Environmental Assessment and Review Framework

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BAN: Second City Region Development Project

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ABBREVIATIONS

ADB	—	Asian Development Bank
CRDP	—	City Region Development Project
DOE	—	Department of Environment
EARF	—	environmental assessment and review framework
ECA	—	Environmental Conservation Act
ECC	—	Environmental Clearance Certificate
ECR	—	Environmental Conservation Rules
EIA	—	environmental impact assessment
EMP	—	environmental management plan
GRC	—	grievance redress committee
GRM	—	grievance redress mechanism
ICCDC	—	institutional capacity and community development consultant
IEE	—	initial environmental examination
LCC	—	location clearance certificate
LGED	—	Local Government Engineering Department
LGI	—	local government institution
PDSC	—	preparation, design and supervision consultant
PIU	—	project implementation unit
PMCU	—	project management coordination unit
PPTA	—	project preparatory technical assistance
REA	—	rapid environmental assessment
SEMP	—	site-specific environmental management plan
SPS	—	Safeguards Policy Statement
SWM	—	solid waste management
TOR	—	terms of reference

NOTE

In this report, "$" refers to United States dollar.

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I. INTRODUCTION

A. Background

1. The Second City Region Development Project (the project) will support development in the city regions of Dhaka and Khulna by building upon infrastructure and capacity building initiatives implemented during the first City Region Development Project (CRDP)[1] funded by the Asian Development Bank (ADB). The project will finance additional crucial infrastructure in urban and peri-urban areas needed to stimulate growth and improve livability in Dhaka and Khulna, two densely populated rapidly growing city regions of Bangladesh. The project will also continue strengthening capacity for project development, sustainable service delivery, and community awareness.

2. The project will be funded by the Government of Bangladesh and the Asian Development Bank (ADB) through a sector loan modality and implemented over a five-year period. The indicative list of subprojects is summarized in Appendix 1.

3. The project has been classified as environmental category B per ADB Safeguard Policy Statement (SPS), 2009.[2] Project preparation was supported by (i) a project preparatory technical assistance (TA);[3] and (ii) a project design advance loan of $5 million to finance preparation, design and supervision consultancy services. Part of the preparatory work was the preparation of the environmental assessment and review framework (EARF) and initial environmental examination (IEE) reports for sample subprojects in accordance with the requirements of ADB SPS, 2009.

4. No subprojects classified as environmental category A per ADB SPS, 2009 will be considered.

B. Purpose of the Environmental Assessment and Review Framework

5. This EARF sets guidance on safeguard screening, environmental assessment, institutional arrangements, consultations, information disclosure, reporting and other processes to be followed for components of a project, where final detailed design takes place after ADB Board approval. Subproject selection will be in accordance with the environmental project selection criteria as outlined in this EARF. The government agrees with ADB on the guidance provided in this EARF to ensure compliance with the requirements specified in ADB SPS, 2009 and government laws, rules and regulations.

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[1] ADB. 2010. *People's Republic of Bangladesh: City Region Development Project*. Manila.

[2] ADB Environment and Safeguards Division confirmed the category B classification of the project on 27 August 2018. A project's category is determined by the category of its most environmentally sensitive component, including direct, indirect, cumulative, and induced impacts in the project's area of influence. Each proposed project is scrutinized as to its type, location, scale, and sensitivity and the magnitude of its potential environmental impacts. Projects are assigned to one of the following four categories: (i) **Category A**. A proposed project is classified as category A if it is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works. An environmental impact assessment is required. (ii) **Category B**. A proposed project is classified as category B if its potential adverse environmental impacts are less adverse than those of category A projects. These impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for category A projects. An initial environmental examination is required. (iii) **Category C**. A proposed project is classified as category C if it is likely to have minimal or no adverse environmental impacts. No environmental assessment is required although environmental implications need to be reviewed. (iv) **Category FI**. A proposed project is classified as category FI if it involves investment of ADB funds to or through a financial intermediary.

[3] ADB. *People's Republic of Bangladesh: City Region Development Project II*.

