ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA)

OF

CUMILLA ECONOMIC ZONE LIMITED

FINAL REPORT

VOLUME I: EXECUTIVE SUMMARY

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Abbreviations

BEZA	Bangladesh Export Processing Zone
BTCL	Bangladesh Telecommunication Company Limited
BOD	Biochemical Oxygen Demand
CEO	Chief Executive Officer
CETP	Central Effluent Treatment Plant
COD	Chemical Oxygen Demand
COO	Chief Operating Officer
CSTP	Central Sewage Treatment Plant
CuEZL	Cumilla Economic Zone Limited
DoE	Department of Environment
ECA	Environmental Conservation Act
ECC	Environmental Clearance Certificate
ECR	Environmental Conservation Rule
EHS	Environment, Health and Safety
EHSG	Environmental, Health and Safety Guidelines
ERP	Emergency Response Plan
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
EZ	Economic Zone
FGD	Focus Group Discussion
FTP	Fume Treatment Plant
GHG	Green House Gas
GOB	Government of Bangladesh
GRM	Grievance Redress Mechanism
HR	Human Resources
ICP	Informed Consultation and Participation
ILO	International Labor Organization
IM	Informal Meeting
IPCC	Intergovernmental Panel on Climate Change
IPFF-II	Investment Promotion and Financing Facility -II
IUCN	International Union for Conservation of Nature
KII	Key Informant Interview
LRP	Livelihood Restoration Plan
MD	Managing Director
MGI	Meghna Group of Industries
NGO	Non-Government Organization
OHS	Occupational Health and Safety

OHSP	Occupational Health and Safety Plan
OP	Operational Policy
PAP	Project Affected Person
PCR	Physical Cultural Resources
PFI	Private Finance Initiative
PM	Particulate Matter
PSI	Performance Standard Indicator
SPM	Suspended Particulate Matter
STP	Sewage Treatment Plant
TDC	Temporary Drainage Congestion
TDS	Total Dissolved Solids
ToR	Terms of Reference
TSDF	Treatment Storage Disposal Facility
VOC	Volatile Organic Carbon
WBG	World Bank Group
WTP	Water Treatment Plant

EXECUTIVESUMMARY

E.1 INTRODUCTION

Meghna Group of Industries (MGI), one of the largest and leading conglomerates of Bangladesh, has proposed to develop a 246.3615 acres' land for an economic zone namely 'Cumilla Economic Zone Limited' (CuEZL) which is located at Sonachar Mauza, Luterchar Union, Meghna Upazila, Cumilla District, Chittagong Division, along Dhaka-Chittagong Highway. The land is exclusively owned by CuEZL and land filling work for the EZ has already been completed. In addition to its own funds, the CuEZL authority is also seeking for finances from private and other lenders including World Bank. In this regard, the developments in the CuEZL project should conform to the Performance Standards for Private Sector Activities (OP 4.03). As part of the World Bank funding guidelines, an Environmental and Social Impact Assessment (ESIA) should be carried out to address the environmental and social issues of the project following operational procedures, policies, guidelines and statements set by the World Bank.

Objective of the EIA, Scoping, Categorization and Screening

The objectives of the study are to prepare a detail ESIA for the CuEZL project to address the associated environmental and social issues. The ESIA process involves study of the plausible changes of the physical, biological and socio-economic environment as the consequence of the proposed project activities, and formulating a suitable Environmental and Social Management Plan (ESMP) to minimize or abate adverse effects and to enhance or augment positive effects. As the project is to be partly financed by the IPFF-II project of Bangladesh Bank, which is funded by WB, the ESIA aims at achieving an acceptable level of compliance with applicable World Bank Group's Performance Standards (PS 1- 8); under WB OP4.03 applicable to the IPFF-II project. This also implies compliance with the applicable WB EHS general and sector guidelines; and international best practice guidelines.

Scoping was performed primarily for categorization of the project according to ECR, 2023 and the World Bank; Information collection through discussions/meetings with WB, MGI, Bangladesh Bank, PFIs; confirmation of the environmental categorization of the project along with selecting the type of ESIA documents to be prepared (Full ESIA, ESMS, etc.) as required under the Environment Conservation Rules, 2023; Confirmation of the applicability of the Performance Standards set forth by the World Bank as requirements of the OP 4.03.

According to the Environmental Conservation Rules (ECR), 2023 of the Department of Environment (DoE), Bangladesh, the project falls under "Red Category". Therefore, it is mandatory to conduct an Environmental Impact Assessment (EIA) for obtaining an Environmental Clearance Certificate (ECC) from DoE. The EIA approval from the DoE has been obtained (Annex P). It is to be noted that each of the industries in CuEZL will

also require to have EIA clearance from the DoE. According to World Bank criteria, this project is in "Category B (i.e., medium risk)" requiring a comprehensive ESIA following the World Bank Operational Policies OP 4.03 addressing the eight Performance Standards to ensure that the project is environmentally sound and sustainable. Considering relevant potential risks and impacts, the proposed CuEZL Project is categorized as Medium Risk(Annex-ii). Although the project lies near the branch of the Meghna River, there will be no industries to be established in the zone which will discharge untreated polluted water or any hazardous materials within the zone. Several operating industries would require tohave individual ETPs, which will discharge effluents after treatment complying national standard. The CuEZL will set up a CETP which would receive the treated effluents from the individual ETPS and treat it to a level acceptable for discharge in the natural environment as per the ECR 2023. CuEZL industries will be established in built-up areas on CuEZL-owned land, so no irreversible conversion of critical habitats is envisaged. There are no vulnerable groups or ethnic minorities in the area, and there will be no large-scale involuntary resettlement or economic displacement, or any alteration of critical cultural heritage. Majority of the potential risks and impacts are temporary, predictable, occurring within the project boundary, and can be readily addressed through mitigation measures and international best practice.

The steps followed in screening include, desk review of the relevant documents and available imagery of the project site and its surroundings; reconnaissance survey of the site, surrounding areas, approach road and informal discussions with local stakeholders, discussions with World Bank, Bangladesh Bank, Local Community Representatives. This information has been used for consultation during different stages of the project.

- Planning of Environmental and Social Auditing of selected industries in the CuEZL.
- Categorization of subproject for the purpose of ESIA.
- Environmental and social impact zone delineation.
- Preliminary identification of the World Bank Operational Policies triggered by the project, e.g.;
    - Location of the project – in eco-sensitive area or not
    - Labor engagement
    - Presence of indigenous peoples in the impact area or not
    - Cultural heritage sites affected or not
    - Land acquisition and/or Involuntary resettlement involved or not

Studies those were undertaken in the preparation of the ESIA report complying with WBG PS is presented in Table E.1.

Table E.1: List of Studies and Work Streams Required for Compliance with WBG PS

Sl. No.	Study Items/Topics	Applicable WBG PS and other guidelines	Relevant Chapter/Annex
1	Project Description & Study of the project's Area of Interest for Environmental and Social Setting, Scoping and Categorization.	This is part of screening, which is a vitally important tool for visualizing and understanding potential environmental and social impacts, as it can help to identify significant issues for the project, and spotlight what issues to monitor and prioritize for studies needed and risk analysis. Year-wise phase implementation schedule should be provided. Applicable Standards/Guidelines: PS1, WBG EHSG	Chapters 1, 2 and Annex A
2	Audit of work in progress in the project area along with Environmental and Social Auditing.	As this is not a green field project and an audit for all environmental and social activities needs to be done. Applicable Standards/Guidelines: PS1-PS8	Chapter 4, Annex B, and Annex F
3	Legal and Policy Framework	Applicable Standards/Guidelines: PS1	Chapter-3, Annex C
4	Baseline Studies	Applicable Standards/Guidelines: PS1, PS3	Chapter 4, Annex B
5	Water Resources and water pollution potential Study	Applicable Standards/Guidelines: PS3, WBG EHSG	Chapter 4, Annex B, Annex R
6	Air Quality study	Applicable Standards/Guidelines: PS3, WBG EHSG	Chapter 4, Annex B
7	Climate Change and Disaster Risk	Applicable Standards/Guidelines: PS3, IPCC Assessment Reports (2014 and 2018)	Chapter 4, Annex D and Annex Q
8	Assessment and GHG Emission Assessment	Applicable Standards/Guidelines: PS3	Chapter 4, Annex B
9	Noise Pollution Study	Applicable Standards/Guidelines: PS3, WBG EHSG	Chapter 4, Annex B
10	Seismicity	Applicable Standards/Guidelines: PS3, WBG EHSG	Chapter 4, Annex B
11	Soil Characteristics Assessment	Applicable Standards/Guidelines: PS3, WBG EHSG	Chapter 4, Annex B
12	Flood Potential Assessment	Applicable Standards/Guidelines: PS3, WBG EHSG	Chapter 4, Annex B
13	Cumulative Impact Assessment	Applicable Standards/Guidelines: PS3	Chapter 4
14	Labor, Human Rights and Gender Assessment	Applicable Standards/Guidelines: PS2	Chapter 3, Annex B, Annex G, and Annex O
15	Community Health, Safety (including Hazardous materials) and Security	Applicable Standards/Guidelines: PS3, PS4, WBG EHSG	Chapter 4, Chapter 7, Annex O, Annex J, Annex Q

Sl. No.	Study Items/Topics	Applicable WBG PS and other guidelines	Relevant Chapter/Annex
	Review		
16	Indigenous People Status Review	Applicable Standards/Guidelines: PS7	Not Applicable
17	Critical Habitat Review and Ecosystem Services Assessment	Applicable Standards/Guidelines: PS6, IUCN Guidelines	Chapter 4, Chapter 7, Annex B
18	Cultural Heritage (both tangible and intangible) Assessment	Applicable Standards/Guidelines: PS8	Chapter 4, Annex B
19	Grievance Redress	Applicable Standards/Guidelines: PS1, PS5	Chapter 7 Annex B, Annex J and Annex L
20	Consideration of Alternatives	Applicable Standards/Guidelines: PS1	Chapter 5
21	Resettlement Action Plan (RAP)	Applicable Standards/Guidelines: PS5	(May not be Applicable) Chapter 4, Annex F, Annex G and Annex H
22	Environmental and Social Action/ Management Plan (including EHS, Community EHS, Fire safety, Traffic Safety, Emergency Response and Preparedness, Monitoring)	The management plan can be a phased program depending on the activities in the project. Applicable Standards/Guidelines: PS1, PS3, PS4. PS6. PS8. EHS guidelines	Chapter 7, Annex H, Annex I, Annex K, Annex O, Annex N, Annex R

E.2 PROJECT DESCRIPTION AND ACTIVITIES

Location and land

The CuEZL has obtained its License from Bangladesh Economic Zones Authority (BEZA) in 2017 after a rigorous land ownership validation process. Cumilla Economic Zone Limited (CuEZL) is located south of Meghna Bridge, abutted by the Meghna-Homna road. The zone is only 600 Meters from the Dhaka-Chittagong highway. The area is located in SonacharMauza, Luterchar Union, MeghnaUpazila, Cumilla District under Chittagong Division. The CuEZL will cover a total area of 246.3615 acres of land. The site is well connected by road and river ports. This area will be developed by the Proponent itself and with the aim of targeting the comparatively non-polluting industries.

