creation of harassment issues by the facility. Harassment refers to any unpleasant incidents, based on experience of local populace, occurring due to influx of migrant workers (like eve-teasing, use of abusive language, disrespectful behavior towards locals etc.).



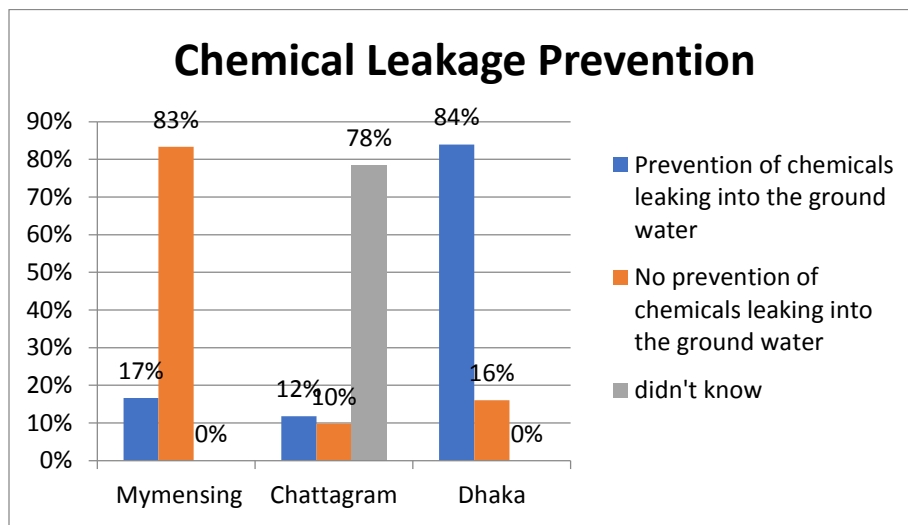
## Chemical Disposal

Most of the respondents from Mymensingh and Chattogram did not know if chemicals were disposed properly and separately. Only 4% of the respondents from Chattogram responded in the positive. However, 71% of the respondents from Dhaka said that chemicals were properly and separately produced.



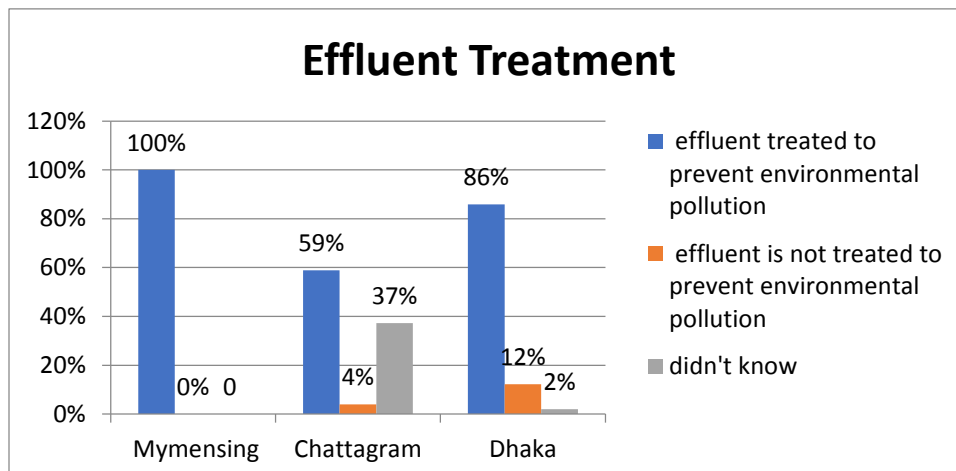
## Chemical Leakage Prevention

Only 17% of the respondents from Mymensingh said that there was prevention of chemicals leaking into ground water and majority of the respondents from Chattogram did not know if such preventions took place or not. However, 84% of the respondents from Dhaka responded in the positive.



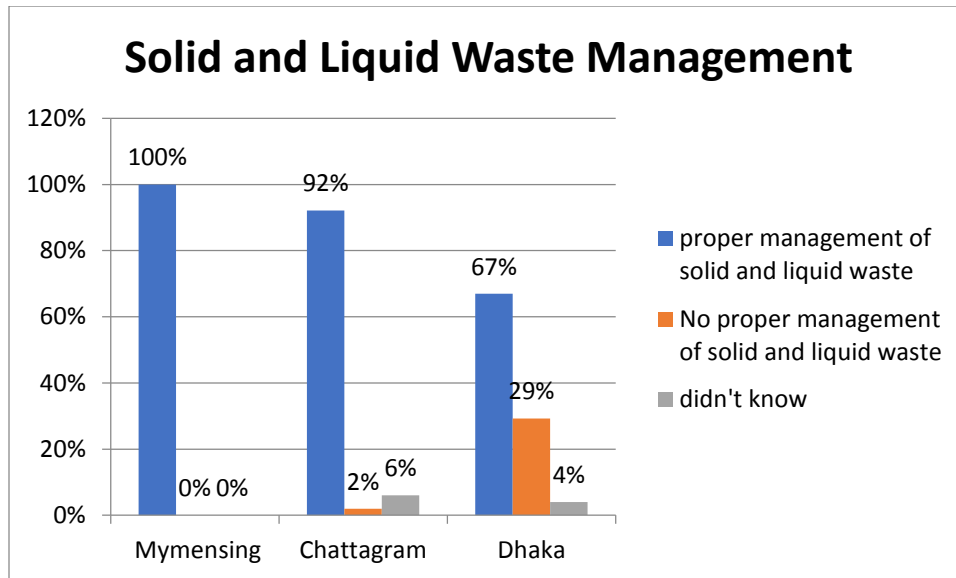
## Treatment of Effluent

All of the respondents from Mymensingh responded that effluent was treated to prevent environmental pollution whereas, about 60% from Chattogram and 85% from Dhaka said that effluent was treated to prevent environmental pollution.



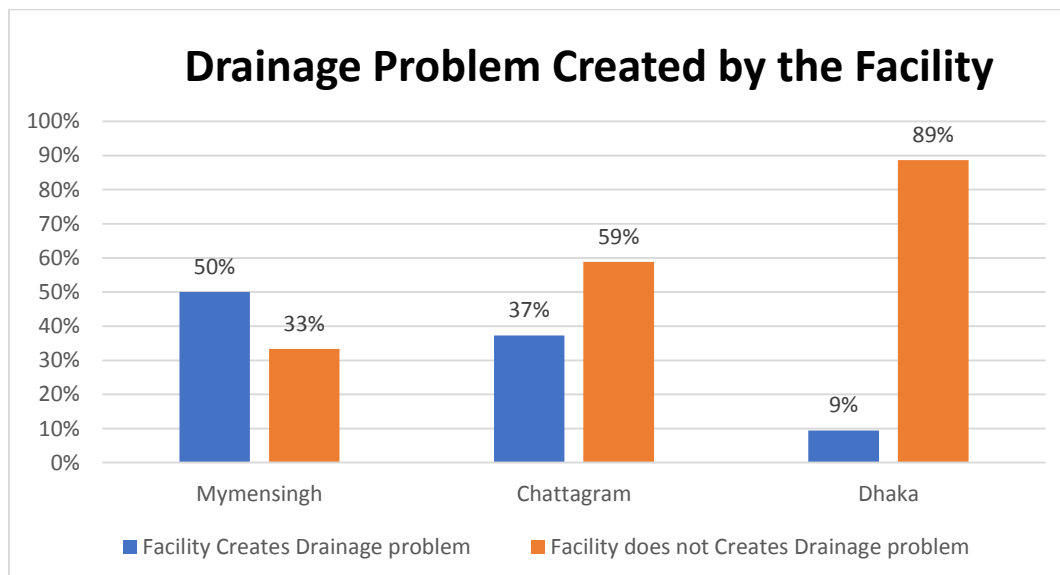
## Solid and Liquid Waste Management

All the respondents from Mymensingh and 92% of the respondents from Chattogram said that there was proper management of solid and liquid waste. On the other hand, 67% of the respondents from Dhaka said that there was proper management and 29% responded that there was not proper management of solid and liquid waste.



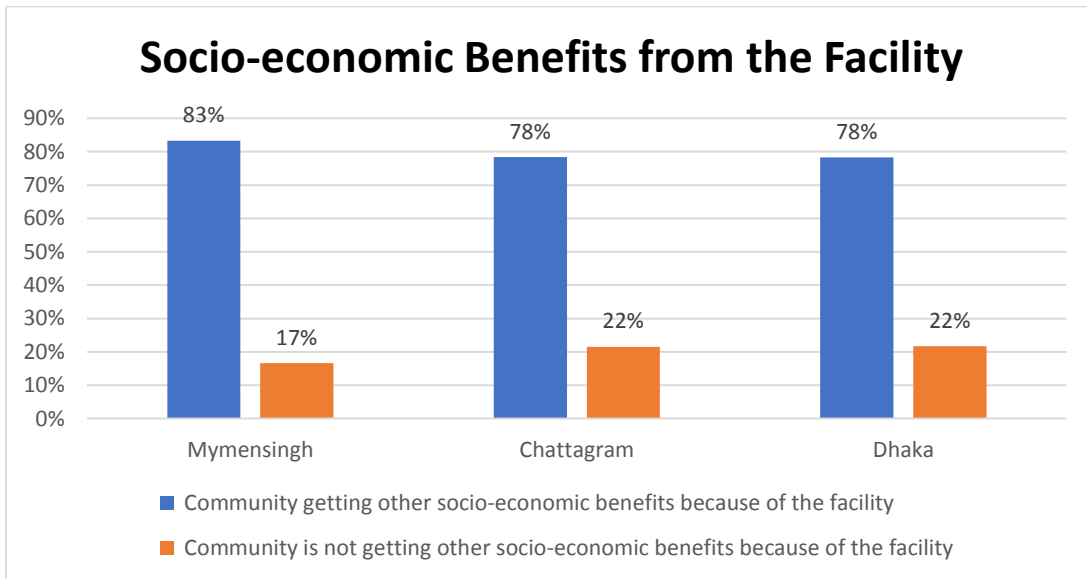
## Drainage Problem Created by the Facility

Of the sample of respondents from Mymensingh, 50% responded that the facility created drainage problems. 37% and only 9% from Chattogram and Dhaka responded that drainage problem was created by the facility.



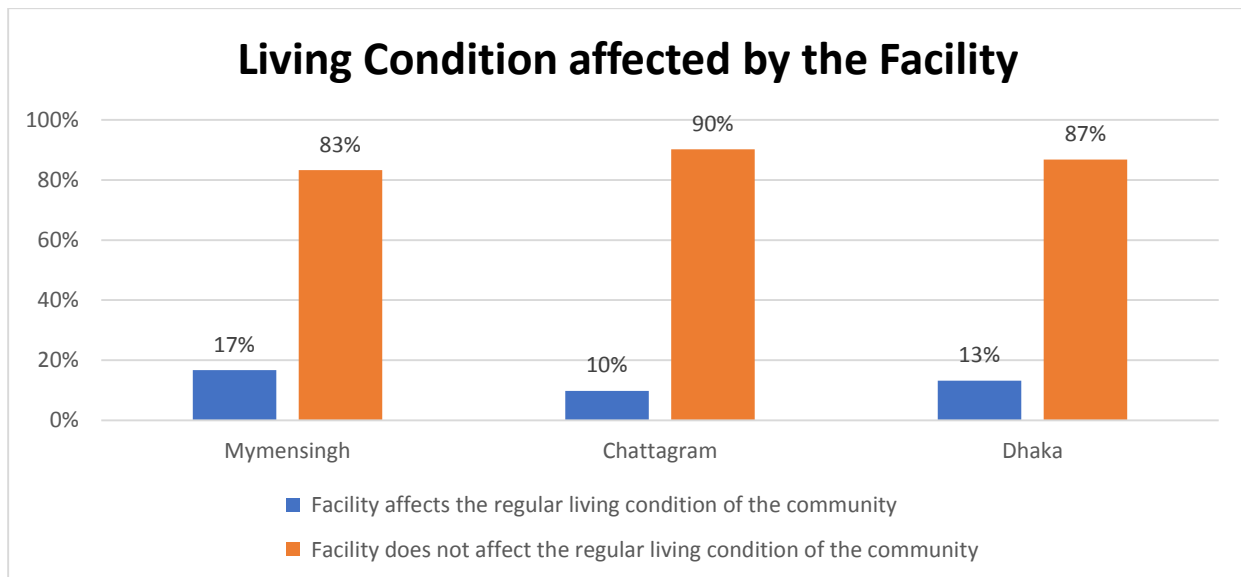
### Socio-economic Benefits from the Facility

83% of the respondents from Mymensingh and 78% from both Chattogram and Dhaka said that socio-economic benefits were created by the facility.



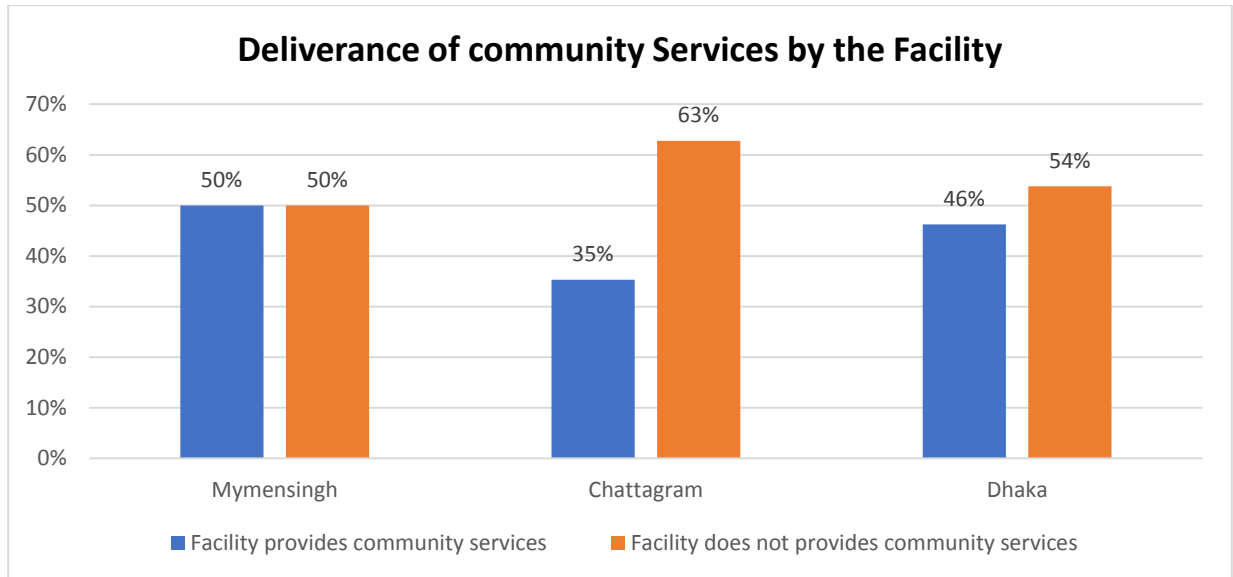
### Living Condition affected by the Facility

Overwhelming majority of respondents from all the three regions said that living conditions were not much affected by the facility.