6. In particular, this EARF:
   (i) describes the project and its subprojects and components;
   (ii) explains the general anticipated environmental impacts of the subprojects and components to be financed under the project;
   (iii) specifies the requirements that will be followed in relation to subproject screening and categorization, assessment, and planning, including arrangements for meaningful consultation with affected people and other stakeholders and information disclosure requirements and, where applicable, safeguard criteria that are to be used in selecting subprojects and components;
   (iv) assesses the adequacy of capacity of the Local Government Engineering Department (LGED) and project implementation units (PIUs) to comply with ADB SPS, 2009 environmental requirements and applicable national and international laws, and identify needs for capacity building;
   (v) specifies implementation procedures, including budgeting, institutional arrangements, and capacity development;
   (vi) specifies monitoring and reporting requirements; and
   (vii) describes the responsibilities of LGED, PIUs and ADB in relation to the preparation, implementation, and progress review of safeguard documents of subprojects.

II. THE PROJECT AND ITS SUBPROJECTS AND/OR COMPONENTS

7. The project scope includes (i) construction, upgrade and rehabilitation of selected Dhaka city region roads, bridges and culverts, including drainage; (ii) construction, upgrade and rehabilitation of drainage in Khulna city region; and (iii) development of a Khulna city corporation comprehensive solid waste management plan and small works. The indicative list of subprojects is summarized in Appendix 1. A summary of the project municipalities and types of works is in Table 1 below.

Table 1: Project Sites and Sub-Sector Works

Project municipalities	**Sub-sector**
Gazipur city corporation	Roads
Savar	Roads and Minor Bridges
Rupganj	Roads
Araihazar	Roads
Tarabo	Roads
Sonargaon	Roads
Singair	Roads
Narsingdi	Roads
Manikganj	Drainage
Kanchon	Drainage
Kaliakoir	Drainage
Dhamrai	Drainage
Jessore	Drainage
Nowapara	Drainage
Jhikorgacha	Drainage
Mongla	Drainage
Chalna	Drainage
Khulna city corporation	Comprehensive Solid Waste Management Plan and Small Works (Composting Plant)

8. **Subproject Selection**. Table 2 summarizes environmental criteria for subproject selection under the project.

9. **Subproject Components Triggering Environmental Category A per ADB SPS**. No component with environmental category A per ADB SPS, 2009 (footnote 3) will be considered under the project. In case a future subproject or component of a subproject is deemed classified as environmental category A per ADB SPS, 2009 a major change in scope of the project shall be proposed for ADB approval.[4] Bidding and awarding of such subproject shall not proceed without ADB approval of the proposed major change in scope.

10. **Future Solid Waste Management Infrastructure Components**. Prior to undertaking small infrastructure works under the solid waste management (SWM) subproject in Khulna city corporation, the project management coordination unit (PMCU), with support from internal and external experts, shall prepare a comprehensive SWM plan following applicable internationally recognized best practices as provided in the ADB's Practical Guide on Integrated Solid Waste Management for Local Governments (Appendix 6).[5] Suggested activities that may be undertaken by PMCU are in Appendix 7.

11. The design and construction of a proposed composting plant shall not be undertaken simultaneous with the comprehensive SWM planning, unless a separate SWM expert is hired for the composting plant component. The engagement of a separate SWM expert shall ensure that the composting plant is designed and constructed in accordance with the comprehensive SWM plan that is yet to be developed, including compliance with World Bank's EHS Guidelines on Waste Management Facilities.[6] As such, the SWM expert shall be closely coordinating with the comprehensive SWM planning team.

Table 2: Environmental Criteria for Subproject Selection

Component	Criteria	Remarks
All subprojects and components	Complies with all requirements of relevant national, state and local laws, rules and regulations.	See Section IV of environmental EARF.
	Complies with all requirements of ADB SPS, 2009 and follow procedures set out in the EARF.	
	Does not trigger environmental category A per ADB SPS.	
	Does not include and/or involve any activities listed in ADB's Prohibited Investment Activities List (Appendix 5 of ADB SPS). These activities do not qualify for ADB's financing.	
	Avoids any work in or near environmentally sensitive locations, including sites with national or international designation for nature conservation, cultural heritage, or any other reason.	Works in the buffer zones may be permitted provided that no impact to these sensitive locations is demonstrated or

[4] In a proposed major change in scope due to stricter environmental categorization of a proposed subproject than the approved environmental categorization, ADB Safeguard Policy Statement (SPS), 2009 requires the following: (i) conduct of new environmental impact assessment and prepare an environmental impact assessment (EIA) report; (ii) submit EIA report to ADB for review, which will include a peer-review among relevant departments within ADB; and (iii) disclose on ADB website the new EIA report 120 days prior to the approval by ADB of the proposed major change in scope for the project.