Project Infrastructure

The Cumilla EZL will be developed according to a comprehensive land-use framework following Bangladesh Economic Zones Act, 2010 and also the Bangladesh Bank

guidelines on EZ.CuEZL aims to provide all necessary facilities to the investors for establishment of manufacturing concerns. For that it will establish necessary supporting infrastructure that would be required for operation. For this, seven major land use divisions are considered, which is presented in Table E.2. These are Industrial area (74.64% of total area), Commercial area (0.07% of total area), Residential Area (1.81% of land area), Administrative Building (0.06 of total area), Utility and Amenities (4.02% of total area), Green Space (7.65% of total area) and Internal Road, Footpath and Walkway (11.76% of total land area). Although residential area is not permitted in Economic Zones, but here in CuEZL, residential area is marked for the Dormitory of the Staff and Workers and Guest Houses for the investors and personnel to stay for a short period, who may come for business and training purpose and is approved by EZ Authority.

Table E.2: Major Land-use Divisions of CuEZL

S.L No	Nature of Land Use	Plot Area (Acre)	Plot Area (m2)	Percentage
1	Industrial	183.88	744,137	74.64%
2	Commercial	0.17	688	0.07%
3	Residential	4.45	18,009	1.81%
4	Administrative Building	0.16	647	0.06%
5	Utilities & Amenities	9.9	40,064	4.02%
6	Green Space	18.84	76,243	7.65%
7	Internal Roads, Footpath & Walkway (Common Areas)	28.96	117,197	11.76%
	TOTAL AREA	**246.36**	**996,984**	**100.00%**

The proposed CuEZL project will have many components. Drawings of these components and implementation status of these components are presented in Annex A. Table E.3and E.4summarizes the infrastructure planning for CuEZLwithin the zone.

Table E.3: Different infrastructure development components in the CuEZL area with cost

S.L.	Cost Item	Estimated Cost (Tk)	S.L.	Cost Item	Estimated Cost (Tk)
	Land & Land Development				
1	Land	1,231,200,000	30	Concrete Batching Plant-1	8,820,000
2	Land development (Earth Filling)	1,155,211,200	31	Concrete Batching Plant-2	8,550,000
	Sub Total	**2,386,411,200**	32	Welding Machine	525,000
	Building & Civil Construction		33	Hydraulic rotary pile machine	74,340,000
3	Boundary Wall	110,550,000	34	Forklift	5,090,000
4	Internal Road Cost	470,448,000	35	Tower Hoist	1,500,000
5	Building (Administrative & Others)	2,040,095,200	36	Generator	1,400,000
6	Custom Office Building	12,500,000	37	Plate Compactor	320,000
7	Gate & Gate House Cost	100,000,000	38	Import Expense	13,114,350
8	Drainage Cost	104,000,000	39	Erection & Installation	5,245,740
9	Sewerage line Cost/Stp	260,000,000		**Sub Total**	**280,647,090**
10	Green Zone Cost	230,400,000		**Vehicle, Furniture & Fixtures**	
11	CETP Cost	512,000,000	40	Furniture	10,315,789
12	Water Reservoir Cost	146,881,677	41	Computer	1,375,000
13	Electrical Street Lighting Cost	53,900,000	42	Printer	400,000
14	Transformer & Substation Cost	383,400,000	43	Air Conditioner	8,400,000
15	Electricity Connectivity Cost	45,000,000	44	Scanner	500,000
16	Fire Station	75,667,765	45	Fax Machine	200,000
17	Security Shed & Guard Room	40,000,000	46	Telephone	3,000,000
18	Central Mosque	89,100,000	47	Other Equipment	5,000,000
19	Park & Lake (Estimated)	21,000,000	48	Motor Vehicles	20,000,000
20	Medical Care	17,500,000		**Sub Total**	**49,190,789**
21	Gas Connectivity Cost	665,000,000		**Deferred Expenses**	
	Sub Total	**5,377,442,642**	49	Consultancy Fees, Company Formation Cost Etc.	60,000,000
	Machinery			**Sub Total**	**60,000,000**
22	Crane	44,100,000		**Pre-operating Expense**	
23	Pay Loader/Wheel loader	17,850,000	50	License And Application Fee	1,605,000
24	Excavator	13,440,000	51	Secretarial Cost	2,000,000
25	Roller compactor	9,240,000	52	Expenses For Site Clearance	500,000
26	Drum Truck	17,640,000	53	Miscellaneous Cost	70,000,000
27	RMC Transit Mixture	44,352,000		**Sub Total**	**74,105,000**
28	Mixture Machine	5,040,000		**Grand Total**	**8,227,796,721**
29	Concrete Pump	10,080,000			

Table E.4: Description of the planned infrastructure in the CuEZL project area

SN.	Components	Description
1	Site Grading	The site which was low char land, has now been sand filled up to the level of Meghna-Homna road which has been built above 50-year flood level. The average land filling required was about 15 feet. The sand for the landfill of thesite was obtained fromthe riverbed with permission from the authority.
2	Boundary Wall	The boundary of the economic zone has been secured with a wall of 9 feet high and topped by 3 feet high barbed wire. This was done to comply with the requirements to receive license for custom bonded warehouse. The perimeter of the zone is approximately 6,821 Meter.

SN.	Components	Description
3	Roads	The road network of CuEZL has been planned maintaining the BEZA building code to provide best possible access to the inhabitants using different modes of transport. The different types of roads planned are as follows: There would be two types of road inside the zone. The major road from the entry gates to the other side of the zone would be 50 Feet wide, which would also have 7 Feet wide Footpath on both sides of the road and 3.5 Feet wide median in the middle. These roads would also have 12 Feet wide green strip on both side along the foot paths. These roads would spread in North-South direction (perpendicular to the Meghna Homna road). The second type of road would be 25 feet wide along with 5 feet wide foot path and 5 Feet wide green strip on both side of the road. These would be connecting roads and spread East-West direction along the zone. The road junctions have been designed to conform to turning radius of fire engines.
4	Roads-pedestrian walkways	Highest priority has been provided in suggesting paths for pedestrian. Since the employees are going to move within the zone mostly on foot, it is essential that they have safe passage. Walkways have been designed aesthetically along with green environment on either side of the roads.
5	Over bridge	Since a public road divides the zone in two parts, it is essential that a communication network be developed which would not require road crossing by pedestrians on a regular basis. It would be required for both security and safety reasons and for time savings as well. A foot over bridge has been planned to connect between the two blocks. The employees would use this bridge to move from one block to the other without crossing busy public road at grade.
6	Surface Drainage	The drainage system has been planned to cater for the entire EZ through gravity flow. Drains are proposed to be on both sides of the roads. The rainwater/surface water will be drained to the local River in five different points. Two points are near the bridge over the river channel that runs through the zone. The other three points would be on the East side of the zone to the river. This would enable the drainage system to utilize the natural slope of the area and disperse the water through gravity flow. The network would be built using LDPP/PVC conduit pipes.

SN.	Components	Description
7	Water Supply/Storage	The zone is on the bank of a river branch, therefore in case of emergency the zone can utilize water from the river. Apart from that there is a canal along the eastern boundary of the zone which would be retained and modified, if necessary, to be utilized as a water reservoir. An artificial water body would be created inside block B that would act as emergency water (e.g., for fire service) reservoir and increase the aesthetic beauty of the zone. The zone would use both ground and surface water. Five deep tube wells would be built to extract water from underground. Apart from that Three Water Treatment Plants will be setup to treat surface water for use in the zone. A 0.5-million-liter overhead storage tank is included in the Meghna Glass Factory. Other industries may also have their own water storage.
8	Rainwater Harvesting	The zone authority would keep provision for rainwater harvesting. The canal would be part of this system. Investors will be guided to incorporate rainwater harvesting system in the factory and other buildings. The contract with the investors would contain mandatory provision for rain water harvesting.
9	Fire Fighting network	The zone would have its own fire station for emergency situation as there are no public fire stations nearby. The zone would be equipped with fire hydrant network. Assessing the area coverage of the zone 109 fire hydrant pillars need to be installed. There would be a pump to supply water to those hydrants through a network of pipeline. The firefighting network would use water directly from the river as well as the water body created in the middle of the primary road. The road design will ensure sufficient turning radius for the fire engines.
10	Sewerage Network	The sewerage system is planned to cater for the anticipated land use distribution. Wastewater generated from toilets is considered as sewage (black water) and wastewater generated from bath/ shower, laundry, hand basin and kitchen are considered as sullage (grey water). It is suggested that two separate networks, namely, sewerage network and effluent collection network will be installed by CuEZL. It is presumed that each industry will treat their effluent into wastewater standards prior to discharge into effluent collection network to be transported to the CETP. Sewerage network will be established by the project implementation authority considering the

SN.	Components	Description
		topography of the site. The network is divided into trunk main and sub mains according to the natural topography and other site constraints. Sewage will be collected and transported to the STP for treatment.
11	Sewage Treatment Plant (STP) Considerations	Sewage treatment is the process of removing contaminants from wastewater, comprising of storm runoff, domestic sewage and primary treated effluent. It includes physical, chemical and biological processes to remove various contaminants. Sewage would be managed through a network of sewerage system and depending on requirement, full scale STP would be developed.
12	Central Effluent Treatment Plant (CETP)	The zone would establish CETP for treatment of industrial effluent. Individual industries would have to treat their effluent to some extent to meet the intake requirements of the CETP. The treated effluent from the plants would then be sent to the CETP for further treatment. The CETP may employ chemical, biological and/or electrocoagulation to effectively treat the industrial effluent. The zone authority would charge individual industries based on the volume treated. The zone authority has plans to establish three CETPs as the demand increases to cater to the needs of the investors. It should be noted that Pharmaceutical industries usually require special chemical effluent treatment processes, therefore, CuEZL should enforce such entities to ensure proper operation of CETP.
13	Power Supply System	The System parameters are as follows: Transmission Line-33 kV Number of Phases – 3 System frequency – 50 Hz Consumer Supply Voltage- 33kV/11 kV/240 volt Distribution substation is proposed in strategic locations. There would be one substation for the connection with the national grid. There would be four secondary substations that would be used to supply electricity to the consumers (i.e., industrial units). Power can be distributed by a network of overhead lines or underground cables. The primary source of electricity would be one captive natural gas fired power plant with capacity of 100 MW consisting of multiple internal combustion engine-based generators, that will be phased in progressively. The connection from the national grid will be taken as a partial support source to meet the additional need and for emergencies. If there is unutilized electricity from the