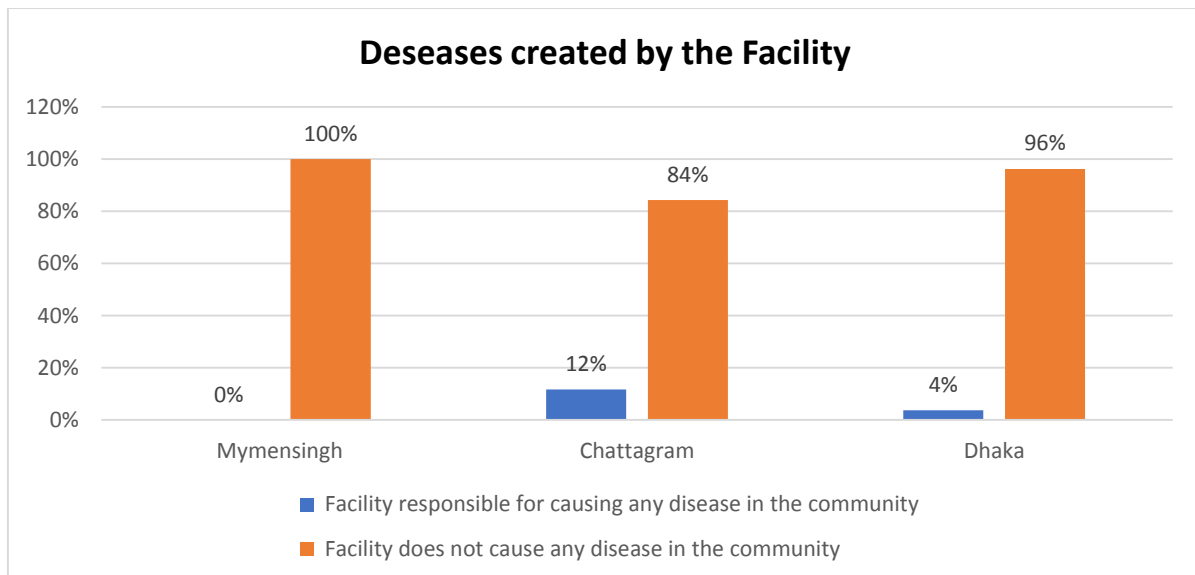
## Community Services

Half of the respondents from Mymensingh said that the facility provided community services, and 35% and 46% of the respondents from Chattogram and Dhaka respectively also said that the facility provided community services.



## Diseases

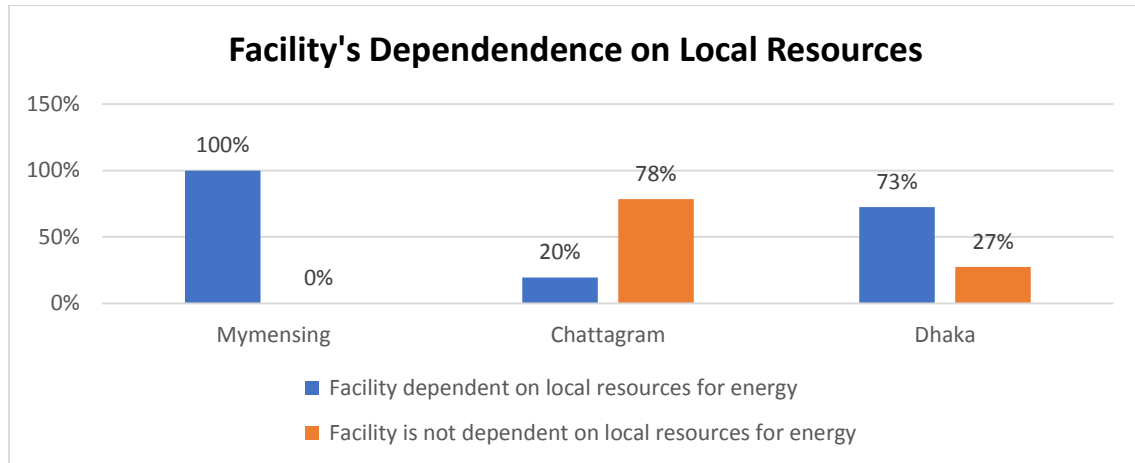
Most of the respondents from all the three regions responded in the negative on regarding the facility being responsible for diseases.





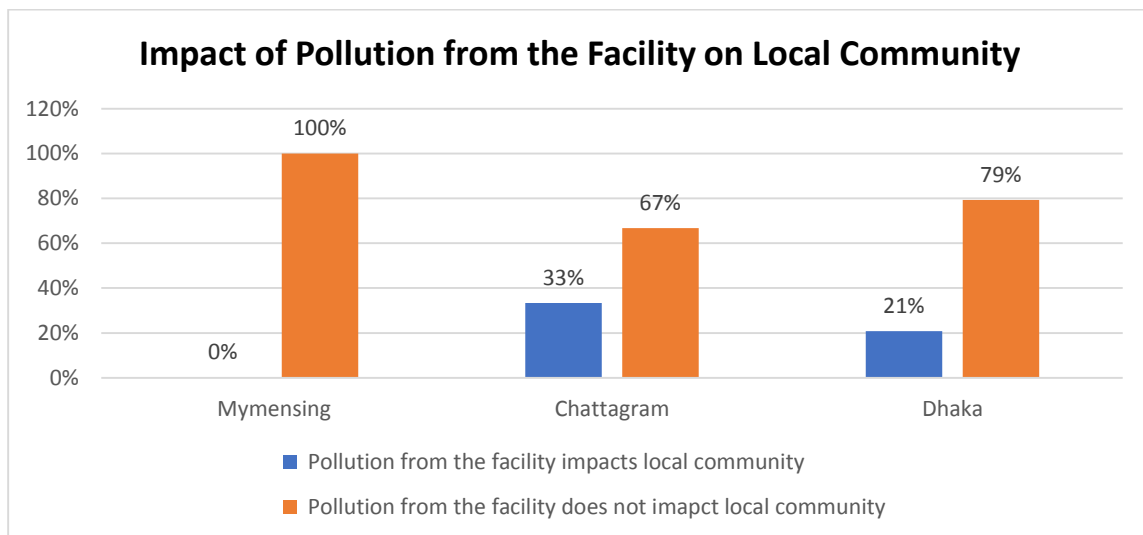
## Local Resource Dependency

All the respondents from Mymensingh said the facility was dependent on local resources. About 20% of the respondents from Chattogram and 73% of the respondents from Dhaka also responded that facility was dependent on local resources.



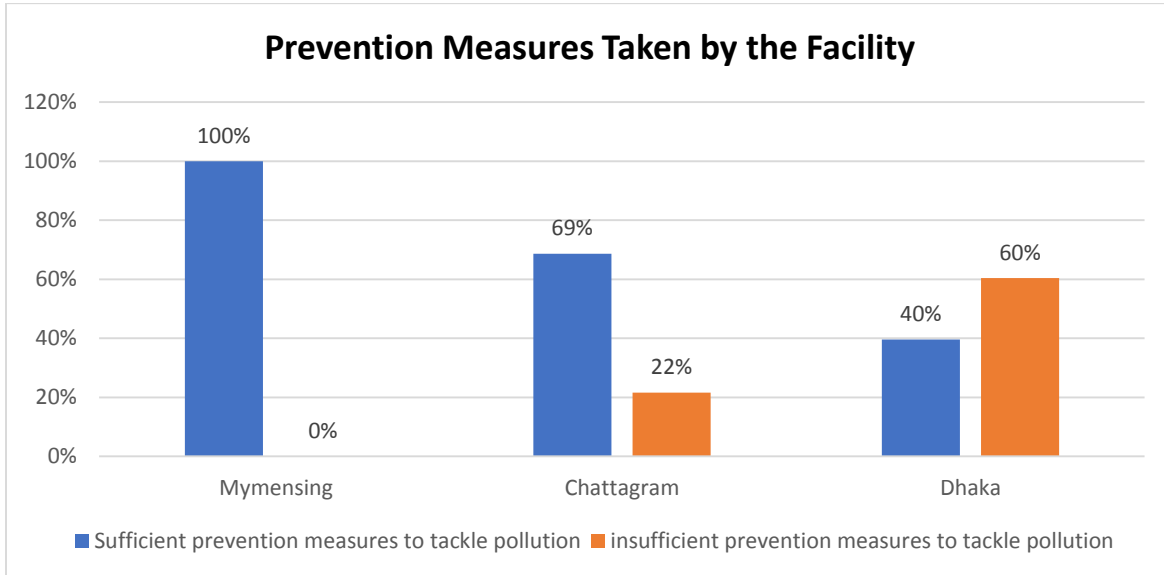
## Pollution impact

All the respondents from Mymensingh said that the pollution from the facility did not impact the local community. One-thirds of the respondents from Chattogram and 21% of the respondents from Dhaka however responded that pollution from the facility impacted the local community.



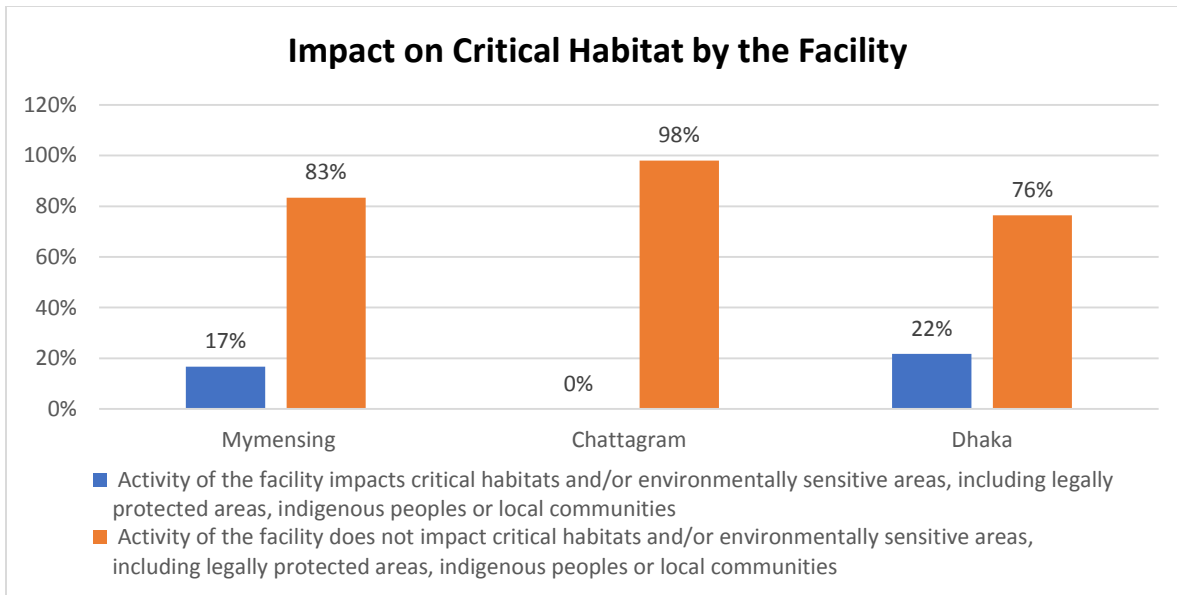
## Prevention Measures

All the respondents from Mymensingh said that sufficient measures were taken by the facility. 69% and 40% of the respondents from Chattogram and Dhaka respectively also responded that sufficient measures were taken to control pollution.



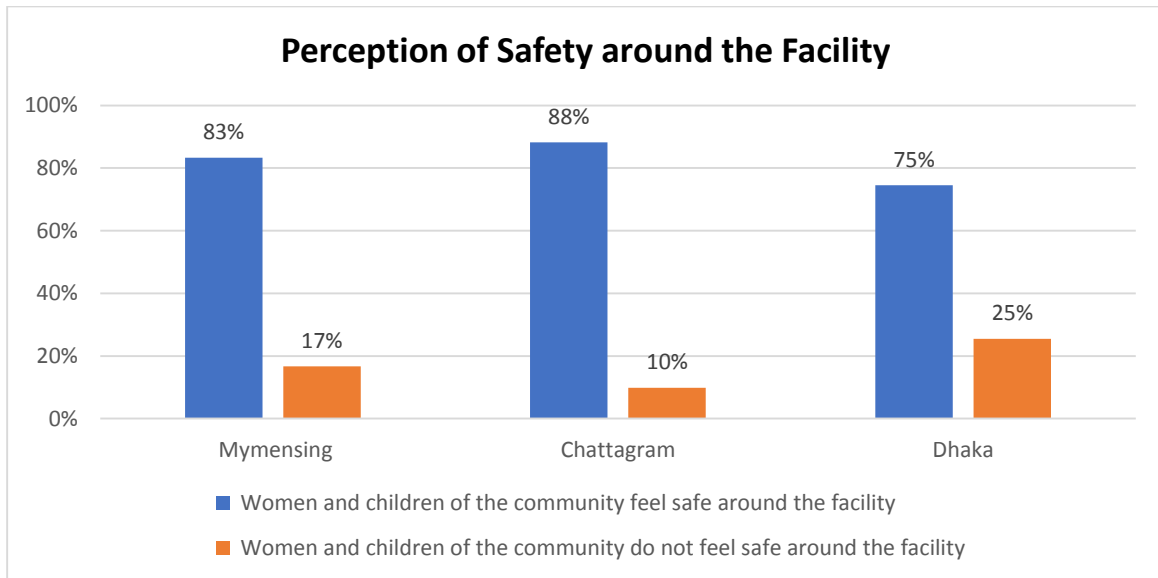
## Impact on Critical Habitats

Majority of the respondents from all the three areas said that the facility did not impact critical habitats, however, 17% from Mymensingh and 22% from Dhaka said that the facility impacted critical habitats.