[5] ADB. 2017. *Integrated Solid Waste Management for Local Governments: A Practical Guide*. Manila.

[6] The guidelines can be found here: https://www.ifc.org/wps/wcm/connect/1cd72a00488557cfbdf4ff6a6515bb18/Final+-+Waste+Management+Facilities.pdf?MOD=AJPERES.

Component	Criteria	Remarks
	Does not result in destruction of or encroachment onto physical cultural resources such as archaeological monuments; heritage sites; and movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance.	proven. For works affecting local heritage sites, all applicable ADB SPS, 2009 requirements (e.g. relocation) shall be followed. In any of these cases, (i) conduct more rigorous environmental assessment following the procedures discussed in this EARF, national laws, and ADB SPS, 2009; and (ii) consult with and get permission from the Department of Archaeology and other relevant government agencies. In such case, official written permission shall be secured from the Department of Archaeology and/or other relevant government agencies prior to finalization of detailed engineering design.
	Alignments or project locations avoid or minimize, when avoidance is not possible, the cutting of trees. Include provisions for compensatory plantation at ten trees per every tree to be cut.	For any tree to be cut, consider replacement of 1:10. Appendix 5 of EARF (Local Government Engineering Department of Bangladesh's Tree Plantation and Conservation and Tree Resources Distribution Activities Implementation Manual dated April 2003)
	Reflects inputs from public consultation and disclosure for site selection.	
Road	Does not trigger environmental category A per ADB SPS. In particular, does not encroach any sensitive areas and/or critical habitats per definition of ADB SPS, and does not cause significant adverse environmental impacts that are irreversible, diverse, or unprecedented, which may affect an area larger than the sites or facilities subject to physical works.	
	All the road works shall be designed to blend in with the environment.	
	Does not lead to alteration of surface water hydrology of streams/waterways that may result in increased sediment load due to erosion from construction sites.	
	Provides for appropriate protection/mitigation measures to address noise impacts on adjoining communities, especially sensitive receptors as schools/hospitals along the roads.	
	Ensure requirements for drainage maintenance measures are incorporated into the operations	

Component	Criteria	Remarks
	and maintenance manual and suitable budget allowed for to ensure ongoing performance of measures.	
	For subproject components that may affect natural streams or rivers, all comments and advice received from PMCU, project implementation unit (PIU), design engineers, and appropriate departments are incorporated into the planning, design and construction of the subprojects as far as practicable.	If there is vegetation or landscaping features forming part of the mitigation requirements, the PMCU and design engineers shall also identify the maintenance party during the design stage.
Drainage	Does not trigger environmental category A per ADB SPS. In particular, does not encroach any sensitive areas and/or critical habitats per definition of ADB SPS, and does not cause significant adverse environmental impacts that are irreversible, diverse, or unprecedented, which may affect an area larger than the sites or facilities subject to physical works.	
	All the drainage works shall be designed to blend in with the environment.	
	Does not lead to alteration of surface water hydrology of streams/waterways that may result in increased sediment load due to erosion from construction sites.	
	Provides for appropriate protection/mitigation measures to address noise impacts on adjoining communities, especially sensitive receptors as schools/hospitals along the roads.	
	Under certain circumstances, storm water runoff may be contaminated by different pollution sources including sewage through expedient connections and hence giving rise to odor nuisance. Siltation and odor problems shall therefore be considered at planning, design, construction and operation stages of stormwater drainage system, in particular where significant pollution, such as discharge of livestock's waste into watercourses, channels, nullahs etc., is identified.	
	Ensure requirements for drainage maintenance measures are incorporated into the operations and maintenance manual and suitable budget allowed for to ensure ongoing performance of measures.	
	For subproject components that may affect natural streams or rivers, all comments and advice received from PMCU, PIU, design engineers, and appropriate departments are incorporated into the planning, design and construction of the subprojects as far as practicable.	If there is vegetation or landscaping features forming part of the mitigation requirements, the PMCU and design engineers shall also identify the maintenance party during the design stage.
Comprehensive SWM Plan	Ensures that the conduct of comprehensive SWM planning itself does not trigger environmental category A per ADB SPS.	