SN.	Components	Description
		power plant than it would be supplied to the national grid. The 100 MW power consumption would not occur at the beginning; it will reach step by step in phase with the commissioning of the industries in the zone.
14	Street lighting	All the roads and streets would be provided with street lighting. This would serve the dual purpose of Assisting pedestrians and traffic and increasing safety and security. It is suggested to use solar street lighting in some areas to utilize renewable energy and reduce usage of electricity. Solar street light is suggested at a ratio of 2:1.
15	Telecommunication	All telecommunication services are expected to be provided through the concerned authority BTCL and the private mobile operators. The CuEZL authority would establish its own exchange to provide landline based telecommunication service to the users inside the zone.
16	Data connectivity	The users of the zone would require data connectivity for information exchange and communication. The zone authority would facilitate by providing internet access through the fiber optic network available in the area.
17	Landscaping	This includes works associated with the landscaping within the EZ covering tree strips along the boundary, roads, public greenery etc. Sufficient land Area will be used for landscaping and Aesthetic beautification of the project area.
18	Specialized infrastructure	It is also envisaged to provide the specialized infrastructure within EZ catering to the specific requirements of the occupant units. This would include: • Training center • Security offices • Administrative building, • Commercial building • Club • Daycare center • Place for worship • Medical center • Car parking hub • Playground and park • Lawn
19	River Protection	The zone is located on the bank of a river. Land filling has been done to raise the land above the 50 yearflood level. To protect the site from river erosion, river bank protection would be required. It is planned to build river bank protection along the west boundary of the zone.

Project Activities

The project construction activities include development of land by sand filling up to the desired level by conveying dredged sand which has been completed. Other activities are preparation of the land for plot layout, construction of industrial buildings for the CuEZL and rental entities, central effluent treatment plant, water treatment plant, central wastewater

treatment plant, surface drainage system, separate liquid effluent and wastewater collection network, water distribution network, internal road network, fire-fighting system, fire station, electrical sub-station, security system, traffic and pedestrian management system and landscaping/tree plantation.

The activities during the operational phase of the CuEZL will include operation and maintenance of Industries owned by CuEZL and the industries on rented plots, CETP, CSTP, WTP, fire station, internal traffic management, labor management including routine environmental and social auditing and Security Operation. Details of the approach for routine environmental and social auditing for the construction work are given in Annex B and F of Vol. II. In addition, Annex E provides a guideline for conducting Environmental and Social Auditing for new industries. The probable industries to be set up in the project and the implementation schedule of the different components of the project is shown in Annex A.

E.3 POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

The national environmental policies and laws and legal framework applicable to the proposed project have been identified. An overview of a few of the major national environmental/Social laws and regulations that are relevant and may apply to the activities supported by the proposed project, and World Bank safeguard policies has been provided in Annex C. A summary of the most important rules, guidelines, acts and SOPs on Economic Zones are provided below.

Environment Conservation Act (ECA), 1995 and Environmental Conservation Rules (ECR),2023

This umbrella Act (ECA, 1995) 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.

In order to protect the environment and reduce pollution, Bangladesh Ministry of Environment, Forest and Climate Change (MoEFCC) issued Environmental Conservation Rule 2023 in March 2023 and thus repealed the previous rule ECR, 1997. In ECR, 2023, industrial units and projects are classified into four categories --- green, yellow, orange and red – based on their activities and level of pollution.The green category denotes a lower impact on the environment; yellow denotes a medium impact on the environment; orange denotes those that have a harmful effect on the environment and human health, and red denotes those in industries that have severe impacts on the environment and human health, which must be reduced to maintain a healthy and safe environment. The Environmental Conservation Rules (2023) sets (i) the National Environmental Quality Standards for various types of water, industrial effluent, emission, noise, etc., (ii) Requirement for and procedures to obtain Environmental Clearance, and (iii) requirements for IEE/EIA according to categories of industrial and other development activities iv) Procedure for damage-claim by persons affected or likely to be affected due to polluting activities or activities causing hindrance to normal civil life.

Air Pollution Control Rules, 2022

Bangladesh Ministry of Environment, Forest and Climate Change (MoEFCC) published Air Pollution Control Rules (2022) on July 2022. This rule is established under the Bangladesh Environment Conservation Act (BECA, 1995) and sets the National Air Quality Control Plan and the Air Pollution Prevention Plan, identifying air pollution activities and establishes standards for ambient air quality, emission standards for vehicles, emission standards from industries (power generation, textiles, cement, fertilizers etc.), and odor standards (Annex C). The rules also provide for the prevention of air pollution from hazardous wastes, air quality monitoring and warning, data management, establishment of a national executive committee for air pollution control, measures to prevent damage to ecosystems caused by air pollution, awards for contributions to air pollution control and penalties for violation.

MOEFCC Circular on ECC in BEZA industrial units (Memo no 22.00.0000.074.18.001.17.44, Date 19.02.2019) and BEZA Standard Operating Procedure for Environmental Clearance

Provides guidance on providing Environmental and Site clearance certificates to industrial units specific to economic zones with a view to providing One-stop service. Requirements for ECC renewals, required documents and application procedures are described in the circular. Mandates individual ETPs for every industry.

BEZA Standard Operating Procedure for Services and Clearance relating to Fire Extinction (2020)

States procedures for Approval of Fire Fighting Floor Plan (NOC), Effectiveness Certificate in favor of Fire safety arrangement and Fire License in Economic Zones.

World Bank Performance Standards for Private Sector Projects

The World Bank operational guideline Performance Standards for Private Sector Activities (OP 4.03) is primarily applicable for the CuEZL project. There are eight key Performance Standards against which the impacts of the project would be evaluated to identify the impacts and affected stakeholders to help with the preparation of the management and mitigation plan.

E.3.1 Triggering of WB PS in CuEZL

The triggering of the WBG Performance Standards (PS) in the present project with explanations are given in the Table E.5below. The applicable GOB Laws, Rules, Policies, and Guidelines are listed alongside the WBG PS. The International Conventions signed by Bangladesh are also included, as once signed these are equivalent to the laws.

Table E.5 Triggered WBG Performance Standard (PS) in the Project

Sl.	PS and Title	Triggered (Yes/No)	Applicable Bangladesh Laws/Rules and Conventions to which Bangladesh is a Party

1	Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts	Yes	Bangladesh Environmental Conservation Act (ECA '95), 1995 and amendments; Environment Conservation Rules (ECR), 2023 and amendments; National Environmental Policy, 2018 & 1992; Environmental Court Act, 2010; National Environmental Management Action Plan, 1995, National Water Policy, 2000; National Water Management Plan, 2001, Air Pollution Control Rules, 2022.
Explanations: PS1 is triggered in this project. This is an umbrella Standard as Assessment and Management of Environmental and Social Risks and Impacts are important in all projects with land-based activities (i.e., during construction, operation and decommissioning phases). The issues that may pose potential E&S risks and/or impacts include air emissions, water pollution, wastes and effluents and engagement of labor etc. These issues have to be assessed to determine the extent of the risks and impacts.			
2	Performance Standard 2: Labor and Working Conditions	Yes	Bangladesh Factories Act (1965); Bangladesh Labor Act, 2006; Bangladesh Labor Rules (2015), Bangladesh Children's Act 2013; ILO Conventions 29, 87, 98, 100, 105, 111 and 182
Explanations: PS2 is triggered in this project; as during all phases of the project labor force will be needed and mobilized to carry out various duties to construct and operate the project. It is therefore necessary for the Project to maintain appropriate labor and working conditions.			
3	Performance Standard 3: Resource Efficiency and Pollution Prevention	Yes	ECA,1995 and amendments, ECR,2023 and amendments; Noise Pollution (Control) Rules 2006, Air Pollution Control Rules, 2022, International Convention for the Prevention of Pollution of the Sea by Oil, London, 1954 (Ratified 1981); The Ground Water Management Ordinance, 1985; Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal, Basel, 1989 (Ratified 1993); Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 1987 (Ratified 1990), (London Amendment, 1990) (Ratified 1994).
Explanations: PS3 is triggered in this project; as it will involve use of a lot of resources both raw, semi-manufactured, manufactured components and energy. Thus, pollutants will be produced and these need to be minimized to comply with standards; resources and energy conservation are also prime needs. Construction works are likely to generate wastes during the construction phase. In addition, operational effluent discharges including associated emissions may have pollution potentials. In addition, the project will depend on resources / raw material inputs such as natural and manufactured resources. PS3 is triggered.			
4	Performance Standard 4: Community Health, Safety, and Security	Yes	The Fertilizer Regulation Order, 1995; Disaster Management Act 2012; Motor Vehicle Ordinance 1983;National Health Policy 2011; Bangladesh Health Protection Act 2014; Bangladesh Private Security Regulations Act, 2006.