## Safety Perception

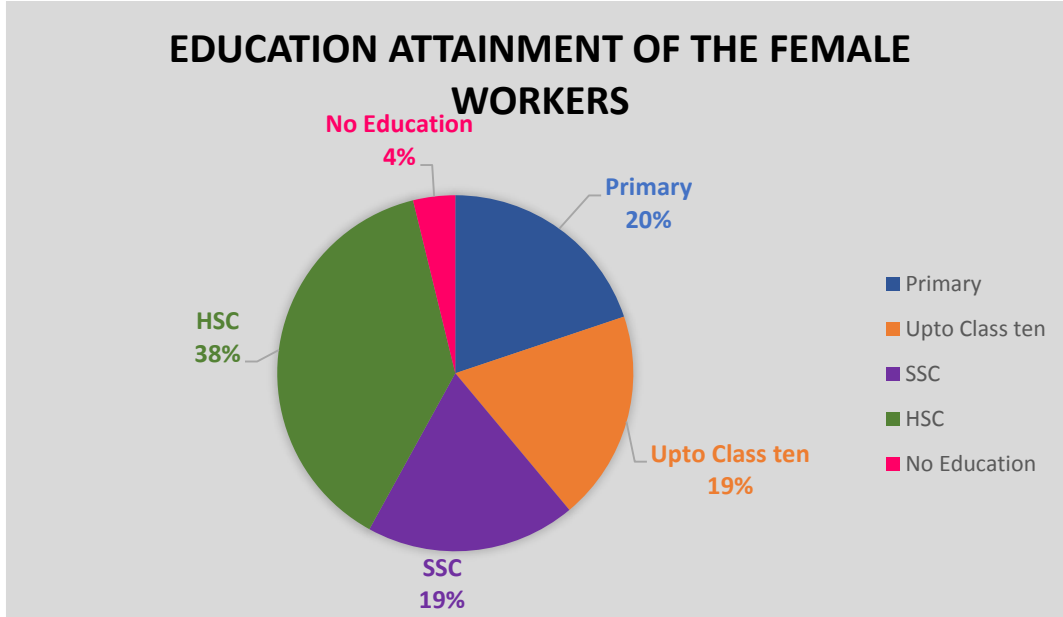
More than 80% of the respondents from Mymensingh and Chattogram feel safe around the facility whereas, 75% of the respondents from Dhaka feel safe around the community.



## Annex 2: Assessment Report on Factory Survey

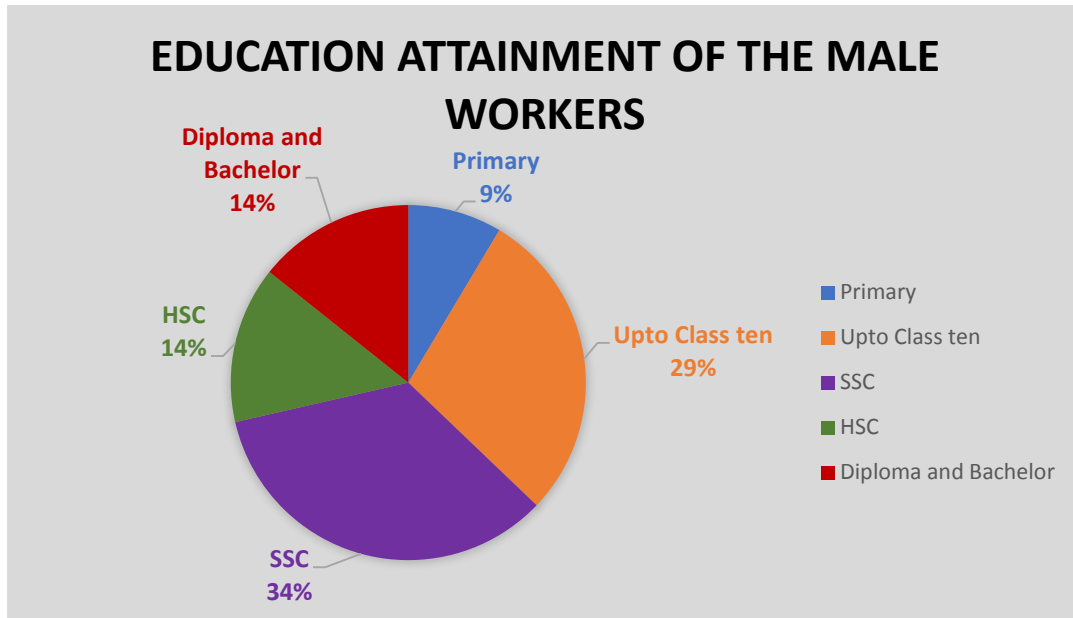
Workers and Facility Manager

### Educational attainment of the workers and the facility managers



**Figure 1: Education Attainment of the Female Workers**

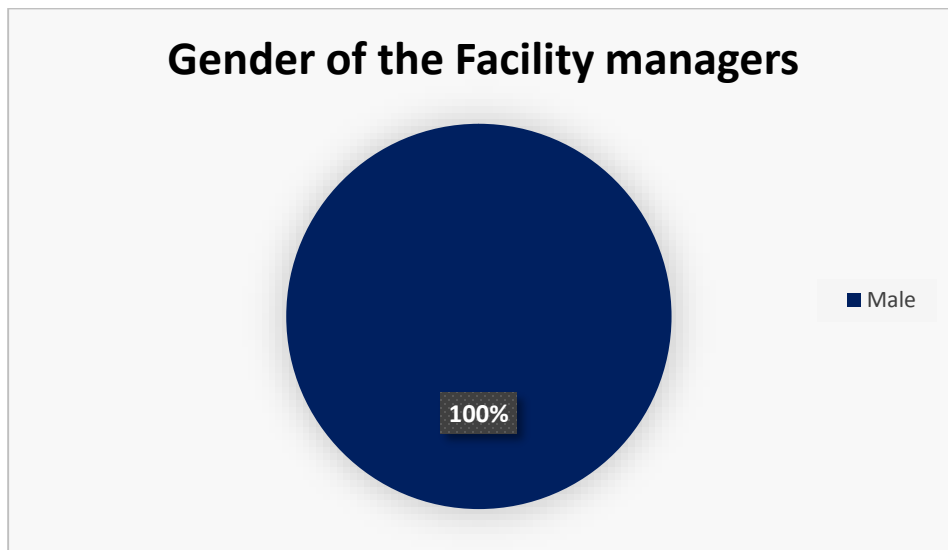
Among the female workers surveyed, 19% have SSC qualification, 38% have HSC qualification, 20% have primary education attainment and 19% have education attainment up to class ten. Only 4% do not have any education at all.



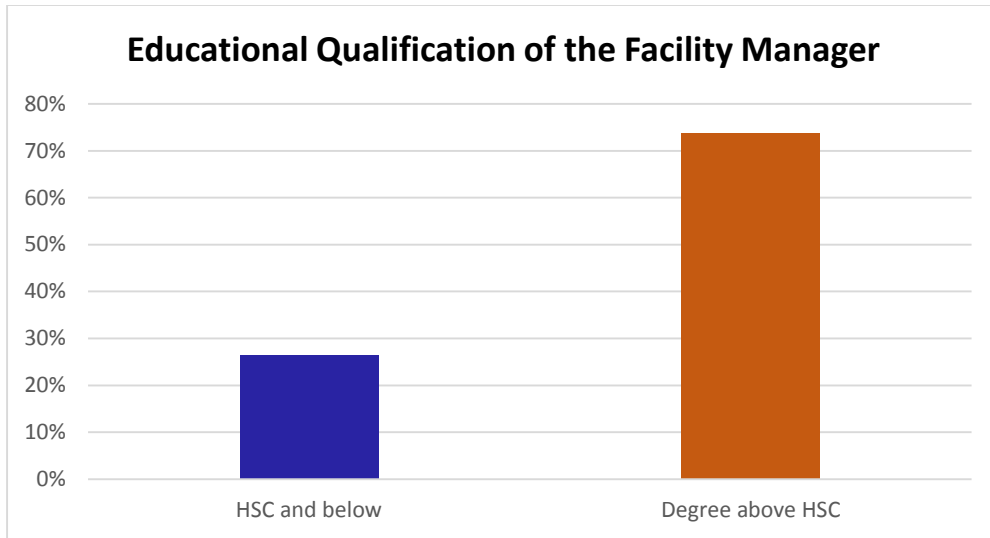
*Figure 2: Education Attainment of the male Workers*

Among the male workers surveyed, 34% have SSC qualification, 14% have HSC qualification, 9% have primary education attainment, 29% have education attainment up to class ten and 14% have a diploma or a bachelor's degree.

Overall, the male workers perform better in terms of education attainment than the females.

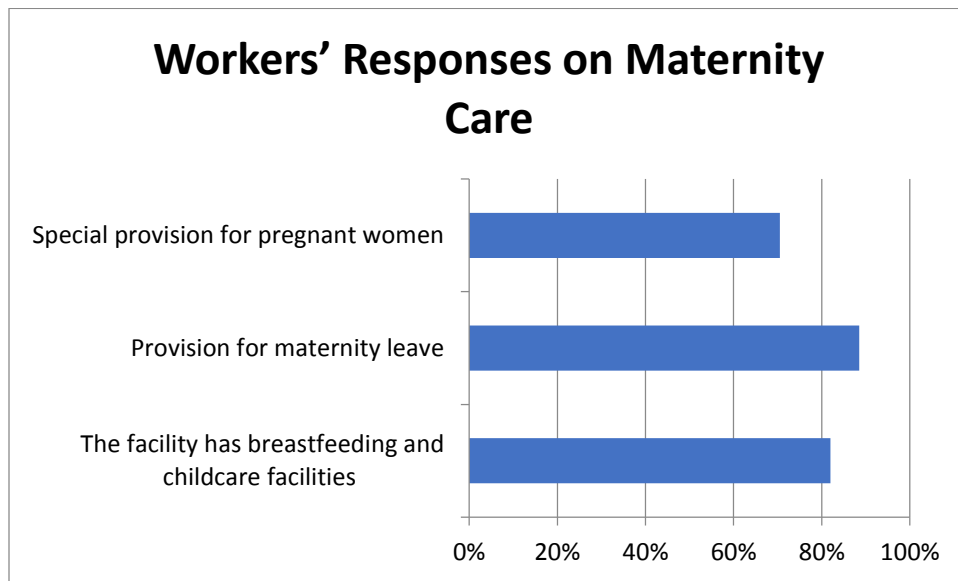


All the facility managers in the sample are males.

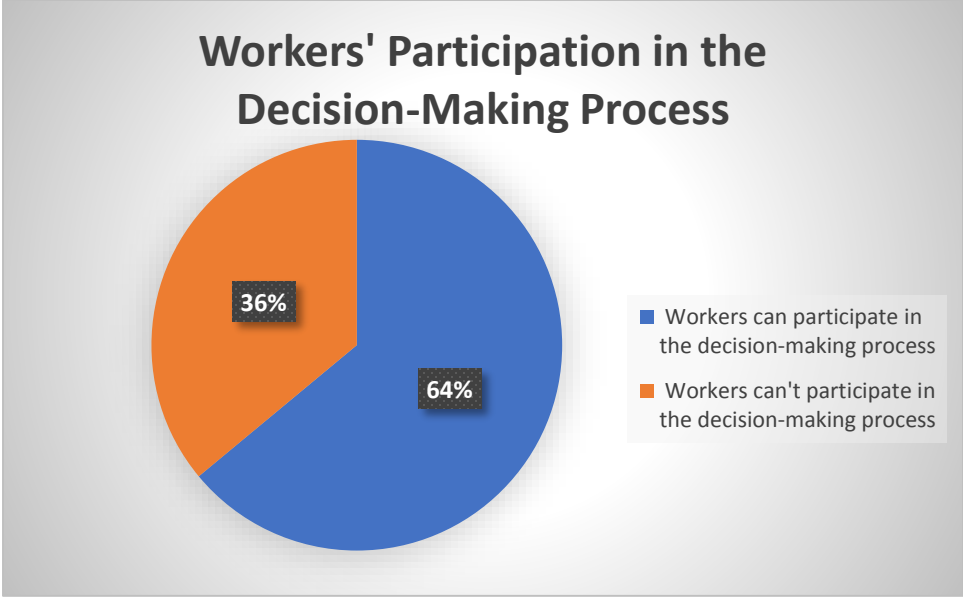


Three-fourths of the sampled facility managers have education higher than HSC and one-fourths of the facility managers have education qualification of HSC or below.

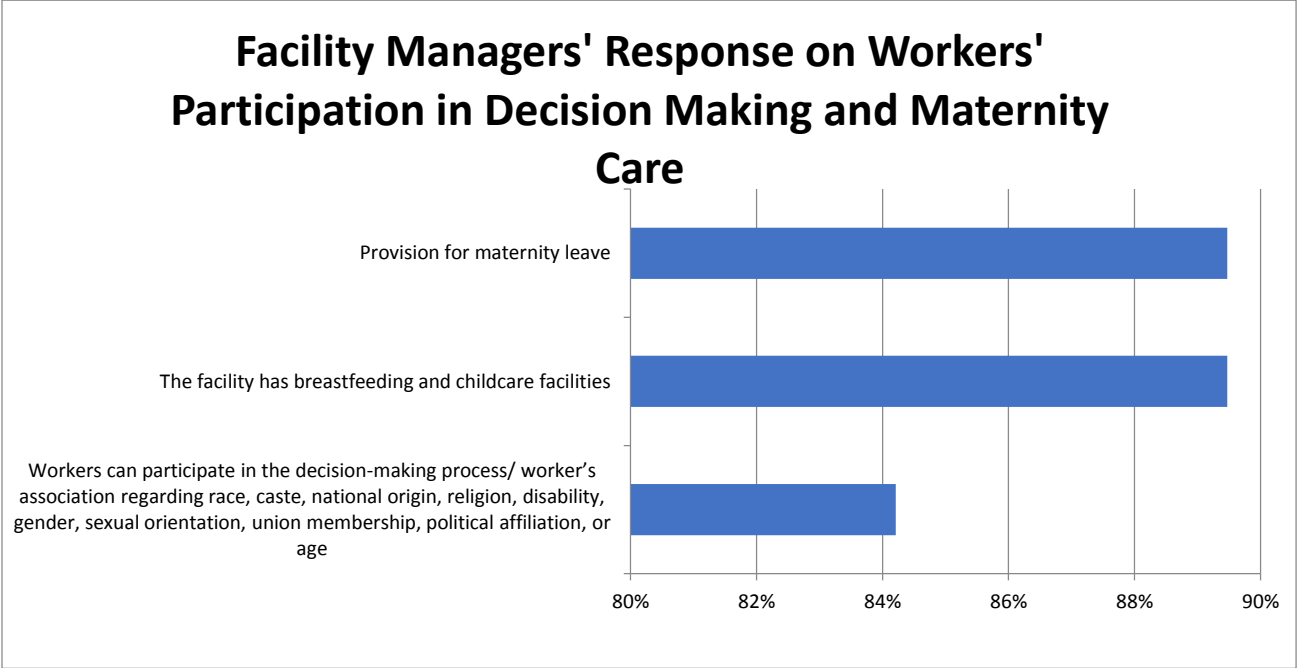
**Workers’ participation in the decision-making process, and maternity care for the workers and the facility managers**



Regarding maternity care, 82% of the respondents said that the facility had breastfeeding and childcare facilities, almost 90% said that it had provision for maternity leave and 70% said that there was special provision for pregnant women.