Component	Criteria	Remarks
	Introduces elements of 3Rs (reducing, reusing, and recycling wastes), including composting in the overall SWM planning. This includes waste characterization, waste categorization, waste collection, waste processing and diversion.	Appendix 6 of EARF for more comprehensive guidance.
	Ensures sufficient capacity for collection, transfer and disposal, perform site selection for proposed disposal sites and assure there is a practice al operations and maintenance plan in place for sustaining the system over the period until all infrastructures for an integrated SWM are in place in the future.	Appendix 6 of EARF for more comprehensive guidance.
	Provides for capacity building of PIU staff on waste management practices.	
	Ensures detailed designs and environmental safeguards conditions are included in the planning.	
Design and construction of small works such as composting plant	Does not trigger environmental category A per ADB SPS. In particular, the small works shall not include any components or activities that cause significant adverse environmental impacts that are irreversible, diverse, or unprecedented, which may affect an area larger than the sites or facilities subject to physical works.	
	The design of small works such as a composting plant shall be finalized in accordance with the specific recommendations of the comprehensive SWM plan. Therefore, the design, construction and operation and maintenance of a composting plant or any other small SWM infrastructures shall commence only after the comprehensive SWM planning is done, unless another SWM expert is simultaneously hired during the comprehensive SWM planning stage to ensure these small works such as the composting plant will be in accordance with the comprehensive SWM plan that is yet to be developed. As such, this another SWM expert shall be closely coordinating with the comprehensive SWM planning team.	
	Locate small works such as composting plant away from houses, sensitive buildings like schools, hospitals, religious places etc., with distance enough that odor nuisance and disease vectors will not impact these receptors.	In case of non-availability of suitable sites due to land and technical design constraints, the following procedures shall be adopted and documented: (i) conduct alternate site analysis, ideally at location with at least 500 m from nearest receptor or at a distance recommended by the outcome of SWM planning; (ii) develop odor mitigation and bio-aerosol management measures, and include in the design; (iii) develop layout

Component	Criteria	Remarks
		plan with maximum buffer to nearby receptors; (iv) provide a peripheral buffer structure such as walls or trees; and (v) conduct meaningful consultation with stakeholders to discuss the proposed subproject.
	Provides for (i) capacity building of PIU staff on composting plant operation and maintenance, and (ii) market study on the users of compost to assess sustainability of the demand for such compost.	
	Ensures detailed designs and environmental safeguard conditions are included in the planning.	

ADB = Asian Development Bank, EARF = environmental assessment and review framework, PIU = project implementation unit, PMCU = project management and coordination unit, SPS = safeguard policy statement, SWM = solid waste management.

III. GENERAL ANTICIPATED ENVIRONMENTAL IMPACTS

12. As subproject locations will be screened during selection process and that proposed subprojects with potential classification of environmental category A per ADB SPS, 2009 are excluded, environmental impacts are not likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented. Potential impacts are unlikely to affect areas far beyond the sites or facilities subject to physical works. These impacts are site-specific and local in nature, and few if any of them are irreversible. Planning principles, subproject selection criteria, and design considerations will be reviewed and incorporated into the site planning and design process wherever possible; thus, environmental impacts as being due to the project design or location will not be significant. For any significant impacts (e.g., dust, noise, vibration, etc.), mitigation measures will be developed to reduce all negative impacts to acceptable levels. In most cases mitigation measures can be designed with uncomplicated measures commonly used at construction sites and known to civil works contractors. Once the subprojects are operating, the facilities will operate with routine maintenance, which should not affect the environment with the implementation of a well-developed operation and maintenance (O&M) manual. Improved system operation will comply with the O&M manual and standard operating procedures to be developed for all the subprojects.

13. In the project, potential impacts are expected due to civil works and O&M of SWM small works such as composting plants. The nature of the subprojects and scope of the civil works will generate impacts, issues and concerns prior to construction, during construction and during operation.

14. Environmental assessment has been conducted for three sample subprojects selected based on subprojects with (i) the most available information, and (ii) most likely environmentally sensitive components as determined during the initial stage of ADB loan processing. The sample subprojects consist of (i) package No. Araihazar/LGED/W-01 for roads; (ii) package No. Manikganj/W-01 for drainage; and (iii) package on comprehensive SWM plan and small works (composting plant).