Explanations: PS4 is triggered in the project. Area around the project site is already developed with numerous industries. There is considerable number of households, villages and local communities in the 3km impact zone around the site. With increased activities in the project area following construction of various industries, there will be influx of workers and service providers, which will add to the local communities; who will be impacted by the activities in the industries within the site. Although the project is likely to be beneficial to entrepreneur and stakeholders, some beneficial impacts are also expected to the community e.g. employment as well as negative impacts e.g. fire and explosion risks, accidents, etc.			
5	Performance Standard 5: Land Acquisition and Involuntary Resettlement	No	Acquisition and Requisition of Immovable Property Act, 2017.
Explanations: The land on which CuEZL project is located has been purchased by MGI. The land has been earmarked for development for economic zone. The Bangladesh Economic Zone Authority (BEZA) has published a gazette granting permission to develop an economic zone on the above mentioned land (details in Annex H). There is no further land acquisition and involuntary Resettlement. Hence PS5 is not applicable.			
6	Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Yes	Bangladesh Wild Life (Preservation) Act, 1974; National Biodiversity Strategy and Action Plan (2004): Fish Act and Rules, Bangladesh Water Act 2013; National Water Bodies Protection Act 2000, National Conservation Strategy, 1992, ECA95, National Water Policy, 2000; National Water Management Plan, 2001; International Plant Protection Convention, Rome, 1951 (Ratified 1978); Convention on Wetlands of International Importance, especially as Waterfowl Habitat, Ramsar, 1971; the Ramsar Convention (Ratified 1992); Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973 (CITES Convention) (Ratified 1982); Agreement on the network of Aquaculture Centers in Asia and Pacific (NACA), 1988; Convention on Biological Diversity, Rio de Janeiro, 1992 (Ratified 1994); International Convention to Combat Desertification, 1994.
Explanations: PS6 is triggered in the project as the issues involved are universal. The area was lowland and was dredge-filled, before it was taken up for development. There are significant biological or ecological issues in the area, however, the area has changed significantly for the development.			
7	Performance Standard 7: Indigenous Peoples	No	Chittagong Hill Tracts Regional Council Act, 1998.
Explanations: PS7 is not triggered in the project. There are no indigenous people in the impact zone of the project.			
8	Performance Standard 8: Cultural Heritage	No	Antiquities Act, 1968; Convention Concerning the Protection of the World Cultural and Natural Heritage, Paris, 1972 (World Heritage Convention) (Ratified 1983).
Explanations: There are no cultural heritage sites within its premises. The cultural heritage sites(Sonargaon area) is located far from CuEZL premises. Therefore, this is not applicable/relevant. However, any chance find will be dealt with using standard procedure.			

E.3.2 Fundamental Conventions of ILO

The ILO Governing Body has identified eight "fundamental" Conventions, covering subjects that are considered to be fundamental principles and rights at work: freedom of association and the effective recognition of the right to collective bargaining; the elimination of all forms of forced or compulsory labor; the effective abolition of child labor; and the elimination of discrimination in respect of employment and occupation. Details of the applicable ILO Conventions are provided in Annex C.

E.3.3 Environmental Clearance Process

The Environmental Clearance Process starts with the project the proponent is to apply for clearance in prescribed form to the Director/Deputy Director of respective DoE divisional offices. The detailed process has been discussed in Annex C. A flow chart to obtain environmental clearance by a project proponent is given in Figure E.1.

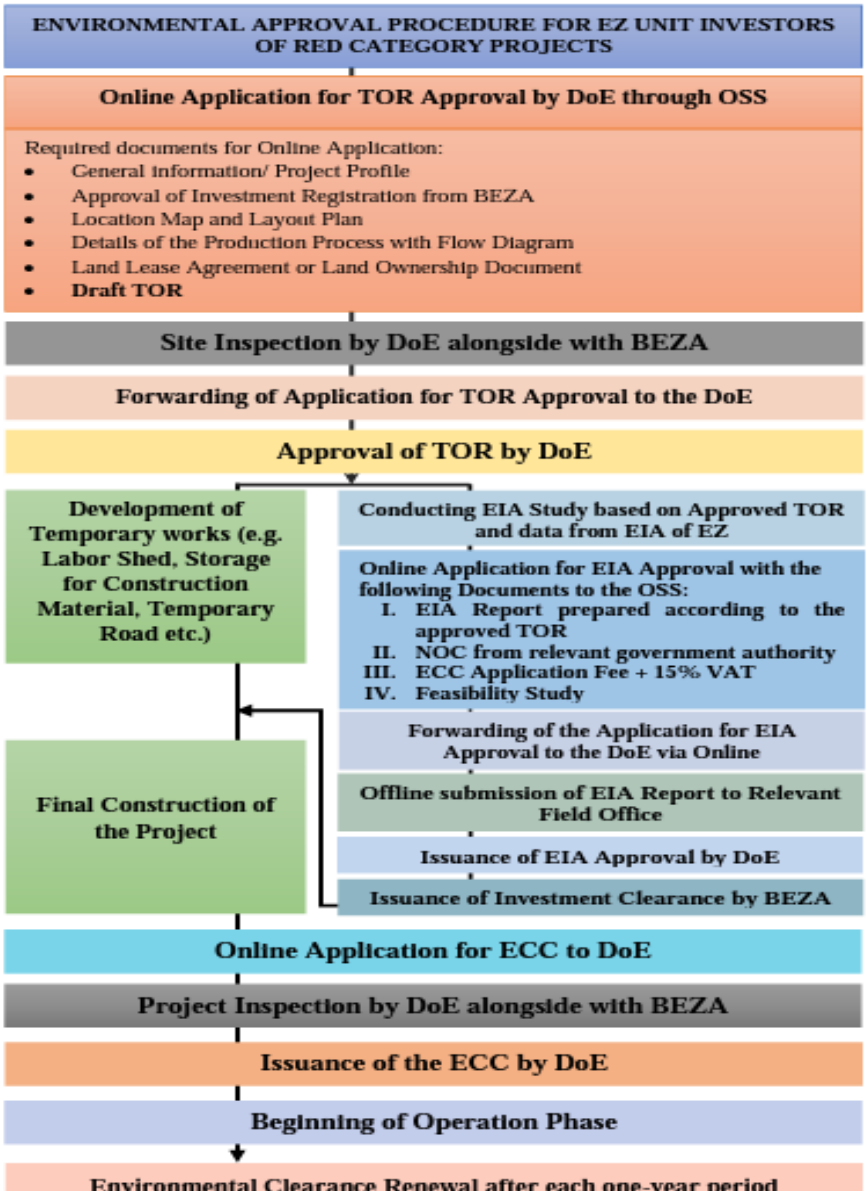

Figure E.1: Process of Application for Environmental Clearance in Bangladesh (ECR, 2023)

E.4 IDENTIFICATION AND ASSESSMENT OF POTENTIAL IMPACTS

E.4.1 Environmental Impacts

An environmental impact is defined as any change to an existing condition of the environment. Identification of potential impacts has been done on the basis of baseline data collected from primary and secondary sources, and potential processes that would be carried out during the project life-cycle. Details of baseline environmental and social conditions have been provided in Annex B. As the CuEZL industries are anticipated to have low impact on the environment hence for conducting the EIA, the impact zone has

been defined as the 5 km radius around CuEZL. Hence all environmental issues have been identified within this region. The potential impacts have also been identified based on experts' opinions and inputs received from public consultation events. Based on the project activities during the pre-construction, construction and operation phases impacts of the project have been identified and assessed against the baseline condition. A brief description of these are given below.

E.4.1.1 Impacts during Pre-Construction Phase (Site Preparation)

The land filling work for the economic zone has already been completed. The low-lying land area, filled up by dredge-filling with appropriate permits, used to act as a storage area for rainwater and often flood water in case of excessive rainfall. The dredged materials, primarily containing sand, from the river bed are usually transported in fluidized form after mixing with water. The runoff water from the dredged area could percolate through the filled materials, which eventually ended up in the river. High turbidity of this water likely affected the quality of the nearby surface water body. Such high turbid water poses serious threat to the aquatic life through obstruction of light penetration. There are long-term impacts on ecology and biodiversity due to change of land-use, land clearing, cutting trees and filling up of the waterbody, ditch, and depression. The low-lying lands in the project area were filled up by sand during the land-development phase of the CuEZL project. Due to filling up of the land, the natural drainage pattern in the area will be altered. Thus, the surrounding community may face water-logging problem if adequate measures are not taken to provide alternate drainage path for the surface runoff towards nearby river and other surface water bodies.

E.4.1.2 Impacts during Construction Phase

In case of excavation with open cut method, there is possibility of soil collapse hampering the safety of the workers. Moreover, the excavation would generate a huge volume of earth material, which need to be properly disposed of. During the construction audit, it is revealed thatopen cut method has been used for excavation with appropriate safety protocol.Construction debris were seen to be scattered in several locations in the site, often, blocking smooth vehicle movement.

Impacts from Road Construction within the area

Proposed CuEZL Project will construct internal roads within the area for transporting materials to and from the site and this will affect the topography and geology of the project area.

Impacts from Wastewater and Solid Waste

Wastewater, in the form of sanitary wastes, will be generated mainly in the temporary labor sheds. This could be a major source of pollution (including water pollution) if not properly managed. There is a chance of sediment pollution due to the flows of construction wastewater to the nearby river, and canals. Moreover, oily water used in various works in construction phase may contaminate the surface water and soil within the project area.

Construction debris and wastes to be generated during the construction phase would include scrap iron, steel, wooden frames, piping, and other solid wastes. Indiscriminate storage and disposal of construction debris and wastes could create local waterlogging and ponding by blocking drainage lines and would be aesthetically displeasing.

Noise Pollution

Noise pollution is likely to result from a wide range of construction activities at the project site, including the movement of vehicles carrying construction materials, equipment to and from the site, and different construction activities.

Air Pollution

Localized and temporary air pollution may generate from earthworks (e.g., excavation, filling) during site preparation, movement of vehicles, and operation of machines and equipment. During the site audit,construction debris were found to be scattered in several locations without any cover.Uncovered construction materials may result in fugitive emission.

Drainage Congestion

Since the construction phase involves significant earthwork (e.g., excavating/ back-filling for the foundation of the buildings) there are chances of stagnation and ponding of storm water if care is not taken for proper drainage of storm water. Additional drainage congestion may result from possible obstruction to the natural flow of drainage water due to construction activities as well as unplanned storage of construction materials.

Impacts on Water Sources

Water quality of nearby Meghna River branch and other nearby canals/khals/ponds may deteriorate during the construction stage of CuEZL project due to changes in physical and chemical composition. Changes in storage area and flow pattern during the construction phase could have adverse impact on the composition of surface water.

E.4.1.3 Impacts during Operation Phase

Impacts on Water Resources

During the full operation stage of the CuEZL project area, several industries such as Beverage and mineral water, Steel re-rolling mill food processing industry etc. will use water for their production. The main source of this water is groundwater. The extraction of groundwater might lower the ground water table in or near the project area for these activities.

Impacts from Wastewater and Solid Waste

The Cumilla Economic Zone will house a number of industries such as Pharmaceutical Industry, Leather Goods and Footwear Industry, Glass Industry, Steel and Re-Rolling

Mills etc. which have high potential of generating wastewater containing toxic heavy metals in the operation stage. If these wastewater is discharged without treatment, it would contaminate the receiving surface water and thus degrade the environmental quality. These industries should have their own ETP to treat this wastewater before disposal.