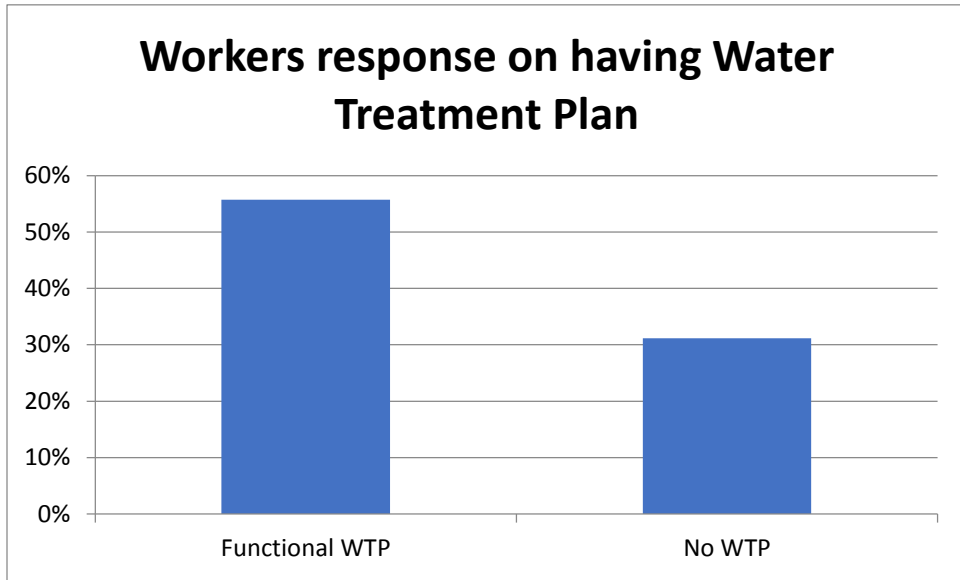


64% of the workers responded that they can participate in the decision-making process and 36% of the sampled workers responded that they could not participate in the decision-making process.

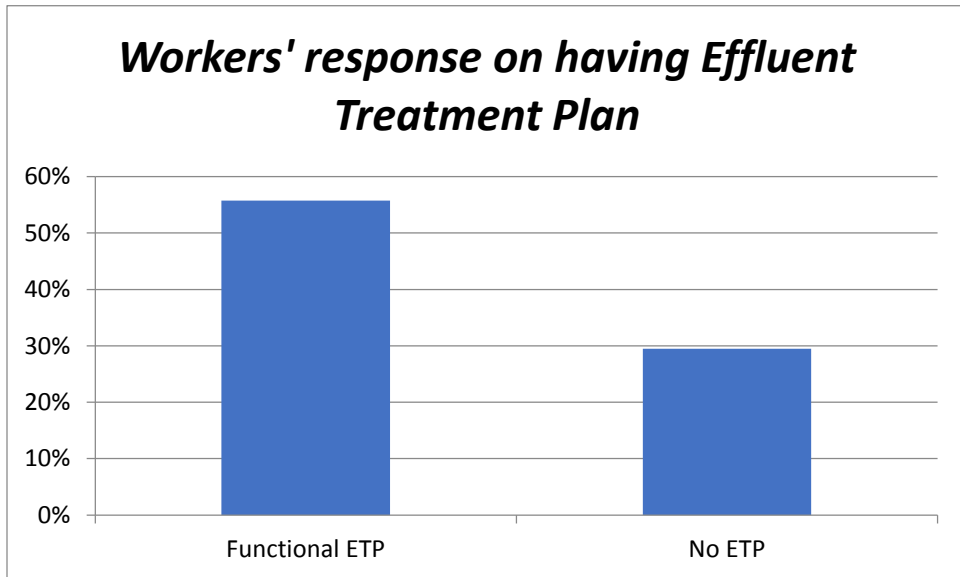


More than 84% of the facility managers said that workers can have participation in the decision-making process regarding race, caste, national origin, religion, disability, gender, sexual orientation, union membership, political affiliation, or age. Almost 90% of the managers also said that there were provisions for maternity leave and breastfeeding and childcare facilities.

**Pollution and Workers' Health**

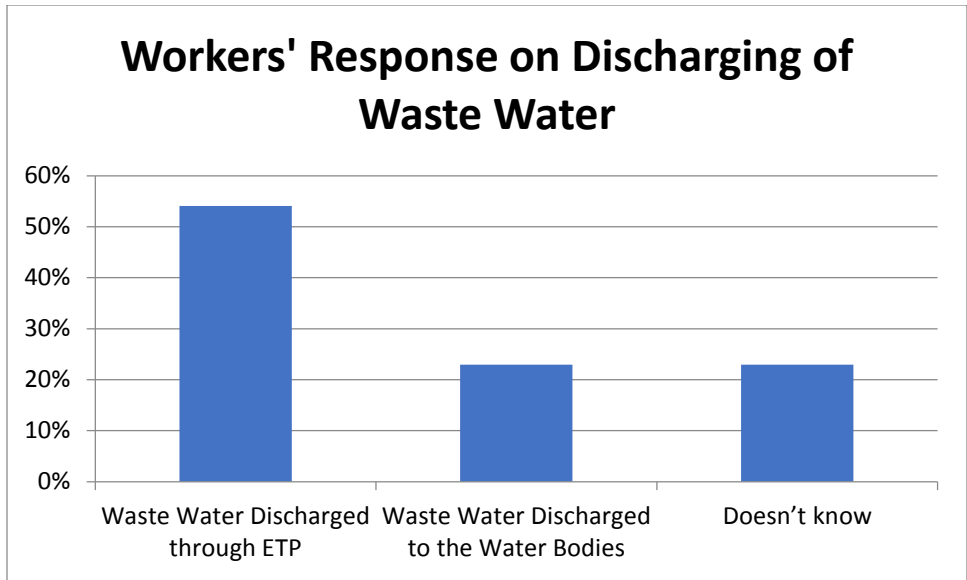


About 56% of the workers believe that there is a functional water treatment plant in their facility and about 30% of the workers said that there was no water treatment plant in their facility.

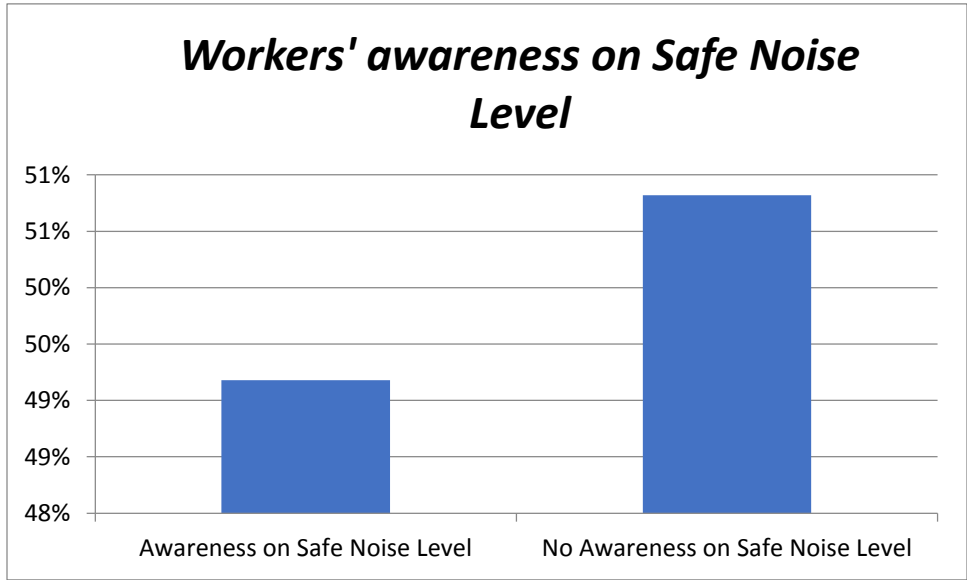


About 55% of the workers responded that there was a functional ETP in their factory and almost 30% responded that there was no ETP in their factory.





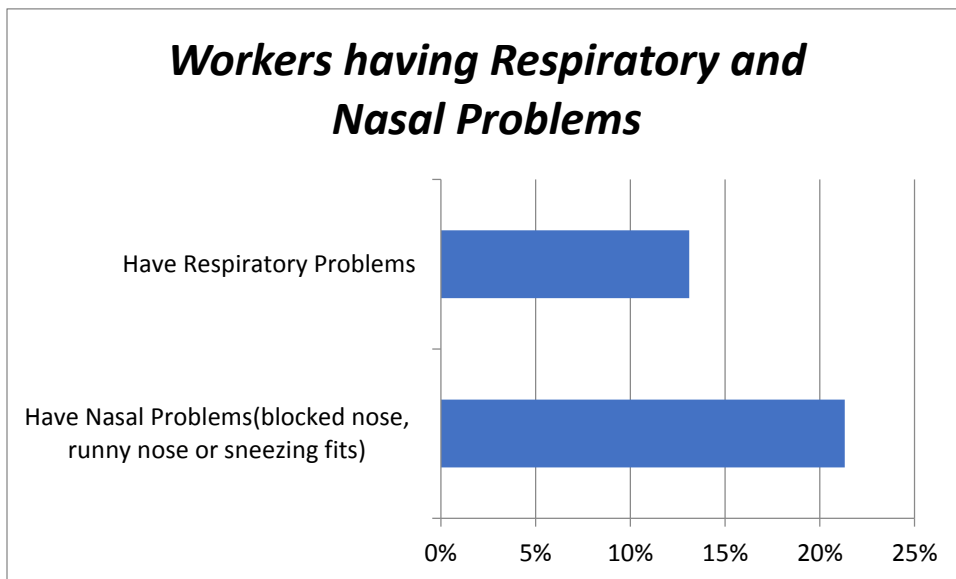
More than 50% of the workers responded that waste water in their factory was discharged through ETP; about 20% responded that waste water was directly discharged to the water bodies. The rest of the respondents don't know how waste water was discharged.



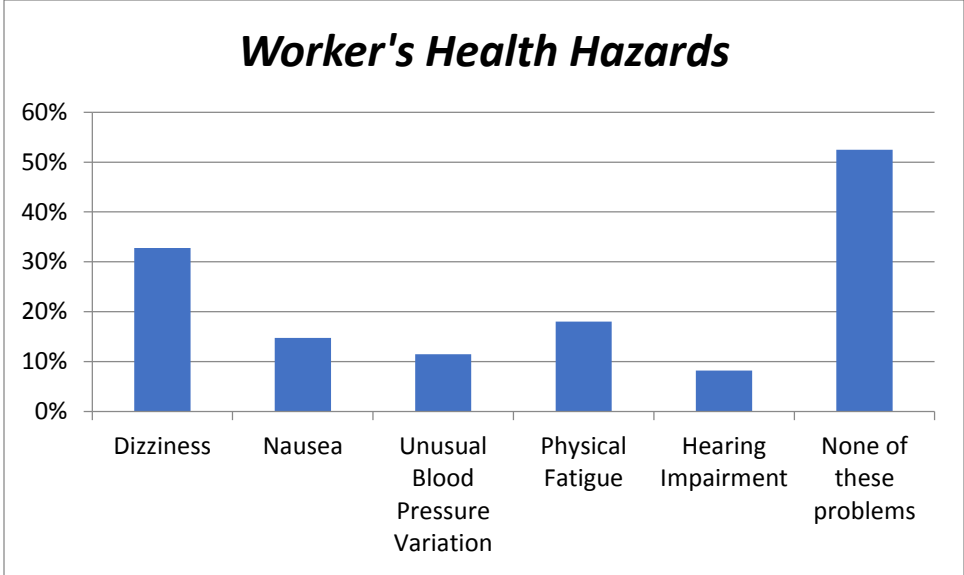
Around 49% of the workers are aware of noise pollution and 51% of the workers do not have any awareness regarding safe noise levels.



About half of the workers believe that solid wastes are segregated by hazardous and non-hazardous types; more than 30% however said that solid wastes were not segregated by any type. The rest of the workers had no knowledge regarding solid waste management.

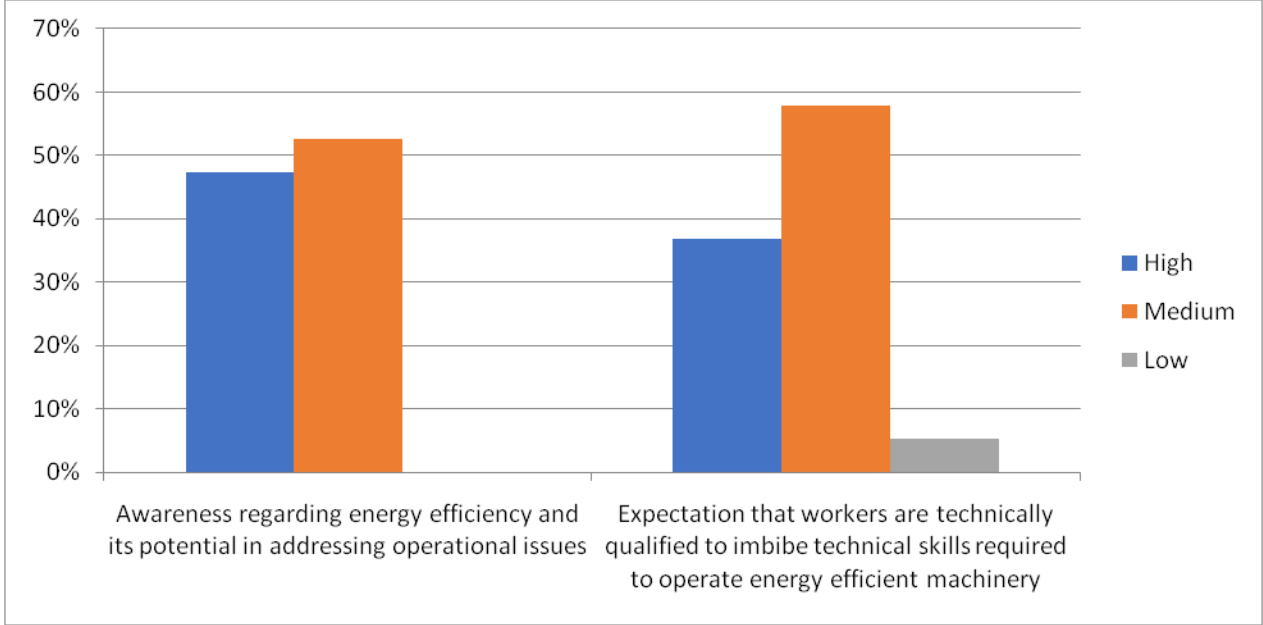


Among the sample of workers, more than 20% suffered from Nasal problems like blocked nose, runny nose and sneezing fits and about 13% suffered from respiratory issues.