15. The environmental assessment of sample subprojects used ADB's rapid environmental assessment (REA) checklists (Appendixes 2 and 3). The assessments show that they are not

likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented. Potential impacts are unlikely to affect large areas beyond the sites or facilities subject to physical works. These impacts are site-specific and local in nature, few if any of them are irreversible, and in most cases mitigation measures can be designed with uncomplicated measures commonly used at construction sites and known to civil works contractors.

16. The potential impacts, issues, and concerns from assessed sample subprojects using ADB REA Checklists and “no mitigation measures scenario” checklist, are presented in Tables 3 to 5.

17. Subject to the selection criteria and procedures in this EARF, anticipated impacts of subsequent subprojects are expected to be within the same range of scope, scale and setting as with the sample subprojects, and producing generally the same impacts at same or lesser magnitude.

18. Future subprojects will utilize the same process of environmental assessment and preparation of IEE reports and are likewise expected to be category B per ADB SPS, 2009.

Table 3: Roads and Drainage Subproject Potential Environmental Impacts, Issues, and Concerns

(No Mitigation Measures Scenario)

Design	Construction	Operation and Maintenance
(i) Impact of climate change such as extended heavy precipitation could trigger flooding of roads and drainage rendering them unusable. (ii) Loss of vegetation at proposed sites due to surveying activities and site clearance prior to construction activities, including pre-construction investigations (boreholes, soil testing, etc.). (iii) Conflict on land use associated with the development of new roads and the surrounding lands. (iv) Extraction of raw materials needed for construction could impact the environment at the source. For example, sources of gravel and sand sourced from quarrying activities along river banks, etc. (v) Potential loss of trees along road and drainage alignments. (vi) Damage to existing infrastructures such as power lines and other community utilities. (vii) Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups. (viii) Environmental pollution due to inadequate sludge. disposal or industrial waste discharges illegally disposed in drainage system. (ix) Discharge of hazardous materials into the drains. (x) Permanent or temporary change in land use or topography including increases in intensity of land use.	(i) Interference with other utilities and blocking of access to residential establishments and/or commercial buildings. (ii) Dislocation or involuntary resettlement of people. (iii) Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups. (iv) Noise and vibration due to vehicle mobilization and maneuvering and other civil works. (v) Dust due to excavation, other civil works, and vehicle mobilization and maneuvering. (vi) Air pollution due to emissions from construction vehicles and heavy equipment. (vii) Risks and vulnerabilities related to occupational health and safety due to physical, chemical, and biological hazards. (viii) Road blocking and temporary flooding due to land excavation during the rainy season. (ix) Traffic disturbances due to transport of construction materials and wastes, and road closures or re-routing due to construction works. (x) Temporary silt runoff. (xi) Population increase that causes increased burden on social infrastructure (such as sanitation system). (xii) Social conflicts between construction workers from other areas and community workers. (xiii) Risks to community health and safety due to the transport, storage, and use and/or disposal of materials	(i) Risks and vulnerabilities related to community and occupational health and safety due to physical, chemical, and biological hazards. (ii) Discharge of hazardous materials into drains. (iii) positive impacts - employment to local people, such as the labors needed in the maintenance of the roads and drains during O&M phase; improved flooding conditions which will enhance people's well-being and boost economic conditions of municipalities.

Design	Construction	Operation and Maintenance
	such as explosives, fuel and other chemicals. (xiv) Community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community. (xv) Clearance of existing land, vegetation or building. (xvi) Construction works. (xvii) Demolition works. (xviii) Temporary sites used for construction works or housing of construction workers. (xix) Cut and fill or excavations. (xx) Working in stream crossings. (xxi) Use of resources (materials, water, energy, etc.). (xxii) Changes in occurrence of disease or affect disease vectors (e.g. insect or water-borne disease) due to worker's camp. (xxiii) Solid wastes such as spoils, overburden, etc. (xxiv) Solid wastes from worker's camp. (xxv) Emission from burning of waste in open air (e.g., worker's camp, slash materials, construction debris).	