During the operation phase of the CuEZL project, the workers at various industries would generate wastewater. Municipal sewage generated from the project can cause unhygienic condition and environmental pollution, if proper sewer system is not implemented. This could also lead to soil and groundwater contamination through the generation of leachate. If the solid waste is not removed from inside the project area regularly, it could result in unhealthy conditions in the premises and surrounding area including attracting nuisance insects such as flies and mosquitoes.

The point of generation of the solid wastes could be the industrial processes, packaging area, cafeterias, and office rooms. Improper disposal of the solid wastes such as on open land, through open drains or sewer pipe could result land pollution and drainage congestion. As the solid waste is expected to be quite large at the CuEZL, it will be necessary to construct a TSDF (Treatment, Storage, and disposal facility) of appropriate capacity. A TSDF facilitates the collection, transportation, storage, treatment, and disposal of solid wastes including hazardous waste in environment friendly manner. Storage enables keeping the hazardous waste until they get treated or disposed of the disposal facility permanently disposes of the hazardous waste. Hazardous waste is disposed of in the specially designed units that protect groundwater and surface water resources. The CuEZL authority will contract a DOE authorized private party to collect and dispose the solid waste from the project area until a TSDF is built. All existing industries will dispose their solid waste through the hired party by the CuEZL in the absence of a TSDF. If the solid waste is not disposed properly, it would create solid waste disposal related impacts, as discussed above.

Noise Pollution and Vibration

During the operation phase of the CuEZL project, the main source of noise would be the industrial processes due to operation of engine-based power plants, industrial machineries and vehicles transporting raw materials and finished goods. Vehicle carrying the staffs and visitors to the project area would also contribute to the noise level. The operation and honking of transportation vehicles could result in noise, which could have increased impacts in case of traffic jam.

Air Pollution

During the operation stages of the CuEZL project, the number of vehicles in the area would increase. Emission from the increased number of vehicles would impact the air quality in the project area. Dust and other air pollutant may generate during the operation process of industries such as steel mills, glass industry etc. Any cutting and sewing operation in industries of RMG type would generate airborne particulates and fiber which could be part of particulate matter emission. There are also possibilities fugitive emission of air pollutants including VOCs from paint, varnish, use of solvents. Since the industrial

compounds are often closed buildings, therefore, the air pollutants get entrapped within the building and result in prolonged exposure for the workers and employees. It is also to be noted that, transboundary pollution from India along with traffic emission are the major ambient air pollution sources in Bangladesh. Hence, the effect of industrial point source emissions can be very important locally to impact nearby population.

GHG Emissions

Power supply in the CuEZL will come both from the national grid and captive generators. Ultimate capacity of captive generators may be as much as 100 MW which will not the supported by IPFF-II project and will be financed by CuEZL from its own resources. The generators are likely to be based on 20-30 MW capacity internal combustion engines which have efficiency of around 35%. Without emission reduction measures as much as 400,000 tons of CO_2 may be emitted due to power generation using simple Cycle NG engine-based Plants. However, use of tri-generators for which efficiency is in the range of 75% to 85%, may reduce more than 50%of CO_2emission. To reduce GHG emissions co-production of industrial process steam and chilled water for space cooling (using absorption cooling method) are used in the tri-generators. The total energy efficiency of such systems will much higher leading to GHG emission savings up to 50%. There is a plan for installation of a Solar PV system, which would lead to emission savings as well.Even a 1-MW capacity SPV may save up to 1500 tons of CO_2 emission per year. As per capita GHG emission in Bangladesh is only 1.54Kg per year, compared to 6.9 Kg for world average, the investment for GHG emission reduction at CuEZL will be voluntary, but it may likely generate considerable savings in energy cost, if the emission savings measures, as discussed, are adopted.

Climate Change and Disaster

Building resilience to climate and geophysical hazards is a vital step in the fight against poverty and for sustainable development. Screening for risks from these hazards improves the likelihood and longevity of a project's success. This report summarizes the results of the screening process for the development of Cumilla Economic Zone Limited (CuEZL) Project under IPFF II. The potential risks flagged in this report were identified through the four screening stages by connecting information on climate and geophysical hazards exposure with the user's subject matter expertise and understanding of the project components and sensitivity to rate the impacts (Annex D).

E.4.1.4 Cumulative Environmental Impact

Though there are no industries in operating stage in CuEZL at this moment, only two industries are currently being constructed. The CuEZL will house more than fifteen types of industries in future. It would take a long time before the full operation of all industries begin. When new industries start their operation, additional impacts may result from these operation processes. Even small impacts from the individual industry can add up and increase the cumulative effects. There are several industries near the CuEZL project area, which could add to the pollution and environmental impacts. For any environmental monitoring and management system effects of all these industries inside and outside the CuEZL area need to be considered. Proper environmental management plan should be

prepared and followed to avoid, mitigate, or reduce the impacts resulted from cumulative effects of all industries.

The environmental impacts are summarized in Table E.6. The physico-chemical environmental parameters that could be affected by the project activities include water quality, soil quality, air quality and noise level. Cumulative impacts' risk level (magnitude) for all different types of impacts would be worst of all the individual impacts. The cumulative risk has been identified as medium from the analysis in this table, the maximum impact level is medium. So, the cumulative impact level can also be considered as medium.

Table E.6: Assessment of impacts due to project activities on physico-chemical parameters

Physico-chemical parameters	Magnitude of Impacts						
	Positive impact			No impact	Negative impact		
	Low	Medium	High		Low	Medium	High
Pre-Construction Stage							
Loss of storage basin						X (S)	
Obstructing the of natural drainage pattern						X (L)	
Loss of agricultural land					X (S)		
Quality of surface water						X (L)	
Quality Soil						X (L)	
Loss of aquatic biota						X (L)	
Construction Stage							
Water quality					X (S)		
Loss of natural drainage						X (L)	
Soil quality						X(L)	
Air quality						X (S)	
Noise level						X (S)	
Drainage congestion						X (S)	
Operation Stage							
Water quality					X (S)		
Loss of natural drainage						X (L)	
Water resources					X(L)		
Soil quality				X			
Air quality						X (S)	
Noise level					X (L)		

Note: S=Short-term; L=Long-term

E.4.2 ECOLOGICAL IMPACTS

Major ecological aspects that are considered for the ecological impact assessment for the proposed CuEZL project includes clearing and alteration of land, excavation of land, uprooting of floras, damage / disturbance of faunal community / habitat, disturbance / damage of fish

habitat / passage, placement of materials, construction work, movement of people and vehicle (on road, and river), accident (e.g. spills), waste disposal, etc. During construction, land related activities are likely to have some adverse impact on its existing ecological environment. During operation, ecological impacts may result from improper disposal of wastes, wastewater discharge, etc. in existing eco-environment that might be used by certain type of fauna, fish and flora. Potential ecological impacts for the proposed CuEZL project could be divided into two broad categories viz. (a) direct impact and (b) indirect impact. Details of these impacts on the existing flora, fauna and fish community are described in Chapter 4.

E.4.3 SOCIAL IMPACTS

Based on the nature of the industries in the CuEZL the social impact area has been considered to be within the 2 km radius. The aspects which are likely to be impacted by the project activities include Employment and Economy, Traffic Condition, Community Health and Safety, and Occupational Health and Safety. Summary of potential social impacts is provided in Chapter 4 of the report.

E.4.4 ENVIRONMENTAL AND SOCIAL AUDITING

As mentioned earlier, the CuEZL is not functional yet. Construction work of the administrative building, Meghna Re-Rolling Steel Industry and Meghna Glass Industry is currently ongoing. Therefore, no social auditing campaign could be conducted. However, a sampling protocol and data collection scheme along with the questionnaire is provided in Annex E. Once the industries of the CuEZL becomes operational these may be used to conduct the social auditing campaign. A construction audit has been conducted to check the construction activities (Annex F). It has been found that, hazardous material storage areas are not properly labelled, storage areas are not properly identified, and not protected from weather. Storage area should be clearly identified using labels. Sheds should be erected over the hazardous material (construction materials, admixture) storage areas. Construction debris are scattered in several locations often blocking smooth vehicle movement. Construction materials are not covered, which may result in fugitive emission. Housekeeping practice need to be improved (better site debris management, covering of loose construction materials, etc.).

E.5 ANALYSIS OF ALTERNATIVES

A brief analysis of available alternative options for the CuEZL has been performed to assess the appropriateness of selection. The analysis was done on two factors, namely location of CuEZL and type of industries. A no project scenario was also analyzed.

Location of CuEZL

Cumilla Economic Zone (CEZ) is located south of Meghna Bridge, abutted by the Meghna-Homna road in Meghna Upazila. The CuEZL is located only 33 km away from Dhaka cityand zone is only 600 Meters from the Dhaka-Chittagong highway and four and half Kilometer from the Meghna Bridge 1. Most of the interested investors would find it very much feasible and accessible with respect to location. The geographical setting of the zone has added value to

it. The zone is located close to the bank of one of the branches of the Meghna River which is useful to the zone as water source as well as for transportation conduit adding to the positive aspects sought by the investors. The economic zone is being developed which would attract the interest of the respondents as setting and operation of industry would require less effort. Since the proposed economic zone will have CETP, STP and WTP, the wastewater generated in the industries will be treated to the national standards before discharging into the Meghna river branch. Hence, it is not likely to cause significant adverse impacts on terrestrial biodiversity as well as aquatic fisheries values. The proposed site is above the flood level and it will be suitable for the construction of the Project. Thus, selection of the site for the CuEZL is quite appropriate and advantageous compared to other locations.

No Project Scenario

Public investment has been on rise in the recent years, though private investment (which is instrumental in attaining higher growth rates) seems to be more or less static. Therefore, there is a need for a new investment scenario in Bangladesh which will emphasize and aim at considerable rise in private investment and its efficiency. If Private Economic Zones such as CuEZL are not established or promoted, then the national target economic growth will not be achieved.

E.6 PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

Public consultation is a two-way communication between the project EIA / ESIA team and the target and affected groups for a proposed development project. These are usually conducted in the form of Focus Group Discussion (FGD), Key Informant Interview (KII) and Informal Meetings (IM). The FGD sessions were organized in three places, within and adjacent to the proposed CuEZL project site, during 19-20 September, 2022. Around ninety-six people have participated in the FGD sessions. In addition to the FGDs, a number of informal meetings with local stakeholders / people were carried out in the project study areas. Four KII sessions have also been conducted with some important person (government and private institutions), who might be important stakeholders. A summary of the salient issues discussed by the participants is given below.