More than 50% of the workers in the sample of workers do not have any of the mentioned health issues. One-third of the workers experience dizziness, 15% experience nausea, more than 10% from unusual blood pressure variation, about 18% experience physical fatigue and almost 10% have some sort of hearing impairment.

**Energy Efficiency awareness and expectations on workers' ability of Facility Managers**



About half of the managers responded that there is high awareness regarding energy efficiency and its potential in addressing operational issues and more than half said that there was medium awareness. Regarding expectation on workers' ability to imbibe technical knowledge, 37% of the managers said there was high expectation, 58% said there was medium expectation and only 5% said there was low expectation.

## Annex 3: Summary of Key Informant Interview (KII) Report

As part of project preparation facility activity for the project, a series of key informant interviews (KIIs) were conducted. A total of 28 KIIs were conducted across organizations/government departments involved in the RMG sector. Among the other areas of the discussion, compliance of manufacturing units with environmental, social and gender (ESG) related requirements were also discussed.

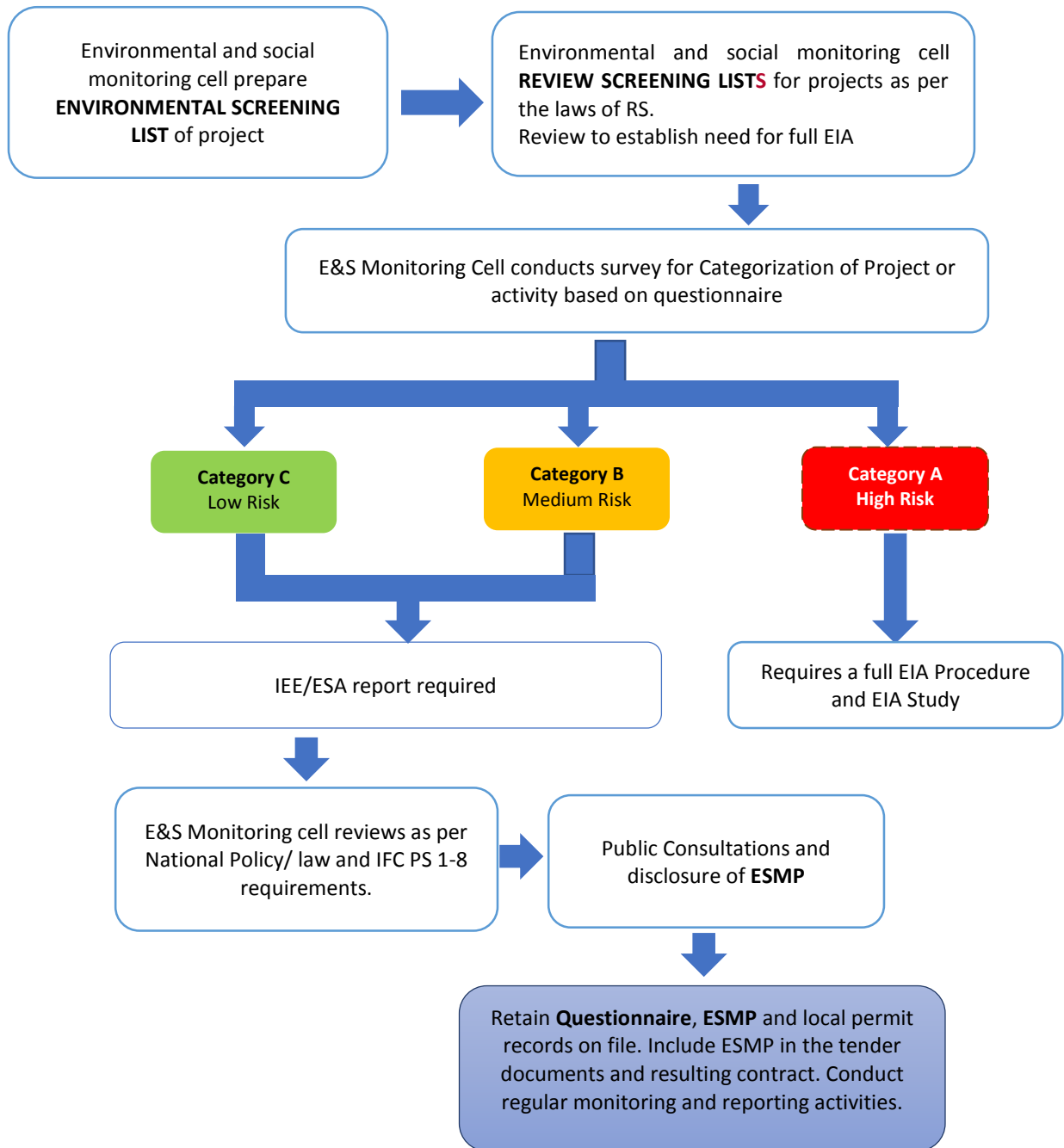
392. ***The RMG sector has been a key enabler in overall socio-economic development of Bangladesh and hence any action taken for the sector has deep social impact.*** The rapid growth of this sector has provided employment to around 4-5 million people, with a majority of them being women. Workers employed in this sector are mostly from rural areas and the employment has provided them with financial freedom and greater social independence. The sector, in general, also show limited incidence as well as limited examples of child labour.

393. The Rana Plaza incident had been a key turning-point in integration of social, health, safety and gender considerations with the business decisions of the buyer. Post Rana Plaza, there was a severe market and media pressure on the buyers i.e. large apparel brands to fulfil their social responsibility and ensure better working conditions for the workers employed in these manufacturing units. ***Accordingly, the buyers demanded stringent compliance with safety and health norms from the manufacturing units and would withdraw business in case these norms are not met.*** The Accord and Alliance was developed and strictly implemented for this purpose – audits were conducted and the unit were notified on the areas of improvement. This prompted the large industries, who are in direct business with the buyers, to comply with these norms. However, the trickle-down effect on small and medium scale units was limited since they rarely have forward linkages with the final buyers and mostly supply inputs for these large-scale units. Hence, there is a large scope of improving the social, health and safety conditions for the medium and small-scale units.

394. ***Compliance to environmental considerations in the sector is largely due to the buyer brand's own environmental commitments.*** The buyer exerted norms are additional to existing laws of Bangladesh – which include basic environmental compliance requirements. This has led to the growing number of LEED certified factories in the RMG sector of Bangladesh – as of May 2019, Bangladesh has 90 LEED-certified garment factories and 24 among them are platinum rated, the highest in the world. Also, the country has 6 of the top 10 LEED certified green factories in the world. However, as in case of social, gender, health and safety, the compliance to these environmental laws is mostly limited to the large-scale industries. There needs to be greater steps taken to impress upon the small and medium scale units on adopting these environmental standards.

# Annex 4: Environmental Screening

## Annex 4-A: Environmental Screening Procedure



## Annex 4-B: Environmental and Social Screening Checklist

<b>Name of the subcomponent:</b>			
<b>City/Municipality:</b>			
<b>Name of applicant (implementing unit):</b>			
<b>Contact:</b>			
<b>ENVIRONMENTAL AND SOCIAL CHECKLIST QUESTIONNAIRE (must be filled out and filed for every application)</b>			
<b>CRITERIA</b>	<b>YES</b>	<b>NO</b>	<b>Not applicable</b>
Will the works financed include construction, reconstruction or demolition works?" <i>If yes, an ESMP needs to be prepared</i>			
Does the existing enterprise have valid operating permit, licenses, approvals etc.? If not, please explain. Permits to screen for include: construction permit, operational/use permit, urban permit, water management permit... <i>If not, will the financing be used to correct this condition?</i>			
Does the existing enterprises have a valid environmental permit (or is in the procedure of obtaining an environmental permit as per the Bangladesh laws) and does the proposed activity fall under those for which this permit was issued?			
Does the existing enterprise have a valid water management permit that calls for special investments or measures for the enterprise's wastewater releases (or is in the procedure of obtaining this permit as per the Bangladesh laws)?			
Does the existing enterprise need to follow specific Bangladesh environmental regulations regarding air emissions, water use or wastewater discharge and solid waste management?			
Are there any significant outstanding environmental fees, fines or penalties or any other environmental liabilities (e.g. pending legal proceedings involving environmental issues etc.) <i>If so, will the financing be used to correct this condition and please explain?</i>			
Have there been any complaints raised by local affected people or groups or NGOs regarding conditions at the facility? <i>If so, will the grant financing be used to remedy these complaints?</i>			
<b>Environmental risks and impacts</b>			
Will the proposed activity require acquisition of land, e.g. <ul style="list-style-type: none"> <li>• Encroachment on private property</li> <li>• Relocation of Project affected persons</li> <li>• Loss of private lands or assets</li> <li>• Impacts on livelihood incomes</li> </ul> <i>If yes, a site-specific Resettlement/Livelihood restoration Action Plan or Abbreviated Resettlement/Livelihood restoration Action Plan shall be prepared</i>			

Will the activity generate water effluents (wastewater) that may require special treatment, control or the water management permit?			
Will the activity generate air emissions which would require special controls in order to ensure compliance with the Bangladesh standards?			
Are the activities likely to induce potential social conflicts?			
Will the activity generate solid waste that may be considered hazardous, difficult to manage, or may be beyond the scope of regular household waste? <i>(This may include, but not be limited too, animal carcasses, toxic materials, pesticides, medical waste, cleaning materials, flammables etc.)</i>			
Will the activity generate noise levels that would require control measures to ensure compliance with the Bangladesh standards?			
Will the noise levels impact particularly sensitive receptors (natural habitats, hospitals, schools, local population centers)?			
Will the proposed activity disrupt access to health services?			
Will the sub-project affect vulnerable <sup>39</sup> groups by any of impacts identified above?			
Will the activity be located within or close to natural habitats or areas under consideration by the Government for official protection status? Will the activity potentially impact areas of known significance to local, regional or national cultural heritage?			
Will the activity involve works that can impact sensitive environmental receptors?			
<b>Labour and working conditions</b>			
Are the activities likely to affect working conditions, particularly in terms of employment, compliance with labor and other laws pertaining to non-discrimination, equal opportunity, child labor, and forced labor of direct, contracted and third-party workers?			
Will the activities pose occupational health and safety risks to workers, including supply chain workers?			
<b>Resource efficiency and pollution prevention</b>			
Are the activities likely to utilize natural resources, including water and energy in an efficient manner?			
<b>Community health, safety and security</b>			
Will the activities potentially generate risks and impacts on the health and safety of the affected communities, including impacts			

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<sup>39</sup>For purposes of the Screening form and assessment vulnerable groups shall Refers to either people below the poverty line, the landless, the elderly, women and children, and those who by virtue of gender, ethnicity, age, physical or mental disability, economic disadvantage, or social status may be more adversely affected by resettlement or other adverse social impacts than others or who may be limited in their ability to claim or take advantage of resettlement assistance and related development benefits.

on ecosystem services affecting the local community health and safety?			
Will the activities increase the risk of sexual exploitation, abuse and harassment?			
Will there be potential risks posed by the security arrangements and potential conflicts at the sub-project site between the workers and the affected community?			
<b>Land acquisition and involuntary resettlement</b>			
Are the activities likely involve the acquisition of lands, land rights or land-use rights through expropriation or other compulsory procedures in accordance with the legal system of the country?			
<b>Assessment and management of risks and impacts</b>			
Do the accredited entities, executing entities and implementing agencies (grantees, sub-borrowers and proponents) have the capacity to implement the environmental and social management plans/action plans?			

#### CERTIFICATION

The applicant, in signing this form proves that the sub-project activity will not involve land acquisition, any form of construction, or will promote any activities on the World Bank Group IFC exclusion list. In addition, the applicant is aware of the EIA requirements as per the Bangladesh Law and certifies that there are no Full Environmental Impact Assessment reports required.

We hereby certify that we have thoroughly examined all the potential adverse effects of this subcomponent. To the best of our knowledge, the subcomponent does not avoid /avoids all adverse social impacts. In case, the Subcomponent does not avoid adverse social impacts list at least two excluding the Subcomponent eligibility.