Table 4: Stormwater Drainage Subproject Potential Environmental Impacts, Issues and Concerns

(No Mitigation Measures Scenario)

Design	Construction	Operation and Maintenance
(i) Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups (ii) Environmental pollution due to inadequate sludge disposal or industrial waste discharges illegally disposed in drainage system (iii) Discharge of hazardous materials into the drains	(i) Interference with other utilities and blocking of access to buildings (ii) Dislocation or involuntary resettlement of people (iii) Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups	(i) Risks and vulnerabilities related to community and occupational health and safety due to physical, chemical, and biological hazards (ii) Discharge of hazardous materials into drains (iii) Positive impacts - employment to local people such as labor needs in the

Design	Construction	Operation and Maintenance
(iv) Permanent or temporary change in land use or topography including increases in intensity of land use	(iv) Noise and vibration due to blasting and other civil works (v) Risks and vulnerabilities related to occupational health and safety due to physical, chemical, and biological hazards (vi) Road blocking and temporary flooding due to land excavation during the rainy season (vii) Noise and dust (viii) Traffic disturbances due to construction material transport and wastes (ix) Temporary silt runoff (x) Population increase that causes increased burden on social infrastructure (such as sanitation system) (xi) Social conflicts between construction workers from other areas and community workers (xii) Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals (xiii) Community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community (xiv) Clearance of existing land, vegetation or building (xv) Pre-construction investigations (boreholes, soil testing, etc.) (xvi) Construction works (xvii) Demolition works (xviii) Temporary sites used for construction works or housing of construction workers	maintenance of the drainage or canals during O&M phase; improved flooding conditions which will enhance people's well-being, and boost economic conditions of municipalities

Design	Construction	Operation and Maintenance
	(xix) Cut and fill or excavations (xx) Working in stream crossings (xxi) Use of resources (materials, water, energy, etc.) (xxii) Changes in occurrence of disease or affect disease vectors (e.g. insect or water-borne disease) due to worker's camp (xxiii) Solid wastes such as spoils, overburden, etc. (xxiv) Solid wastes from worker's camp (xxv) Emission from burning of waste in open air (e.g. worker's camp, slash materials, construction debris)	

Table 5: Solid Waste Management Subproject (Small Works) Potential Environmental Impacts, Issues and Concerns

(No Mitigation Measures Scenario)

Design	Construction	Operation and Maintenance
(i) Nuisance to neighboring areas due to noise, smell, and influx of insects, rodents, etc. (ii) Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups (iii) Pollution of surface water due to leachate overflow from composting plants and other small works (iv) Pollution of groundwater due to leachate seepage (v) Inadequate buffer zone around composting plants and/or other small works to alleviate odor and other possible nuisances, and protect facilities (vi) Permanent or temporary change in land use or topography including increases in intensity of land use	(i) Interference with other utilities and blocking of access to buildings (ii) Elevated noise and vibration due to excavation and other civil works (iii) Risks and vulnerabilities related to occupational health and safety due to physical, chemical, and biological hazards (iv) Road blocking and temporary flooding due to land excavation during the rainy season (v) Elevated dust generation causing ambient air quality degradation during excavation and construction activities (vi) Elevated emissions causing ambient air quality degradation during excavation and construction activities. (vii) Traffic disturbances due to transport of construction material and wastes (viii) Temporary silt runoff	(i) Nuisance to neighboring areas due to noise, smell, and influx of insects, rodents, etc. (ii) Pollution of surface water due to leachate overflow from the composting plants and other small works. (iii) Risks and vulnerabilities related to occupational health and safety due to physical, chemical, and biological hazards (iv) Discharge of hazardous materials into sewers, resulting in damage to sewer system and danger to workers (v) Elevated noise due to operation of hauling equipment/vehicles (vi) Contamination of ground waters due to leachate seepage (vii) Health and safety hazards to workers from toxic gases and hazardous materials which may be contained in collected solid wastes