General Opinion of the Participants about the project

- Most participants liked to know the name, types and number of industries to be installed at CuEZL. Thus, more information needs to be disseminated to the local community on the project and related issues.
- It is the expectation of some participants that the proposed CuEZL project will improve the local economic condition during the construction phase as well as operational phase.
- Some participants thought that the proposed CuEZL project will create new business opportunity as well as new employment for the local people.

- Some participants suggested that the proposed CuEZL project should allow only green category industries to be established.
- Participants expressed that dredging might be needed to widen the river/ tributaries, adjacent to the proposed CuEZL project site for large cargo vessels.
- Participants expected that villagers will be benefitted by renting their properties to outsiders/workers of CuEZL project.

Opinion on Potential Impacts related to the proposed CuEZL Project

- A rural roadfrom the village to the river has been closed when the boundary wall of the CuEZL was constructed. This was an important path for the villagers, therefore, alternative road need to be constructed by CuEZL authority to alleviate the problems of the villagers.
- The present population of Luterchar Union is about 20,000 and is ill-equipped to handle the anticipated increase in population of approximately 50,000 when the CuEZL is in full operation.
- Local environment has already been changed drastically due to sand-filling which has irreversibly affected the ecologyof the area.
- Disposal of untreated and/or partially treated effluent in the surface water bodies may deteriorate the water quality.
- Temperature will be increased for establishment of re-rolling industry and other red category related industries; those industries will pollute the air, water and soil as well as create noise disturbance to the local community.
- Ground-water is used primarily for drinking and other household purposes; local people collect ground–water from 750 feet depth; Water is also available in shallow aquifer which is recharged through riverbank infiltration.
- Water logging occurs during rainy season in the existing Meghna to Homna road and nearby areas; it may enhance for the proposed CuEZL project activities, if appropriate mitigation measures are not taken at specific water logging areas.
- Village environment will be changed as semi-urban environment; hence, local people will not hear the birdssinging, especially in the morning, due to the CuEZL project activities.

E.7 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

Mitigation, monitoring, cost estimation of monitoring

Mitigation measures have been proposed in order to reduce adverse impacts and enhance positive impacts from specific project activities.The EMP outlines: (a) the measures to be taken during both construction and operation phases of the project to eliminate or offset adverse environmental impacts, or reduce them to acceptable levels; (b) the actions needed to implement these measures; and (c) a monitoring plan to assess the effectiveness of the mitigation measures employed. Most of the mitigation measures require the contractor of individual industry to adopt good practices, which should be part of their normal procedures

already, so there are unlikely to be major costs associated with compliance. Mitigation that is the responsibility of CuEZL and contractor's will be provided as part of their management of the project.

The Cumilla Economic Zone will house a number of different types of industries. Although the overall responsibility lies within the CuEZL for ensuring proper implementation of mitigation measures and monitoring, every industry should have its own environmental management cell to take care of its own environmental policy, compliance and health and safety issues. The responsibilities of the cell will cover Environmental Policy, Compliance, Environmental Management System, Training, CETP Performance Monitoring, surface and groundwater monitoring, Waste Management and 3R policy, policies related to sustainable green production etc. For monitoring of ambient air, water, noise, CuEZL will set up its own laboratory for self-compliance and monitoring of inlet and outlet characteristics of industrial wastewater, receiving environment quality. CuEZL will also conduct continuous monitoring of ground water table by installing piezometer equipped with pressure transducer within the complex.

The CuEZL project will involve a series of activities such as preparation of the site prior to the construction of infrastructures, then construction of internal roads, industrial buildings, supporting office buildings and other amenities and finally the operational process for the finished products. All these activities are associated with a number of environmental impacts which are already identified and evaluated. The mitigation measures to minimize those impacts along with their responsibilities for their implementation have been presented in Chapter 7 of Vol. I of the report.

Meghna Group of Industries (MGI) has well defined policies and rules covering the human resources related to Labor Management (Annex O). CuEZL should adopt and implement human resources policies, rules and procedures appropriate to its size and workforce consistent with the national law and in the light of MGI'S policies and rules. CuEZL should provide workers with documented information that is clear and understandable, regarding their rights under National Labor Law and Employment Law and applicable collective agreements, including their rights related to working hours, wages, overtime, compensation, benefits upon beginning the working relationship and when any changes may occur. CuEZL should follow up with industries so that they should provide in writing to their workforce about their rights and privileges under the Labor Law 2013 during appointment. Since there is no scope for collective bargaining (CBA) or employee's association, CuEZL should explicitly include the relevant provisions of the Labor Law 2013 in their contract with construction contractors as well as with the industries to ensure reasonable working conditions and terms of employment. Details are provided in Chapter 7.

E.7.1 Enhancement Plan, Contingency Plan and Compensation Plan

Along with the mitigation measures, CuEZL can adopt some measures which would enhance the positive impacts. As for example, CuEZL can adopt green production policy which will reduce the carbon footprint throughout its life cycle. It can practice 3R policy which will minimize the wastes. CuEZL can harvest rainwater and use it for domestic purposes. CuEZL can also make arrangements for groundwater recharge which will

decrease its water footprint. CuEZL can promote industrial ecology and thus enhance sustainable development.

The implementation of the CuEZL project involves many complex and diverse risks. The identification and allocation of those risks is critical in structuring the financing facility for such a project. A contingency plan should be there to respond effectively in case of an unexpected situation. It can be used as an alternative action if expected results fail to materialize. Contingency planning is a component of disaster recovery and risk management. Contingency planning also serves as a tool for maintaining control over events or reduce the risk of loss of property. As for example, the project area is located close to Dhaka-Chattogram highway and surrounding human settlement. Here, human settlement and road traffic may be severely affected due to this project and conflicts with the local community, road accident or unforeseen situation may happen anytime and a contingency plan should be in place to tackle those situations.

From the Focus Group Meetings, it is evident that the lands where the CuEZL is situated were fallow land and as such no apparent loss of livelihood has taken place. Therefore, there is no eminent need for a "livelihood restoration plan". Furthermore, CuEZL will bring more employment in the region. By hiring the local people after proper training, CuEZL can have positive impact on the livelihood and economy of the region.

E.7.2 Cost Estimation for Environmental Monitoring

Mitigation that is the responsibility of CuEZL and contractor's will be provided as part of their management of the project. The tentative yearly cost involvement for Mitigation Measures and Monitoring during construction and operation phases have also been presented in Chapter 7 of Vol. I of the report. It also includes construction and establishing a monitoring laboratory for regular monitoring of the environmental parameters using its own resources.

E.7.3 Occupational Health and Safety Plan and Emergency Preparedness Plan

The CuEZL authority has its mission and vision where Environmental, Health and Safety Policy has been described (Annex L). As a part of environmental management program, the ESIA team has developed a generic Occupational Health and Safety Plan which can be used by the individual industry catering their needs and is presented in Annex N.

The CuEZL has an Emergency Preparedness and Response plan of its own. The ESIA Team has prepared a generic Emergency Response Plan for individual industry which the industry would make it more specific befitting their requirements. Both these plans are provided in Annex K. It is worthy to mention here that the individual industry within the complex should have its own Occupational Health and Safety Plan and Emergency Response Plan to follow and CuEZL authority should oversee their activities following their own plans.

E.8 GAP ANALYSIS AND ACTION PLAN

The CuEZL project is now in initial stage. Land preparation has been completed and construction of CuEZL Administrative building is going on. No new industries have started

their construction, let alone their operation. Keeping this in mind, analysis of the gaps in the Environmental and Social Management System of CuEZL with respect to the eight World Bank Group Performance Standard Requirements pertaining to OP4.03 and provide recommendations of closing the gap have been performed. The detailed analysis in tabular form is given in Annex Q. The Environmental and Social Action Plan (ESAP) is designed to address the gaps between the environmental social requirements as stated in PS 1-8 and that of the summary is provided in Table E.7.

Table E.7: Suggested Action Plan for Corresponding Gap

Sl. No	Corrective Action	Responsibility	Indicators	Timeline
PS 1: Assessment and Management of Environmental and Social Risks and Impacts				
1	CuEZL to establish its own ESMS commensurate with its nature and scale of impacts due to operation of its common/shared facilities and integrate the ESMS of industries within its premises.	CuEZL ES management unit.	- Half-yearly E&S compliance reports	6 months
2	Industries to develop Environmental and Social policies and to have environmental impact/screening documentations, emergency response and preparedness plans	CuEZL E&S Focal Point	E&S policies and environmental impact/screening/ ESMS documents, emergency response plans of all industries are available in CuEZL records	3 months
3	CuEZL to ensure that third party contractor activities are audited	CuEZL E&S Focal Point	• Periodic audit reports of construction activities are available • Inclusion of final disposal clause in the contract agreement of the waste collector • General environmental and social management plan is incorporated in the Contract documents	3 months

Sl. No	Corrective Action	Responsibility	Indicators	Timeline
4	Conduct E&S compliance training on WBG Performance Standards	CuEZL HR Department	Training modules developed keeping including the WBG performance standards or hiring experts for such training	6 months
5	Environmental monitoring and impact monitoring of common/shared facilities by competent third parties	CuEZL E&S Focal Point	• Third party hired for monitoring water and effluent quality, air quality to comply with ECR 2023 standards • Install piezometer in tubewells	3 months
6	Develop a stakeholder engagement Plan	CuEZL Compliance Department	• Stakeholder engagement plan developed • Documentation of consultations	3 months
7	Endorsement of the updated GRM (Annex J)	CuEZL HR and compliance Department	Updated GRM endorsed by the management	1 month
PS 2: Labor and Working Conditions				
8	Formalize the application of Labor Law 2013 through contract documents	CuEZL HR and contract department	• Contract with construction contractor explicitly states Labor law requirements Contract with industries explicitly states Labor law requirements	1 month
9	To ensure that occupational health and safety protocols and their audit mechanism is in place in industries	CuEZL E&S focal person	• Ensure that each industry under CuEZL has their own OHS plan documented • Third party contracted for periodic audit	3 months