<b>Form filled out by (Applicant):</b>	
Date:	
Name:	
Title:	
Signature:	
Stamp:	

<b>Form checked by (Environmental Social Expert):</b>	
Date:	
Name:	
Title:	
Signature:	
Stamp:	



## Sub-project Screening Criteria

Once a sub-project brief has been received and reviewed by the LFIs, a proposed sub-project is exempted from further compliance with EIA *Category 12* requirements if all of the following conditions are satisfied:

1. The sub-project will not substantially use natural resources in a way that pre-empts use, or potential use of that resource for any other purpose.
2. Potential residual impacts on the environment are likely to be minor, of little significance and easily mitigated.
3. The type of sub-project, its environmental impacts and mitigation measures are evident and well understood.
4. Reliable means exist for ensuring that impact management measures can and will be adequately planned and implemented.
5. The sub-project will not displace significant number of people, families or communities.
6. The sub-project is not located in, and will not affect, environmentally-sensitive areas such as:
  - a) National parks
  - b) Wetlands
  - c) Productive agricultural land
  - d) Important archaeological, historical and cultural sites
  - e) Areas protected under legislation
  - f) Areas containing rare or endangered flora or fauna
  - g) Areas containing unique or outstanding scenery
  - h) Mountains or developments on or near steep hill slopes
  - i) Forests
  - j) Lakes or their shores
  - k) Areas important for vulnerable groups such as fishing communities
  - l) Areas near high population concentrations or industrial activities where further development could create significant cumulative environmental problems
  - m) Groundwater recharge areas or drainage basins
7. The sub-project will not result in and/or:
  - a) Policy initiatives which may affect the environment
  - b) Major changes in land tenure
  - c) Changes in water use through irrigation, drainage promotion or dams, changes in fishing practices.
8. The sub-project will not cause:
  - a) Adverse socioeconomic impact
  - b) Land degradation
  - c) Water pollution
  - d) Air pollution
  - e) Damage to wildlife and habitats
  - f) Adverse impact on climate and hydrological cycle
  - g) Creation of by-products, residual or waste materials which require handling and disposal in a manner that is not regulated by existing authorities.
9. The sub-project will not cause significant public concern because of potential environmental changes. The following are guiding principles:

- a) Is the impact positive, or harmful?
  - b) What is the scale of the impact in terms of area, numbers of people or wildlife affected?
  - c) What is the intensity of the impact?
  - d) What will be the duration of the impact?
  - e) Will there be cumulative effects from the impact?
  - f) Are the effects politically controversial?
  - g) Have the main economic, ecological and social costs been quantified?
  - h) Will the impact vary by social group or gender?
  - i) Is there any international impact due to the proposed projects?
10. The sub-project will not necessitate further development activity, which is likely to have a significant impact on the environment.

## Annex 5 Draft outline of Initial Environmental Examination (IEE) checklist

<b>Name of the Sub-project borrower:</b>	
<b>Sub-project Name:</b>	
<b>Sub-project Location:</b>	
<b>Name of the financing PFI(s)</b>	
<b>Description of the item on which loan was approved</b>	
<b>Environmental Risk Category by DoE</b>	
<b>Office Address:</b>	
<b>Contact Person:</b>	
<b>Designation:</b>	
<b>Contact Number/s</b>	<b>Landline:</b> <b>Fax Number:</b> <b>Mobile:</b> <b>E-mail Address:</b>

### Initial Environmental Examination Checklist

*This is a draft outline of the IEE checklist. The parameters will be area specific and may vary considering the sub-project activities. The LFIs will finalize the required issues that need to be considered after consulting with the end-borrowers.*

<p>1. Will the works financed include construction, reconstruction or demolition works?"</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><i>If yes, an ESMP needs to be prepared</i></p>
<p>2. Will the proposed sub-project activities require acquisition of land, e.g.</p> <ul style="list-style-type: none"> <li>• Encroachment on private property</li> <li>• Relocation of Project affected persons</li> <li>• Loss of private lands or assets</li> <li>• Impacts on livelihood incomes</li> </ul> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><i>If yes, a site-specific Resettlement/Livelihood restoration Action Plan or Abbreviated Resettlement/Livelihood restoration Action Plan shall be prepared</i></p>
<p>3. Will the sub-project activities potentially impact areas of known significance to local, regional or national cultural heritage?</p> <p><input type="checkbox"/> Yes</p>

<input type="checkbox"/> No
<p>4. Will the sub-project activities generate water effluents (wastewater) that may require special treatment, control or the water management permit? (This will be required only for the sub-projects accessing funds for ETP or any other intervention related to waster water treatment or management)</p> <p> <input type="checkbox"/> Yes  <input type="checkbox"/> No </p> <p><i>If yes, then please include the results of the latest water quality test conducted by DoE and mention the adequate management measure in the EMP.</i></p>
<p>5. Will the sub-project activities cause depletion of water resources? (compare the water quality tests with national standards)</p> <p> <input type="checkbox"/> Yes  <input type="checkbox"/> No </p> <p><i>If yes, then please mention the management measure.</i></p>
<p>6. Will the sub-project activities generate air emissions which will require special controls in order to ensure compliance with the Bangladesh standards?</p> <p> <input type="checkbox"/> Yes  <input type="checkbox"/> No </p> <p><i>If yes, then please include the results of the latest air quality test conducted by DoE and mention the adequate management measure in the EMP.</i></p>
<p>7. Will the sub-project activities generate noise levels that would require control measures to ensure compliance with the Bangladesh standards?</p> <p> <input type="checkbox"/> Yes  <input type="checkbox"/> No </p> <p><i>If yes, then please include the results of the latest sound quality test conducted by DoE mention the adequate management measure in the EMP.</i></p>
<p>8. Has the sub-project generated any report regarding water, air and sound quality test?</p> <p> <input type="checkbox"/> Yes  <input type="checkbox"/> No </p> <p><i>If yes, then please attach the relevant report on tests conducted by DoE.</i></p>
<p>9. What will be the amount of GHGs emitted from the industry because of the sub-project activities?</p> <p> <input type="checkbox"/> Very low  <input type="checkbox"/> With little significance and can be controlled with proper monitoring  <input type="checkbox"/> Significant and will require proper mitigation measures </p>
<p>10. Will the sub-project activities generate solid waste that may be considered hazardous, difficult to manage, or may be beyond the scope of regular household waste?</p> <p> <input type="checkbox"/> Yes  <input type="checkbox"/> No </p>

<p><i>If yes, then please mention the management measure.</i></p> <p>11. Are the activities likely to utilize natural resources, including water and energy in an efficient manner?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><i>If yes, then please mention the efficiency potential.</i></p>
<p>12. Will the activities pose occupational health and safety risks to workers, including supply chain workers?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><i>If yes, then please mention the management measure.</i></p>
<p>13. Will the activities pose any risk to wildlife or vegetation?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><i>If yes, then please mention the management measure.</i></p>
<p>14. Will the sub-project activities have any impacts on community health and safety?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><i>If yes, then please mention the management measure.</i></p>
<p>15. Will the sub-project create any adverse socio-economic impact?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><i>If yes, then please specify .....</i></p>
<p>16. Will the sub-project activities impacted by climatic hazards?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><i>If yes, then please mention the climate risk management measure.</i></p>
<p>17. Will the activities cause any damage to biological environment (trees, birds, animals, aquatic species)?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><i>If yes, then please mention the management measure.</i></p>

## ENVIRONMENT MANAGEMNET 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.)

### Potential Impacts and Proposed Mitigation Measures

Phase	Issues	Potential Impact	Mitigation/ Enhancement Measures	Responsible Organization	
				Implement	Monitor
Pre-Installation Phase	Thermal energy used by factory	<ul style="list-style-type: none"> <li>CO<sub>2</sub> and GHG emission</li> </ul>	<ul style="list-style-type: none"> <li>Energy conservation through recourse management and behavioral change</li> </ul>	PIU of the end borrower	PIU of the LFI
	Electricity used by factory	<ul style="list-style-type: none"> <li>CO<sub>2</sub> and GHG emission</li> </ul>	<ul style="list-style-type: none"> <li>Energy conservation through resource management and behavioral change</li> </ul>	PIU of the end borrower	PIU of the LFI
	Surface and ground water pollution <sup>40</sup>	<ul style="list-style-type: none"> <li>Water pollution due to disposal of waste and chemicals</li> </ul>	<ul style="list-style-type: none"> <li>Baseline information on water quality parameters</li> <li>Sampling at different points in the RMG unit and nearby areas which are expected to be impacted.</li> </ul>	PIU of the end borrower	PIU of the LFI
	Air/Dust pollution	<ul style="list-style-type: none"> <li>Emission of pollutants from dismantle/ deconstruct/ disassemble of existing equipment/ machineries.</li> </ul>	<ul style="list-style-type: none"> <li>Baseline information on air quality parameters</li> <li>Sampling at different points in the RMG unit and nearby areas which are expected to be impacted.</li> </ul>	PIU of the end borrower	PIU of the LFI

<sup>40</sup> Please include the results of the latest water quality test conducted by DoE

Phase	Issues	Potential Impact	Mitigation/ Enhancement Measures	Responsible Organization	
				Implement	Monitor
	Noise pollution	<ul style="list-style-type: none"> <li>Employees and communities exposed to high noise level due to dismantling of existing machineries</li> </ul>	<ul style="list-style-type: none"> <li>Baseline information on noise quality parameters</li> <li>Sampling at different points in the RMG unit and nearby areas which are expected to be impacted.</li> </ul>	PIU of the end borrower	PIU of the LFI
	Solid/ Hazardous Waste Management	<ul style="list-style-type: none"> <li>Solid waste generated from demolition, construction activities containing potentially hazardous materials</li> </ul>	<ul style="list-style-type: none"> <li>Baseline information on waste quality parameters</li> <li>Sampling at different points in the RMG unit and nearby areas which are expected to be impacted.</li> </ul>	PIU of the end borrower	PIU of the LFI
	Suppliers' compliance with labor and environmental standards	<ul style="list-style-type: none"> <li>Non-compliant labor and equipment can lead to additional hazard</li> </ul>	<ul style="list-style-type: none"> <li>Verify standard certification before hiring</li> </ul>	PIU of the end borrower	PIU of the LFI
Installation Phase	Thermal energy used by factory	<ul style="list-style-type: none"> <li>CO<sub>2</sub> and GHG emission</li> </ul>	<ul style="list-style-type: none"> <li>Using energy efficient machineries/equipment</li> <li>Energy conservation through recourse management and behavioral change</li> </ul>	PIU of the end borrower	PIU of the LFI
	Electricity used by factory	<ul style="list-style-type: none"> <li>CO<sub>2</sub> and GHG emission</li> </ul>	<ul style="list-style-type: none"> <li>Using energy efficient machineries/equipment</li> <li>Energy conservation through recourse management and behavioral change</li> </ul>	PIU of the end borrower	PIU of the LFI

Phase	Issues	Potential Impact	Mitigation/ Enhancement Measures	Responsible Organization	
				Implement	Monitor
	Noise	<ul style="list-style-type: none"> <li>Employees and communities exposed to high noise level</li> <li>Disturbance of school and education activities during construction works</li> </ul>	<ul style="list-style-type: none"> <li>Installation of sound insulation.</li> </ul>	PIU of the end borrower	PIU of the LFI
	Air Quality	<ul style="list-style-type: none"> <li>Emission of pollutants from mobile (vehicles) and stationary (mixers, generators etc.) sources.</li> <li>Air pollution from burning of demolition wastes e.g. wood, paper etc.</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of dust reduction measures in construction sites</li> <li>Safety measures put in place</li> </ul>	PIU of the end borrower	PIU of the LFI
	Water Quality	<ul style="list-style-type: none"> <li>Potential pollution of surface and ground water through runoff of pollutants e.g. chemical, lubricating oil, diesel fuel etc. from workshop areas etc.</li> <li>Water pollution due to seepage from tanks (diesel, sanitary wastes etc)</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate containment measures for all operational areas and proper disposal of used lubrication oil.</li> <li>Work sites Installed far from waterways</li> <li>Regular collection of work sites wastes for proper disposal</li> <li>Liquid waste discharged at designated outfalls after effluent treatment to protect water resources</li> </ul>	PIU of the end borrower	PIU of the LFI
	Solid/ Hazardous Waste Management	<ul style="list-style-type: none"> <li>Solid waste generated from demolition, construction activities</li> </ul>	<ul style="list-style-type: none"> <li>Quick sorting, collection and disposal of waste removed from the sites in accordance with applicable regulations.</li> </ul>	PIU of the end borrower	PIU of the LFI



Phase	Issues	Potential Impact	Mitigation/ Enhancement Measures	Responsible Organization	
				Implement	Monitor
		containing potentially hazardous materials			
<b>Post Installation Phase</b>	Thermal energy used by factory	<ul style="list-style-type: none"> <li>Reduced CO<sub>2</sub> and GHG emission</li> </ul>	<ul style="list-style-type: none"> <li>Proper monitoring and maintenance to maintain the improved condition</li> <li>Encourage employees towards energy efficiency</li> </ul>	PIU of the end borrower	PIU of the LFI
	Electricity used by factory	<ul style="list-style-type: none"> <li>Reduced CO<sub>2</sub> and GHG emission</li> </ul>	<ul style="list-style-type: none"> <li>Proper monitoring and maintenance to maintain the improved condition</li> <li>Encourage employees towards energy efficiency</li> </ul>	PIU of the end borrower	PIU of the LFI
	Surface and ground water pollution	<ul style="list-style-type: none"> <li>Reduced water use</li> </ul>	<ul style="list-style-type: none"> <li>Proper monitoring and maintenance to maintain the improved condition</li> </ul>	PIU of the end borrower	PIU of the LFI
	Air/Dust pollution	<ul style="list-style-type: none"> <li>Reduced dust pollution</li> </ul>	<ul style="list-style-type: none"> <li>Proper monitoring and maintenance to maintain the improved condition</li> </ul>	PIU of the end borrower	PIU of the LFI
	Noise pollution	<ul style="list-style-type: none"> <li>Reduce noise/ vibration</li> </ul>	<ul style="list-style-type: none"> <li>Proper monitoring and maintenance to maintain the improved condition</li> </ul>	PIU of the end borrower	PIU of the LFI
	Waste disposal/ Management	<ul style="list-style-type: none"> <li>Reduced waste generation</li> </ul>	<ul style="list-style-type: none"> <li>Proper monitoring and maintenance to maintain the improved condition</li> </ul>	PIU of the end borrower	PIU of the LFI
	Operation and Maintenance	<ul style="list-style-type: none"> <li>Reduced need for engineering controls</li> <li>Lowered cooling requirements</li> <li>Increased facility reliability</li> </ul>	<ul style="list-style-type: none"> <li>Proper monitoring and maintenance to maintain the improved condition</li> </ul>	PIU of the end borrower	PIU of the LFI

Phase	Issues	Potential Impact	Mitigation/ Enhancement Measures	Responsible Organization	
				Implement	Monitor
		<ul style="list-style-type: none"> <li>▪ Reduced wear and tear on equipment/machinery</li> <li>▪ Reductions in labor requirements</li> </ul>			
	Working Environment	<ul style="list-style-type: none"> <li>▪ Improved lighting</li> <li>▪ Reduced noise levels</li> <li>▪ Improved temperature control</li> <li>▪ Improved air quality</li> </ul>	<ul style="list-style-type: none"> <li>▪ Proper monitoring and maintenance to maintain the improved condition</li> </ul>	PIU of the end borrower	PIU of the end borrower

## 5.2 Monitoring Checklist

(Parameters should be measured before the installation phase (baseline value) and once in three months after operation. Parameters will be area specific and vary depending on the sub-project interventions. The LFI will finalize the parameters for the monitoring checklist after consulting with the end-borrower of each sub-project.)