Design	Construction	Operation and Maintenance
	(ix) Population increase that causes increased burden on social infrastructure (such as sanitation system) (x) Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals (xi) Community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community (xii) Clearance of existing land, vegetation or building (xiii) Temporary sites used for construction works or housing of construction workers (xiv) Resource depletion due to use of resources (materials, water, energy, etc.) (xv) Changes in occurrence of disease or affect disease vectors (e.g. insect or water-borne disease) due to workers' camp (xvi) Solid wastes such as spoils, overburden, etc. (xvii) Solid wastes from workers' camp (xviii) Emission from burning of waste in open air (e.g., workers' camp, slash materials, construction debris)	(viii) Population increase that causes increased burden on social infrastructure (such as sanitation system) (ix) Risks to community health and safety due to the operation of the composting plant and/or other small works (x) Community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community (xi) Resource depletion due to use of resources (materials, water, energy, etc.) (xii) Positive impacts - employment to local people, such as job opportunities in the composting and recycling plants, etc.; safe and easy access to improved sanitation which will enhance people's health, and boost economic conditions of municipalities

IV. ASSESSMENT OF LEGAL FRAMEWORK AND INSTITUTIONAL CAPACITY

19. ADB will not finance any project if it does not comply with ADB SPS, 2009 nor will it finance any project if it does not comply with its host country's environmental and social safeguard laws. Where discrepancy between ADB and Government of Bangladesh policies exist, the stricter policy will prevail. Moreover, ADB SPS, 2009 applies to all ADB-financed and/or ADB-administered sovereign projects, and their components regardless of the source of financing, including investment projects funded by a loan; and/or a grant; and/or other means.

A. ADB Safeguard Policy Statement

20. ADB SPS, 2009 requires borrowers to meet a set of requirements (Safeguards Requirements 1) when delivering environmental safeguards for projects supported by ADB. The objectives are to ensure the environmental soundness and sustainability of projects, and to support the integration of environmental considerations into the project decision-making process. Hence, the project is required to comply with these requirements. Summary of the step by step process is discussed below in this section. Detailed discussions are provided in the ADB SPS, 2009.[7]

21. **Screening and Categorization.** Subprojects are to be screened for their expected environmental impacts and are assigned to a specific category (footnote 3). Categorization is to be based on the most environmental sensitive component. However, for subproject(s) with component(s) that can trigger Category A or with potentially significant adverse impacts that are diverse, irreversible, or unprecedented, PMCU shall examine alternatives to the subproject's location, design, technology, and components that would avoid, and, if avoidance is not possible, minimize adverse environmental impacts and risks, and to meet Category B categorization. The rationale for selecting the subproject location, design, technology, and components will be properly documented, including, cost-benefit analysis, taking environmental costs and benefits of the various alternatives considered into account. The "no action" alternative will be also considered. In general, criteria that can trigger subproject's 'Category A' are in Section II above.

22. **Environmental Assessment.** Environmental assessment shall include description of environmental and social baseline to provide an understanding of current conditions forming the benchmark against which subproject impacts are assessed. Environmental impacts and risks will be analyzed for all relevant stages of the project cycle, including design and planning stage, construction, operations, decommissioning, and post-closure activities such as rehabilitation or restoration. The structure and composition of the typical IEE report is provided in Appendix 8. The IEEs of sample subprojects prepared during the ADB loan processing stage[8] may be used as model documents for subprojects.

23. **Environmental Planning and Management.** The PMCU shall prepare environmental management plan (EMP) to be included in the IEE report. The EMP shall describe and address the potential impacts and risks identified by the environmental assessment. The level of detail and complexity of the EMP and the priority of the identified measures and actions will be commensurate with the subproject's impact and risks. The EMP shall include the proposed mitigation measures, environmental monitoring and reporting requirements, emergency response

[7] ADB. 2009. *Safeguard Policy Statement*. Manila.

[8] Subprojects with initial environmental examinations (IEEs) prepared during project processing include (i) roads package Araihazar/LGED/W-01; (ii) drainage package Manikganj/W-01; and (iii) comprehensive solid waste management plan and small works package.

procedures, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators.

24. **Public Disclosure.** LGED, through PMCU, shall submit to ADB for disclosure on ADB website so affected people, other stakeholders, and the public can provide meaningful inputs into the subproject design and implementation:[9]

(i) final IEE upon receipt;
(ii) a new or updated IEE and corrective action plan prepared during subproject implementation, if any; and
(iii) environmental monitoring reports submitted during subproject implementation upon receipt.

25. **Consultation and Participation.** PMCU and PIUs shall carry out meaningful consultation[10] with affected people and other concerned stakeholders, including civil society, and facilitate their informed participation. The consultation process and its results are to be documented and reflected in the environmental assessment report.