Sl. No	Corrective Action	Responsibility	Indicators	Timeline
10	To establish a mechanism for audit for Construction contractors	CuEZL E&S focal person	Third party contracted for periodic audit	3 months
11	Endorsement of the updated GRM	New GRM endorsed by the CEO/MD	Register system for grievances at the field level	6 months
PS 3:Resource Efficiency and Pollution Prevention				
12	Ensure the development of hazardous waste and raw materials management plan in the industries	CuEZL E&S focal person	Hazardous waste and raw materials management plan developed in each industry.	3 months
13	Ensure that all industries have a system of audit of pollution prevention	CuEZL E&S focal person	• Ensure that ESMS is developed for all industries. • Environmental audit records periodically submitted to CuEZL	6 months
14	Stakeholder engagement plan to include feedback from communities to assess groundwater availability	CuEZL E&S focal person	Stakeholder engagement plan to include feedback from communities regarding GW availability	1 month
PS 4: Community Health, Safety, and Security				
15	Ensure community safety during construction works	CuEZL HR and Contract Department	Clauses for community safety included in the construction contracts	1 months
16	CETP Effluent quality monitoring by competent agencies	CuEZL E&S Focal person	CETP effluent quality monitoring being done by competent agencies	1 month
17	Ensure that the Contractor keeps documentation of health/immunization records of temporary workers involved in construction	Contractor to ensure treatment, CuEZL to supervise	Inclusion of a clause to incorporate keeping health records of temporary workers in the construction contract	1 month
18	Revise the emergency response and preparedness plan to include representatives from local communities	CuEZL E&S Focal person	Emergency Response plan updated to include involvement of local communities	1 months
PS 5: Land Acquisition and Involuntary Resettlement				

Sl. No	Corrective Action	Responsibility	Indicators	Timeline
PS5 not applicable because CuEZL has acquired land through 'voluntary land transaction', market transactions in which the seller is not obliged to sell and the buyer cannot resort to expropriation or other compulsory procedures when negotiations fail). To confirm that voluntary land transactions have taken place, a copy of a 'Willing buyer-willing seller' agreement have been included. Asummary of discussionmeeting heldamongthe sellerswheretheyconfirmthevalidityof thistransaction have also been provided.				
PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources				
1	CETP relevant parameter Monitoring and external stake holder engagement need to be incorporated in the CuEZL. Professionals need to be engaged to assess the impact on bio-habitats and critical habitats (if any)	CuEZL E&S Focal person	Effluent discharge parametersin ECR 2023 monitoringneededtoidentify anyadverse impactsto ecosystemservicesanddevise mitigationmeasures.	3 months
PS 7: Indigenous Peoples				
Base line studies show that there are no indigenous people in the surrounding area of the CuEZL premises. Construction of new industries and their operation are limited within the CuEZL premises. Therefore, thisisnotrelevant.				
PS 8: Cultural Heritage				
There are no cultural heritage sites within its premises. The cultural heritage sites (Sonargaon area) is located far from CuEZL premises. Therefore, this is not applicable/relevant.However, any chance find will be dealt with using standard procedure and the PS8 will be triggered.				

E.9 DISCUSSIONS AND CONCLUSIONS

Successful examples from around the world as well as Bangladesh's own positive experience with the EPZ model had encouraged the GoB to develop this new Economic Zone paradigm for Bangladesh to promote economic development. As a part of this initiative, Bangladesh Economic Zone Authority (BEZA) has granted a license for the development of the Cumilla Economic Zone Ltd. (CuEZL).

The CuEZL authority is also seeking for finances from private and other lenders including World Bank. The World Bank financing requires the project to comply with certain regulations and standards for sustainable development. All the operations related to projects should be carried out in an environmentally responsible manner that comply with all local environment legal obligations and appropriate World Bank guidelines. In this regard, the developments in the CuEZL project should conform to the World Bank's Performance Standards for Private Sector Activities (OP 4.03). As part of the World Bank funding guidelines, an Environmental and Social Impact Assessment (ESIA) should be carried out to address the environmental and

social issues of the project following operational procedures, policies, guidelines and standards set by the World Bank.

As a part of the ESIA of the proposed project, the baseline environment (including physical, biological and socio-economic environment) within and surrounding the project areas has been carefully surveyed and documented. The project activities during both construction and operational phases have been analyzed in order to assess their impacts on the baseline environment. The environmental impacts resulting from the proposed project activities have been assessed and evaluated for: (a) construction phase, and (b) operational phase. The potentially significant environmental impacts resulting from the project have been identified, and measures to mitigate the adverse impacts and enhance positive impacts have been proposed. In addition, occupational health and safety issues have been addressed extensively. Furthermore, mitigation measures to reduce the impact of this project within the project area and around the said location have been proposed. Finally, an environmental and social management plan (ESMP) has been developed following the World Bank Guidelines OP4.03 where eight Performance Standards were compared with the project activities as a part of the Gap Analysis. Documentations of the comparative analysis have been presented in the Annex Qand an Environmental and Social Action Plan has been provided in Chapter 8 which has to be strictly followed by the project proponent to attain the requirements. This section summarizes the major findings from the assessment of impacts for the ESIA study.

General Issues and Categorization

As a part of the build-up process, the pre-construction phase involved land filling of the area (246.3615 Acres) has been elevated to the level of the regional road which is above flood level of 50-years' return period. This has already been completed and the land filling operation has altered the ecology and biodiversity of the area to a great extent, and the area has settled down to a new ambient condition.

At present, there are no industries in operation in the CuEZL and only two plots have been allotted to the Meghna Steel and Re-Rolling Mills Ltd and Meghna Glass Industries Ltd who are in construction stage in establishing their industry. A list of probable industries is provided in this document which are most likely to be SMEs and likely to be classified in the Orange or Red (as per ECR, 2023) category of DOE. As analyzed in this document, such industries will be in the medium risk or B category according to WB OP 4.03. A site audit shows that construction activities are reasonably well-managed. None of the expected industries are likely to be on the ESPP document's negative list and no such industries will be allowed in the CuEZL premises. Based on statistical considerations, the average impacts of existing and future probable industries are likely to be moderate. Detailed analysis of impacts/risk in this document shows that risks are mostly either medium or low, on all environmental and social issues. Thus, the CuEZL subproject of IPFF II has been classified as a medium risk (Category-B) sub-project.

Construction Related Impacts (Boundary wall, Internal roads, Industry and Administration Buildings)

The construction phase of this subprojects involves construction of infrastructures as there is no direct initiative by the tenants' industries are yet to set up their factories. Construction of the common facilities and service-related works are being done by the subproject proponent.

Thus, the impacts during the current construction phase are limited to infrastructure only. These activities are likely to impact the physico-chemical environmental parameters such as drainage congestion, water pollution, noise pollution and air pollution, etc. The mitigation measures proposed/undertaken are considered to be sufficient to deal with the impacts. The Environmental and Social Action Plan will further strengthen the organizational capacity to deal with future impacts with better environmental governance.

Operation Stage Impacts

It is anticipated that during the operational phase of the CuEZL, drainage congestion may pose a threat when the industries are progressively set up and road networks are constructed. Adequate green spaces and drainage outlets have been planned and will be constructed and maintained to combat the probable flooding, if any. This issue has been discussed further in the following.

Drainage and Wastewater (CETP, ETP, STP)

In the Master Plan of CuEZL around 1979.73 m^2 area is allocated for Centralized Effluent Treatment Plant (CETP) that will treat the wastewater from the industrial processes. It is also important for new industries to check whether pollution load in their effluent meet the requirements for influent of the CETP for subsequent treatment. If any industry exceeds the limit, it should install an individual ETP to reduce the pollution that can be acceptable at the CETP, which is now required by the MOEFCC notification (2019). It is to be noted that discharge of any polluted water, not conforming to standard, to the nearby canal is strictly prohibited. Strict compliance of CETP wastewater is to be achieved, and for this periodic monitoring and maintenance of CETP should be done by the CuEZL.

The drainage system has been designed with five outlets which is expected to be adequate to prevent flush flooding, but maintenance of the drainage system will be crucial in eliminating stormwater congestion. During the operation stage, construction of most of the industries will be completed. Thus, the uncovered land in the subproject area will be reduced. Roads constructed in the subproject area will further reduce the uncovered land area. As a result, surface run off would increase. This might create drainage problem in the subproject area. CuEZL has designed green spaces on both sides of the roads, open space, parks, playground, water body, etc. which will be part of the non-processing areas. The overall non-processing areas constitute around 25% of CuEZL area. Green spaces of CuEZL is around 7.65% which is higher than BEZA mandatory requirement (5%). These spaces and water bodies will help percolation and retention of water respectively and will help reduce any drainage congestion. However, proper maintenance of the drainage system will be crucial in eliminating stormwater congestion.

Water Resources

The industries inside the CuEZL premises will use the groundwater only. There will be 5 deep tube wells within the CuEZ premises to meet domestic and a part of industrial water demands. During the full operation stage of the CuEZL subproject area, the extraction of groundwater may lower the ground water table in or near the subproject area. Being located on the bank of the Meghna River branch, groundwater recharge will be perennial. But it would still be important to monitor the groundwater level and recharge potential to assess and quantify the effect of ground water extraction. This will provide reliable information on

the seasonal variation and groundwater recharge rate, which may be used to assess the sustainable availability of water for the neighboring locality. Successful operation of CETP (when installed) shall eliminate any chances of releasing of improperly treated wastewater into the surrounding environment and natural water ways.

Air and Noise

During the operation stages of the CuEZL subproject, the number of vehicles in the area would increase. Emission from the increased number of vehicles would impact the air quality in the subproject area. The impact on air pollution is particularly critical in the dry season, since even at present condition PM_{10} and $PM_{2.5}$ concentration levels exceed the National Ambient Air Quality Standards in Bangladesh set by the DoE.

Dust may be generated during the operation process in industries. There are also possibilities of fugitive emission of air pollutants including VOCs from paint, varnish, use of solvents. Since the industrial compounds are often closed buildings, therefore, the air pollutants get entrapped within the building and result in prolonged exposure for the workers and employees. The nature of emission from future industries in the CuEZL cannot be specified with any degree of certainty yet; but can be assumed to be similar to current ones on statistical considerations. Future industries are mostly likely to be under ORANGE to RED Categories as per Bangladesh's Environment Conservation Rules, 2023. Some of the industries' have potential for air emissions and air emissions from combustion sources (boilers, generators) may also be important. If future investments lead to significant air emissions, these will be addressed through mitigation measures. However, as mentioned in the Gap Analysis (Annex Q), it is imperative that the CuEZL conducts indoor air quality monitoring campaigns in each of its industries to assess the baseline conditions. In addition, it has been proposed in this ESIA document that the CuEZL will set up a monitoring laboratory with the capability to continuously measure and record the air quality parameters and with capabilities of communicating with the CAMS system of the Department of Environment. The potential source of GHGs emissions from the facility will be comparatively low as all power needs will be met from natural gas-driven captive generators.