Wastewater tests will be required only for the sub-projects accessing finance for ETP or any other measures that includes management and treatment of wastewater. Sub-projects getting funding for boilers or other intervention that does not generate wastewater will not require to conduct wastewater tests.)

Sl. No.	Particulars	Parameters	Standard <sup>41</sup>	Measured value at industry	Frequency
1.	Power/electricity used in the industry	Average energy used in KWh			Once in three months
2.	Water usage in the industry	Cubic meters/day			Once in three months
3.	Ambient Air Monitoring	PM <sub>2.5</sub> , PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> , O <sub>3</sub> & CO			Once in three months
4.	Water Quality Monitoring <sup>42</sup>	Drinking Water Specifications: pH Color (True or Apparent) Turbidity Total Hardness Chloride (Cl) Total Dissolved Solids (TDS) Manganese (Mn) Arsenic (As) Total Iron (Fe) Total Coliform (TC)/Thermotolerant Coliform (TTC) Fecal Coliform (FC)			Once in three months
5.	Noise Level Monitoring	24 Hrs. Noise Level (in dBa)			Once in three months
6.	Wastewater from industry	pH Suspended solids 100 BOD <sub>5</sub> 20°C Oil and Grease Total dissolved solids (TDS) Wastewater flow Total Chromium, as Cr Sulfide, as S Phenolic compounds, as C <sub>6</sub> H <sub>5</sub> OH			Once in three months

<sup>41</sup> Standard values are provided in the ESMF

<sup>42</sup> If the sub-project has recently (within 1 year) conducted water quality tests for ECC then the test results should be attached with the IEE report. If the water quality tests are older than 1 year then the sub-projects have to submit new test results for water quality.



## Annex 6: Environmental and Social Monitoring Checklist

Monitor(s) Name:

Contract No & Location:

Contractor Name:

Monitoring Dates:

Issues	Monitoring Indicators	Baseline (starting of the sub-project)	Monitoring Frequency				Complies (Yes/No) <sup>43</sup>	Mitigation Measures (site specific)
			3 months	6 months	9 months	12 months		
<b>Environmental Risks and Impacts</b>								
Thermal energy consumed in factory	Average energy consumption per month							
Electrical energy consumed in factory	Average energy consumption per month							

<sup>43</sup> Note: If yes, details of the measures taken to be taken and reported in the monitoring report

Surface and ground water pollution	Water quality test on collected samples							
Air/Dust pollution	Air quality test inside and outside the factory							
Noise pollution	Noise quality test inside and outside the factory							
Waste disposal/ Management	Average amount of waste generated, disposed and managed per month							
Suppliers' compliance with labor and environmental standards	Standard of raw materials, constructions materials, parts of machineries/ equipment							
<b>Social Risks and Impacts</b>								

Working condition in terms of employment, compliance with labor and other laws	Wage, overtime, leave, legal contract, longer working hours							
Equal opportunity despite of gender, race, religion, social status	Wages, facilities, tasks assignments, promotions and decision making							
Workplace facilities and environment	Working space, cleanliness, relationship between employees							
Occupational Health and Safety (OHS)	Fire safety, Hazardous chemical, earthquake safety, emergency exit, safety kit							
Healthcare facilities	First aid service, emergency healthcare and medicine							

Training and capacity building	Technical training, management training, OHS training							
WASH Facilities	Safe drinking water, Hygienic sanitary toilet, separate washroom for men and women							
Sexual exploitation, abuse and harassment inside the factory	Any unpleasant incident inside the factory							
Sexual exploitation, abuse and harassment in the community	Any unpleasant incident in the community because of the factory							
Community health	Health issues caused by air, water, noise, soil pollution by the factory							



Community safety and security	Security arrangements and potential conflicts at the sub-project site between the workers and the affected community							
Impacts on ecosystem services affecting the local community health and safety	Any damage caused by the factory to the ecosystem services							

## Annex-7: Format of Half-yearly/Annual Monitoring Report

### **1. Introduction**

### **2. Sub-project Background**

Sub-project description including log frame and sub-project activities; Location and geographic extent of the sub-project; Potential environmental and social impacts due to the sub-project activities.

### **3. Governing Policies and Legislations**

Briefly mention the policies and legislations that were followed during the monitoring procedure.

### **4. Objective of the Monitoring Report**

### **5. Environmental Safeguards Monitoring**

Summarize the environmental protection and pollution control/mitigation measures, as recommended in the agreed EMF and sub-project specific EMP.

### **6. Social Safeguards Monitoring**

Summarize the social protection and pollution control/mitigation measures, as recommended in the agreed SMF and sub-project specific SMP.

### **7. Stakeholder engagement**

Summarize the meeting and the subsequent decision on the environment management those have been taken in the current period.

### **8. Management of Grievances**

### **9. Conclusions and Recommendations**

### **10. Annexure**

- a) Environmental and Social Screening Checklist
- b) Environment and Social Monitoring Checklist

## Annex-8: Grievance Redressal Form

Parameter	Details
<p>Full Name</p> <p>Note: You can remain anonymous if you prefer or request not to disclose your identity to the third parties without your consent.</p>	<p>First Name: _____</p> <p>Last Name: _____</p> <p><input type="checkbox"/> I wish to raise my grievance anonymously</p> <p><input type="checkbox"/> I request not to disclose my identity without my consent</p>
<p>Contact Information</p> <p>Please mark how you wish to be contacted (mail, telephone, e-mail)</p>	<p><input type="checkbox"/> By Post: Please provide mailing address:            _____            _____            _____</p> <p><input type="checkbox"/> By Telephone: _____            _____</p> <p><input type="checkbox"/> By E-mail: _____            _____</p>
<p>Preferred Language for communication</p>	<p><input type="checkbox"/> Bangla</p> <p><input type="checkbox"/> Other indicate: _____            _____</p>
<p>Description of Incident or Grievance:</p>	<p>What happened? Where did it happen? Who did it happen? What is the result of the problem?</p>
<p>Date of Incident or Grievance:</p>	<p><input type="checkbox"/> One-time incident/grievance (date _____)</p> <p><input type="checkbox"/> Happened more than once (how many times? _____)</p> <p><input type="checkbox"/> On-going (currently experiencing problem)</p>
<p>What would you like to see happen to resolve the problem?</p>	
<p>Signature: _____</p> <p>Date: _____</p>	
<p>Please return this form to: [name], Health and Safety Manager, [company name],</p> <p>Address: _____ : Tel: _____ or E-mail: _____ @ _____ .com</p>	

## Annex-9: Table of Content for ESMS Report

### **ABBREVIATION**

### **GLOSSARY**

### **EXECUTIVE SUMMARY**

### **CHAPTER ONE: INTRODUCTION**

- 1.1 Background of the study
- 1.2 Sub-project Overview
- 1.3 Purpose and scope of ESMS
- 1.4 Technical Approach and Methodology
- 1.5 Limitations of ESMS
- 1.6 Team Composition- Qualification and Competency
- 1.7 Report Structure
  - ESIA Report
  - ESMP Report

### **CHAPTER TWO: POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK**

- 2.1 Government Policies, Acts, Rules and Strategies
  - 2.1.1 National Environmental Policy 1992
  - 2.1.2 Bangladesh Environmental Conservation Act (ECA), 1995 amended 2002
  - 2.1.3 Environment Conservation Rules (ECR) 1997 amended 2003
  - 2.1.4 Environment Court Act, 2000
  - 2.1.5 Industry Policy, 2016
  - 2.1.6 Bangladesh Labor Act, 2006
  - 2.1.7 Public Procurement Rule (PPR), 2008
- 2.2 GCF Environmental and Social Safeguard Policies
- 2.3 Other Relevant Policies, Acts, Rules and Strategies
  - 2.3.1 World Bank Environmental and Social Safeguard Policies
  - 2.3.2 JICA Environmental and Social Safeguard Policies
  - 2.3.3 ADB Environmental and Social Safeguard Policies
  - 2.3.4 IFC Environmental and Social Safeguard Policies
  - 2.3.5 IDCOL Environmental and Social Safeguard Policies
  - 2.3.6 Implications of the Environmental Policies to the Sub-project
  - 2.3.7 Environmental Clearance Procedure
  - 2.3.8 Implication of Social Development and Safeguard

### **CHAPTER THREE: PROJECT DESCRIPTION**

- 3.1 Background and Rationale of the sub-project
- 3.2 Sub-project Location and Description of the site
- 3.3 Sub-project Details
  - 3.3.1 Project Activities
  - 3.3.2 Sub-project Capacities
  - 3.3.3 Sub-project Component
  - 3.3.4 Resource Requirements

- 3.3.5 Sub-project Facilities and Design
- 3.3.6 Sub-project Timeline and work plan

#### **CHAPTER FOUR: ESIA Report**

- 4.1 Screening and Scoping Based on IFC Performance Standards
- 4.2 Baseline Environmental Study
  - 4.2.1 General Consideration
  - 4.2.2 Geographical Location of the Sub-project Area
  - 4.2.3 Landscape and Topography
  - 4.2.4 Physiography
  - 4.2.5 Geology and Soils
  - 4.2.6 Major Land Use Categories
  - 4.2.7 Biological Environment
  - 4.2.8 Meteorological Condition
  - 4.2.9 Ambient Air Quality
  - 4.2.10 Ambient Noise Quality
  - 4.2.11 Surface and Ground Water Quality
  - 4.2.12 Vulnerability to Climate change and natural hazard
  - 4.2.13 Traffic Survey
- 4.3 Baseline Social Study
  - 4.3.1 Demography
  - 4.3.2 Livelihood Sources in site location
  - 4.3.3 Labor rights and working conditions in the factory
  - 4.3.4 Occupational health and safety
  - 4.3.5 Workplace facilities
  - 4.3.6 Gender Issues in factory and community
  - 4.3.7 Health conditions of workers and community
  - 4.3.8 Social safety and security
- 4.4 Assessment of Anticipated Environmental and Social Risks and Impacts
  - 4.4.1 Ambient Air and Noise Quality
  - 4.4.2 Impacts on Land Use, Soil and Drainage
  - 4.4.3 Impacts on Water Resources and Quality
  - 4.4.4 Impact on Biological Environment
  - 4.4.5 Impacts on Socio-economic environment
  - 4.4.6 Labor rights and working conditions in the factory
  - 4.4.7 Workplace facilities
  - 4.4.8 Gender issues
  - 4.4.9 Occupational Health and Safety
  - 4.4.10 Impacts on Health and Safety of workers and community
  - 4.4.11 Social safety and security
- 4.5 Impacts Mitigation and Monitoring

#### **CHAPTER FIVE: ENVIRONMENTAL & SOCIAL MANAGEMENT PLAN**

- 5.1 Objective of the Environmental and Social Management Action Plan
- 5.2 Institutional Setting and Implementation Arrangements
- 5.3 Environmental and Social Management Action Plan

- 5.4 Riks Mitigation Plans
- 5.5 Climate Risk Management Plan
- 5.6 ESMP Monitoring & Reporting

## **CHAPTER SIX: STAKEHOLDER ENGAGEMENT**

- 6.1 Identification of Stakeholders
- 6.2 Summary of Stakeholder Consultation
- 6.3 Public Disclosure

## **CHAPTER SEVEN: GRIEVANCE REDRESSAL MECHANISM**

## **CHAPTER EIGHT: CONCLUSIONS & RECOMMENDATIONS**

- 8.1 Conclusions
- 8.2 Recommendations

## **REFERENCES**

## **ANNEXURE**

## Annex-10: World Bank Group Exclusion List

All participating financial intermediaries (PFIs) must apply the following exclusion list of activities:

- Production or trade in any product or activity deemed illegal under host country laws or regulations
- International conventions and agreements, or subject to international bans, such as pharmaceuticals
- Pesticides/herbicides, ozone depleting substances, PCBs, wildlife or products regulated under CITES
- Production or trade in weapons and munitions
- Production or trade in alcoholic beverages (excluding beer and wine)
- Production or trade in tobacco
- Gambling, casinos and equivalent enterprises
- Production or trade in radioactive materials. This does not apply to the purchase of medical equipment
- Quality control (measurement) equipment and any equipment where IFC considers the radioactive source to be trivial and/or adequately shielded
- Production or trade in unboned asbestos fibers. This does not apply to purchase and use of bonded asbestos
- Cement sheeting where the asbestos content is less than 20%
- Drift net fishing in the marine environment using nets in excess of 2.5 km in length
- Production or activities involving harmful or exploitative forms of forced labor/harmful child labor
- Commercial logging operations for use in primary tropical moist forest
- Production or trade in wood or other forestry products other than from sustainably managed forests.

## Annex-11: Projected Seasonal, Annual Surface Warming and Rainfall

### *Projected Seasonal and Annual Surface Warming (°C)*

Region	Seasonal Temperature change (°C) for 2030				Annual Change
	Dec-Jan-Feb	Mar-Apr-May	Jun-Jul-Aug-Sept	Oct-Nov	
<b>Maximum Temperature (°C)</b>					
NW	1.5	-0.1	1.3	1.1	1.0
NC	1.4	-0.3	1.3	1.0	0.9
NE	1.4	0.0	1.3	1.1	1.0
SW	1.2	0.0	1.0	0.8	0.8
SC	1.1	0.4	1.0	0.8	0.8
SE	1.2	-0.1	1.2	0.9	0.8
<b>Minimum Temperature (°C)</b>					
NW	1.4	0.6	1.2	1.4	1.1
NC	1.5	0.6	1.2	1.4	1.1
NE	1.6	0.8	1.2	1.6	1.3
SW	1.3	0.6	1.1	1.1	1.0
SC	1.3	0.7	1.0	1.0	1.0
SE	1.4	0.6	1.1	1.3	1.1

Source: IPCC, 2013

N- North, S-South, E-East, W-West.

### *Projected Seasonal and Annual Change in Rainfall*

Region	Seasonal Rainfall change (%) for 2030				Annual
	Dec-Jan-Feb	Mar-Apr-May	Jun-Jul-Aug-Sept	Oct-Nov	
NW	134.0	19.9	-6.1	116.1	-0.1
NC	107.6	34.1	14.8	47.7	19.0
NE	32.0	7.1	15.0	8.1	13.1
SW	68.8	11.9	1.4	76.4	6.0
SC	-6.7	15.7	3.4	45.4	6.3
SE	-5.1	26.6	10.9	6.6	12.3

Source: IPCC, 2013



**Annex-12: Climate Risk Management Framework**

Sub-Project Name	Defined or Anticipated Sub-Project Elements	Duration	Location	Climate Risks						Adaptive Capacity	Climate Risk Ratings	Opportunities	Climate Risk Management Options	Climate Risk Management Proposed	Next Steps for Activity Design/Implementation	Accepted Climate Risks
				Urban sprawl, unplanned settlements and development	Lowering of groundwater levels and prolonged dry periods	Sea level rise and increasing precipitation	Rise in Temperatures	Cyclones	Excessive Rainfall							

## Annex-13: Environmental Standards as per The Environment Conservation Rules, 1997

Table 14.1: Standards for Air

Sl. No.	Categories of Area	Suspended Particulate Matters (SPM) <sup>44</sup>	Sulphur-dioxide	Carbon Monoxide	Oxides Nitrogen
a.	Industrial and mixed	500	120	5000	100
b.	Commercial and mixed	400	100	5000	100
c.	Residential and rural	200	80	2000	80
d.	Sensitive <sup>45</sup>	100	30	1000	30

Density in microgram per cusec meter\*

Table 14.2: Standards for Water (Standards for inland surface water)

Best Practice based classification	Parameter			
	pH	BOD mg/l	DO mg/l	Total Coliform number/100
a. Source of drinking water for supply only after disinfecting:	6.5-8.5	2 or less	6 or above	50 or less
b. Water usable for recreational activity :	6.5 – 8.5	3 or less	5 of more	200 or less
c. Source of drinking water for supply after conventional treatment :	6.5 – 8.5	6 of less	6 or more	5000 or less
d. Water usable by fisheries <sup>46</sup> :	6.5 – 8.5	6 of less	5 or more	---
e. Water usable by various process and cooling industries:	6.5 – 8.5	10 or less	5 or more	5000 or less
f. Water usable for irrigation <sup>47</sup> :	6.5 – 8.5	10 or less	5 or more	1000 or less

<sup>44</sup> Suspended Particulate Matter means airborne particles of a diameter of 10 micron or less.

<sup>45</sup> At national level, sensitive area includes monuments, health center, hospital, archeological site, educational institution, and government designated areas (if any).

<sup>46</sup> In water used for pisciculture, maximum limit of presence of ammonia as Nitrogen is 1.2 mg/l.

<sup>47</sup> Electrical conductivity for irrigation water – 2250  $\mu$ mhos/cm (at a temperature of 25°C); Sodium less than 26%; boron less than 0.2%.

**Table 14.3: Standards for Sound**

Sl. No.	Categories of Area	Standards determined at dBa unit	
		Day <sup>48</sup>	Night <sup>49</sup>
a.	Silent zone <sup>50</sup>	45	35
b.	Residential area	50	40
c.	Mixed area (mainly residential area, and also simultaneously used for commercial and industrial purposes)	60	50
d.	Commercial area	75	60
e.	Industrial area	70	70

**Table 14.4: Standards for Sound originating from Motor Vehicles or Mechanized Vessels**

Category of Vehicles	Unit	Standards	Remarks
<b>*Motor Vehicles (all types)</b>	dBa	85	As measured at a distance of 7.5 meters from exhaust pipe.
		100	As measured at a distance of 0.5 meter from exhaust pipe.
<b>Mechanized Vessels</b>	dBa	85	As measured at a distance of 7.5 meters from the vessel which is not in motion, not loaded and is at two thirds of its maximum rotating speed.
		100	As measured at a distance of 0.5 meter from the vessel which is in the same condition as above.

\* At the time of taking measurement, the motor vehicle shall not be in motion and its engine conditions shall be as follows:-

- (a) Diesel engine – maximum rotating speed.
- (b) Gasoline engine –at two thirds of its maximum rotating speed and without any load.
- (c) Motorcycle – If maximum rotating speed is above 5000 rpm; two-thirds of the speed, and if maximum rotating speed is less than 5000 rpm, three-fourth of the speed.

<sup>48</sup> The time from 6 a.m. to 9 p.m. is counted as daytime.

<sup>49</sup> The time from 9 p.m. to 6 a.m. is counted as night time.

<sup>50</sup> Area up to a radius of 100 meters around hospitals or educational institutions or special institutions/ establishments identified/to be identified by the Government is designated as Silent Zones where use of horns of vehicles or other audio signals, and loudspeakers are prohibited.

**Table 14.5: Standards for Emission from Motor Vehicles**

Parameter	Unit	Standard Limit
<b>Black Smoke</b>	Hartridge Smoke Unit (HSU)	65
<b>Carbon Monoxide</b>	gm/k.m. percent area	24 04
<b>Hydrocarbon</b>	gm/k.m. ppm	02 180
<b>Oxides of Nitrogen</b>	gm/k.m. ppm	02 600

**Table 14.6: Standards for Sewage Discharge**

Parameter	Unit	Standard Limit
<b>BOD</b>	milligram/l	40
<b>Nitrate</b>	milligram/l	250
<b>Phosphate</b>	milligram/l	35
<b>Suspended Solids (SS)</b>	milligram/l	100
<b>Temperature</b>	Degree Centigrade	30
<b>Coliform</b>	number per 100 ml	1000

**Table 14.7: Standards for Waste from Industrial Units or Sub-Project's Waste**

Sl. No.	Parameter	Unit	Places for determination of standards		
			Inland Surface Water <sup>51</sup>	Public Sewerage system connected to treatment at second stage <sup>52</sup>	Irrigated Land <sup>53</sup>
1	2	3	4	5	6
1	Ammonical Nitrogen (as elementary N)	mg/l	50	75	75
2	Ammonia (as free ammonia)	„	5	5	15
3	Arsenic (as)	„	0.2	0.05	0.2
4	BOD <sub>5</sub> at 20°C	„	50	250	100
5	Boron	„	2	2	2
6	Cadmium (as CD)	„	0.50	0.05	0.05
7	Chloride	„	600	600	600
8	Chromium (as total Cr)	„	0.5	1	1
9	COD	„	200	400	400

<sup>51</sup> Inland Surface Water means drains/ponds/tanks/water bodies/ditches, canals, rivers, springs and estuaries.

<sup>52</sup> Public sewerage system means treatment facilities of the first and second stage and also the combined and complete treatment facilities.

<sup>53</sup> Irrigable land means such land area which is sufficiently irrigated by waste water taking into consideration the quantity and quality of such water for cultivation of selected crops on that land.

10	Chromium (as hexavalent Cr)	„	0.1	1	1
11	Copper (as Cu)	„	0.5	3	3
12	Dissolved Oxygen (DO)	„	4.5-8	4.5-8	4.5-8
13	Electro-conductivity (EC)	Micro mho/cm	1200	1200	1200
14	Total Dissolved Solids	„	2100	2100	2100
15	Fluoride (as F)	„	2	15	10
16	Sulfide (as S)	„	1	2	2
17	Iron (as Fe)	„	2	2	2
18	Total Kjeldahl Nitrogen (as N)	„	100	100	100
19	Lead (as Pb)	„	0.1	1	0.1
20	Manganese (as Mn)	„	5	5	5
21	Mercury (as Hg)	„	0.01	0.01	0.01
22	Nickel (as Ni)	„	1	2	1
23	Nitrate (as elementary N)	mg/l	10	Not yet Fixed	10
24	Oil and Grease	„	10	20	10
25	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	„	1	5	1
26	Dissolved Phosphorus (as P)	„	8	8	15
27	Radioactive substance	To be specified by Bangladesh Atomic Energy			
28	pH		6-9	6-9	6-9
29	Selenium (as Se)	mg/l	0.05	0.05	0.05
30	Zinc (as Zn)	Degree	5	10	10
31	Total Dissolved Solids	„	2100	2100	2100
32	Temperature	Centigrade	40 45	40 45	40-Summer 45-Winter
33	Suspended Solids (SS)	mg/l	150	500	200
34	Cyanide (as Cn)	„	0.1	2	0.2

**Table 14.8: Standards for Gaseous Emission from Industries or Sub-project**

Sl. No.	Parameter	Standard present in a unit of mg/Nm <sup>3</sup>
1	2	3
1	Particulate (a) Power plant with capacity of 200 Megawatt or above. (b) Power plant with capacity less than 200 Megawatt.	150 350
2	Chlorine	150
3	Hydrochloric acid vapor and mist	350
4	Total Fluoride F	25
5	Sulfuric acid mist	50
6	Lead particulate	10
7	Mercury particulate	0.2
8	Sulfur dioxide (a) Sulfuric acid production (DCDA* process) (b) Sulfuric acid production (SCSA* process) (* DCDA: Double Conversion, Double Absorption; SCSA: Single Conversion, Single Absorption.)	kg/ton acid 4 10
	Lowest height of stack for dispersion of sulfuric acid (in meter). <b>a) Coal based power plant</b> 1. 500 Megawatt or above 2. 200 to 500 Megawatt 3. Less than 200 Megawatt <b>b) Boiler</b> 1. Steam per hour up to 15 tons 2. Steam per hour more that 15 tons [Q = Emission of Sulfur dioxide (kg/hour)]	275 220 14(Q) <sup>0.3</sup> 11 14(Q)0.3
9	Oxides of Nitrogen a) Nitric acid production b) Gas Fuel based Power Plant 1. 500 Megawatt or above 2. 200 to 500 Megawatt 3. Below 200 Megawatt c) Metallurgical oven	3 kg/ton acid 50 ppm 50 ppm 40 ppm 30 ppm 200 ppm
10	Kiln soot and dust a) Blast Furnace b) Brick Kiln c) Coke oven d) Lime Kiln	mg/Nm <sup>3</sup> 500 1000 500 250

**Table 14.9: Standards for Sector-wise Industrial Effluent or Emission (Composite textile plant and large processing unit (in which capital investment is more than thirty million Taka))**

Parameters	Standard and presence in a unit of mg/l
pH	6.5-9
Suspended solids	100
BOD <sub>5</sub> 20°C	150
Oil and Grease	10
Total dissolved solids	2100
Wastewater flow	100 per kg of fabric processed
Note: BOD limit of 150 mg/l implies only with physico chemical processing. Special parameters based on classification of dyes used	
Total Chromium, as Cr	5
Sulfide, as S	5
Phenolic compounds, as C <sub>6</sub> H <sub>5</sub> OH	5

Effluent (liquid waste)

## Annex 14: Approved Rates for Testing of Materials And Services<sup>54</sup>

Sl. No.	Name of Tests	Test Rate (Tk.)
<b>Tests on Water</b>		
<b>Routine Drinking Water Parameters (Package)</b>		
1	pH	<b>9,600 + 2,600 = 12,200 (Drinking+As+TC/FC) 7,500 + 2,000 = 9,500 (Drinking+As)</b>
2	Colour (True or Apparent)	
3	Turbidity	
4	Total Hardness	
5	Chloride (Cl)	
6	Total Dissolved Solids (TDS)	
7	Manganese (Mn)	
8	Arsenic (As)	
9	Total Iron (Fe)	
10	Total Coliform(TC)/Thermotolerent Coliform (TTC)	
11	Fecal Coliform (FC)	

<b>Environmental Quality of Soil, Sludge and Solids</b>		
1	pH (Chemical 200/-)	1,200
2	Electrical Conductivity (Chemical 300/-)	1,500
3	Organic Matter Content by Loss on Ignition Tes	4,500
4	Water Soluble Cl / Salinity/ PO <sub>4</sub> / SO <sub>4</sub> (each) (Chemical 400/-)	4,500

<b>Ambient Air Quality Monitoring *</b>		
<b>Parameters</b>		
1	SPM (Chemical 1500/-)	16,000
2	PM10	
3	PM2.5 (Chemical 2500/-)	20,000

<b>Noise Monitoring *</b>		
1	Minimum Fee (per 5 locations in one entity)	20,000
2	Clibration of Noise Meter (per equipment)	5,000

**Notes:** [\* Field visit fee; Inside Dhaka City = Tk. 15,000; Outside Dhaka City (No overnight stay) = Tk. 25,000; Near Districts = Tk. 38,000 without overnight stay and Tk. 30,000 per day for overnight stay; Farthest Districts = Tk. 50,000 without overnight stay and Tk. 40,000 per day for overnight stay, Remote Areas with overnight stay = Tk. 45,000 per day ] [\* & Transport, local hospitalities, accommodation (in case of overnight stay) etc. are to be provided by the Client]

S.P.C. = Sample Preparation Charge

<sup>54</sup> Rates approved by Bureau of Research, Testing & Consultation, Bangladesh University of Engineering and Technology, Dhaka -1000, Department of Civil Engineering in 2018



## Annex 15: Approved Rates for Testing Materials and Consultancy Services <sup>55</sup>

### 395. Environmental Quality of Soil, Sludge and Solids

Ser No	Name of Tests	Rate incl IT & VAT (Tk)
1	pH	500
2	Electrical Conductivity	800
3	Organic Matter (Dry combustion Method)	2,400
4	Water Soluble Cl/PO <sub>4</sub> /SO <sub>4</sub>	2,400

### 396. Test on Water (Routine Drinking Water Parameters (Package))

Ser No	Name of Tests	Rate incl IT & VAT (Tk)
1	pH	9,500 (Drinking +As +TC/FC); 6,500/- (Drinking +As)
2	Color (True or Apparent)	
3	Turbidity	
4	Total Hardness	
5	Chloride (Cl)	
6	Total Dissolved Solids (TDS)	
7	Manganese (Mn)	
8	Arsenic (As)	
9	Total Iron (Fe)	
10	Total Coliform (TC) /Thermotolerent Coliform (TTC)	
11	Fecal Coliform (FC)	

### 397. Ambient Air Quality Monitoring

Ser No	Name of Tests	Rate incl IT & VAT (Tk)
1	SPM	11,000 + F.V.
2	PM10	
3	PM2.5	12,000 + F.V.

398.

<sup>55</sup> Rates approved by Military Institute of Science and Technology, Dhaka Department of Civil Engineering in 2017

399. Noise Monitoring

Ser No	Name of Tests	Rate incl IT & VAT (Tk)
1	Minimum Fee (per 5 locations in one entity)	12,000 + F.V.
2	Calibration of Noise Meter (per equipment)	4,000