During the operation phase of the CuEZL subproject, the main source of noise would be the industrial processes due to operation of machineries and vehicles transporting raw materials and finished goods. Vehicle carrying the staffs and visitors to the subproject area would also contribute to the noise level. Machineries used in the industries would create significant noise. Mitigation measures and occupational health and safety measures proposed in the ESIA proposes appropriate use of PPE in noisy environments.

Solid Waste

Impacts of excavations, land development and construction waste generated so far have been dealt with successfully through on site management and the issues faced caused only short-term problems. The CuEZL authority will establish a STS (Secondary Transfer Station) for temporary storage of solid wastes.As the solid waste is expected to be quite large at the CuEZL when all the industries will be in operating stage, it will be necessary to construct a TSDF (Treatment, Storage, and disposal facility) of appropriate capacity. A TSDF facilitates the collection, transportation, storage, treatment, and disposal of solid wastes including hazardous waste in environment friendly manner. Storage enables keeping the hazardous

waste until they get treated or disposed of the disposal facility permanently disposes of the hazardous waste. Hazardous waste will be disposed of in the specially designed units that will protect groundwater and surface water resources. The CuEZL authority will contract a DOE authorized private party to collect and dispose the solid waste from the project area until a TSDF is built.

Traffic

During the construction stage, transportation of construction materials would increase traffic flow in CuEZL subproject area. The subproject area is on the side inter-district road. The increased construction-related traffic demand, on top of the vehicular movement due to industrial activities, may create traffic congestion on the surrounding local roads. Continuous entry and exit of the traffic from the CuEZL subproject may slow down the local traffic. During the full operation of the industries, the main road connecting the CuEZL, and Dhaka-Chattogram highway traffic flow would increase in the subproject area at the start and end of office hours/industrial shifts. Proper traffic management measures are proposed in the ESIA to allay the dangers of accidents and ease congestion.

Power Supply and GHG Emission

Power supply in the CuEZL will come both from the national grid and captive generators. Ultimate capacity of captive generators may be as much as 100 MW which will not the supported by IPFF-II project and will be financed by CuEZL from its own resources. The generators are likely to be based on 20-30 MW capacity internal combustion engines which have efficiency of around 35%. Without emission reduction measures as much as 400,000 tons of CO_2 may be emitted due to power generation. However, trigenerator Simple Cycle NG Plant, whose efficiency is in the range of 75% to 85%, may reduce more than 50% of CO_2 emission. To reduce GHG emissions co-production of industrial process steam and chilled water for space cooling (using absorption cooling method) may be used. The total energy efficiency of such systems will much higher leading to GHG emission savings can be up to 50%. Installation of Solar PV would lead to emission savings as well. Even a 1-MW capacity SPV may save up to 1500 tons of CO_2 emission per year. As per capita GHG emission in Bangladesh is only 1.54 Kg per year, compared to 6.9 Kg for world average, the investment for GHG emission reduction at CuEZL will be voluntary, but it may likely generate considerable savings in energy cost, if the emission savings measures, as discussed, are adopted.

Fire management

The CuEZL proposes to build its own fire stations and the whole area would be equipped with adequate number of fire hydrant network. Assessing the area coverage of the zone fire hydrant pillars needs have been assessed. There would be a pump to supply water to those hydrants through a separate water supply pipeline network.Each individual industry will have an underground fire water reserve tank and its own firefighting and fire detection system.BEZA Standard Operating Procedure for Services and Clearance relating to Fire Extinction (2020) will be applicable for the purpose. Effectiveness Certificate in favor of Fire safety arrangement and Fire License in Economic Zones and individual industries will be obtained from the Fire department.

Health Centers

Constructionof a central hospital is envisaged in the CuEZL and as well access to medical facilities for the workers in the local medical facilities will be arranged.

Community Amenities (Parks)

CuEZL has been designed with green spaces on both sides of the roads, open spaces, parks, playground, water bodies, etc. which will be part of the non-processing areas. The overall non-processing areas constitute around 25% of CuEZL area. Keeping green spaces around 7.65% and open areas are also a mandatory requirement from BEZA. This will provide a recreational space for sharing the natural environment for the community.

Labor Management and Occupational Safety

About 800 workers are currently employed in the construction of Administrative Building, Meghna Steel and Re-Rolling Mills Ltd and Meghan Glass Industries Ltd in the CuEZL. Most of employees live in rented accommodation in nearby communities and others commute to work; some even from Dhaka as CuEZL is well connected by road. There are no female workers working in the zone. CuEZL management will take measures to facilitate employment of female workers in the future, specially in operation stage. There are no significant migrant workers as most workers are employed on long term basis. During the operational phase of the subproject, the number of workers may as high as 10,000. The ESIA has identified the labor management issues which are needed to be implemented to comply with both OP 4.03 and GOB requirements; and also, ILO conventions to which GOB is a signatory. Accordingly, the ESIA has outlined the labor management procedures and Occupational health & safety guidelines. ESIA provides for implementation of required EHS regulations e.g., WB EHGS and sectoral EHS guidelines for worker safety. CuEZL has an existing Emergency Response (ER) Plan, which outlines the protocols which CuEZL will adopt during an emergency situation. Additional actions have also been proposed in the ESIA that are aimed to reduce occupational hazards and health risks; and also, use of tools and procedures for proper implementation of ER measures including fire protection.

Cumulative Impacts

CuEZL would house industries of various types. It would take a long time before the full operation of all the industries begin. When new industries will start their operation, additional impacts may result from these operation processes. Even small impacts from the individual industry can add up and increase the cumulative effects. There are a number of industries in the vicinity of the CuEZL subproject area, which may add to the pollution and environmental impacts, and these are likely increase with time. For any environmental monitoring and management system, effects of all these industries inside and outside the CuEZL area need to be considered. Proper environmental management plan should have been prepared to avoid, mitigate, or reduce the impacts resulted from cumulative effects of all industries.

Land Ownership

Land was purchased from local residents by MGI through ‘willing-buyer, willing-seller arrangement’, and the land was transferred to CuEZL for the development of the economic zone. Eventually, a government gazette was published pinpointing the designated areas for the CuEZL development. Consultations with the host community and other stakeholders have been carried out as a part of this ESIA and potential issues were raised regarding land

ownership. However, the buyers present in the meeting stated that they are satisfied with the issues. If legacy issues arise in the future, these will be addressed amicably through negotiations.

Environmental and Social Management Plan

An Environmental and Social Management Plan (ESMP), including monitoring requirements, has been developed to ensure implementation of the "mitigation and abatement measures" identified in the environmental assessment. An environmental laboratory with adequate staff and equipment has been proposed for monitoring and guiding the management measures. Proper mitigation measures, as suggested in the ESMP/ESAP, should be followed to reduce such adverse impacts to the extent possible. Restoration of ecological balance will be a pertinent responsibility of the subproject proponent. Accordingly, the ESMP has provided suggestions on tree plantation, wetland and surface water body preservation and green area delineation which should be ensured by the proponent. The subproject would bring about socio-economic benefits during its operational phase through improvement of resilient building construction, risk reduction, disaster preparedness and trained personnel in the EZ.

Public Participation and Community Concern

During the operational phase, the subproject is likely to bring about significant benefit for the nation. Social issues are likely to play important role during the construction as well as operational phases. The subproject activities are likely to generate opportunity for significant employment. Coordination among the CuEZL personnel, its sister concerns and tenant industries need to be ensured through participatory approach. Relationship between the community and the subproject personnel regarding safety and security through a participatory program. Mitigation of noise and vibration problem should be addressed at the earliest to ease the concerns of the local people. Local roads (e.g., Meghna-Homna road) need to be improved for better accessibility. They also opined that road traffic may increase due to increase of vehicle involved in supply/delivery of the industries that may run on the Dhaka-Chattogram highway and the local roads, which may increase the possibility of accidents and underlined the importance of proper traffic management measures. However, most participants at the consultation events expressed their supportive attitude towards the subproject. Community consultation will continue to be done throughout the life cycle of the subproject.

Grievance Redress Mechanism

A Grievance Redress Mechanism (GRM) already exists for CuEZL with due procedures (see Annex J); through which aggrieved parties may launch complaint during both the construction and operational phase. CuEZL has the framework for addressing Sexual Exploitation and Abuse (SEA), and Sexual harassment (SH) related grievances (Annex S). In addition to this, as per Labour Rules, CuEZL will initiate participation meetings regularly with the workers, record the minutes and submit those minutes to the Labour Office, Cumilla. Most of the grievances and issues are to be resolved in these meetings. External grievances are to be channeled through the elected representatives of the local Union Parishad.

Compliance with PSs and Management Plan

As CuEZL is no longer a greenfield subproject, an 'Environmental Audit' was conducted recently through which on site status was assessed and some compliance gaps were found. CuEZL management has promised to rectify those drawbacks. The existing gaps between the requirements of the OP4.03 Performance Standards and the current construction, operation and management practices of the CuEZL are provided in AnnexQ. Based on the gap analysis, an Environmental and Social Action Plan (ESAP) has been proposed; which needs to be followed by the CuEZL to conform to the Performance Standards set in the OP 4.03. The ESAP describes feasible and practical corrective actions to be taken by CuEZL that will bring its operation in conformity with the OP4.03 Performance Standards, the responsible personnel within the CuEZL to carry out the actions as well as indicators and timeline of implementation of actions. The ESAP has been communicated with the top management of CuEZL and they are in agreement regarding taking the proposed actions within the stated timelines. The subproject will make its best effort to minimize the environmental and social impacts unavoidably associated with the subproject; during its entire life cycle by implementing suggested mitigation measures and management plans as described in this ESIA to ensure compliance with the requirement of the World Bank PS and EHS guidelines. CuEZL will ensure that the subproject conforms to all the legal, regulatory and policy objectives and also ensure that all the necessary permits are obtained and renewed from time to time as necessary.

Disclosure

The draft ESIA report will be disclosed in the CuEZL website (https://www.meghnagroup.biz/miez.php). The final ESIA will be made available at accessible places (e.g., Zone gate, local government offices, libraries, community centers, etc.), and the executive summary translated into local language (Bengali) will be posted in the CuEZL and Bangladesh Bank websites. The final ESIA document will be shared with WB for clearance and disclosed in Bangladesh Bank website. As a part of the disclosure, all versions (Bengali and English) will be available at the project office in addition to CuEZL's website.

Finally, it is expected that all necessary information/evidences contained in this report are enough to meet all requirements for the operation of the CuEZL's facilities in accordance with WB OP4.03 and applicable WBG guidelines and standards.