26. **Grievance Redress Mechanism.** The LGED, through PMCU, shall establish a mechanism to receive and facilitate resolution of affected peoples' concerns, complaints, and grievances about the subproject's environmental performance. The grievance mechanism shall be scaled to the risks and adverse impacts of the subproject. As of the ADB loan processing for the project, a grievance redress mechanism (GRM) has been established and discussed in detail in Section VI below.

27. **Monitoring and Reporting.** The PMCU shall monitor, measure and document the progress of implementation of the EMP. If necessary, PMCU will identify the necessary corrective actions, and reflect them in a corrective action plan. PMCU will prepare and submit to ADB semi-annual environmental monitoring reports that describe progress with implementation of the EMP and compliance issues and corrective actions, if any. For subprojects likely to have significant adverse environmental impacts during operation, semi-annual reporting will continue until ADB issues a project completion report.

28. **Unanticipated Environmental Impacts.** Where unanticipated environmental impacts become apparent during subproject implementation, PMCU shall update the environmental assessment and EMP or prepare a new environmental assessment and EMP to assess the potential impacts, evaluate the alternatives, and outline mitigation measures and resources to address those impacts.

29. **Pollution Prevention and Control Technologies**. During the design, construction, and operation of the subproject the PMCU and PIUs shall apply pollution prevention and control technologies and practices consistent with international good practice, as reflected in

[9] Per ADB SPS, 2009, prior to disclosure on ADB website, ADB reviews the "borrower's/client's social and environmental assessment and plans to ensure that safeguard measures are in place to avoid, wherever possible, and minimize, mitigate, and compensate for adverse social and environmental impacts in compliance with ADB's safeguard policy principles and Safeguard Requirements 1-4."

[10] Per ADB SPS, 2009, meaningful consultation means a process that (i) begins early in the project preparation stage and is carried out on an ongoing basis throughout the project cycle; (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people; (iii) is undertaken in an atmosphere free of intimidation or coercion; (iv) is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enables the incorporation of all relevant views of affected people and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues.

internationally recognized standards such as the World Bank Group's Environmental, Health and Safety Guidelines. These standards contain performance levels and measures that are normally acceptable and applicable to subprojects. When the government's regulations differ from these levels and measures, the concerned subprojects shall achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific subproject circumstances, LGED through PMCU will provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented in ADB SPS, 2009.

30. **Occupational Health and Safety.** The PMCU[11] shall ensure that workers[12] are provided with a safe and healthy working environment, considering risks inherent to the sector and specific classes of hazards in the subproject work areas, including physical, chemical, biological, and radiological hazards. PMCU shall ensure to take steps to prevent accidents, injury, and disease arising from, associated with, or occurring during the course of work by (i) identifying and minimizing, so far as reasonably practicable, the causes of potential hazards to workers; (ii) providing preventive and protective measures, including modification, substitution, or elimination of hazardous conditions or substances; (iii) providing appropriate equipment to minimize risks and requiring and enforcing its use; (iv) training workers and providing them with appropriate incentives to use and comply with health and safety procedures and protective equipment; (v) documenting and reporting occupational accidents, diseases, and incidents; and (vi) having emergency prevention, preparedness, and response arrangements in place.

31. The PMCU shall ensure to apply preventive and protective measures consistent with international good practice, as reflected in internationally recognized standards such as the World Bank Group's Environmental, Health and Safety Guidelines.[13]

32. **Community Health and Safety.** The PMCU shall ensure to identify and assess the risks to, and potential impacts on, the safety of affected communities during the design, construction, operation, and decommissioning of the subproject, and will establish preventive measures and plans to address them in a manner commensurate with the identified risks and impacts.

33. **Physical Cultural Resources**. The PMCU is responsible for siting and designing the subproject to avoid significant damage to physical cultural resources. Such resources likely to be affected by the subproject will be identified, and qualified and experienced experts will assess the subproject's potential impacts on these resources using field-based surveys as an integral part of the environmental assessment process. When the proposed location of a subproject component is in areas where physical cultural resources are expected to be found as determined during the environmental assessment process, chance finds procedures shall be included in the EMP.

34. **Biodiversity**. The PMCU will assess the significance of project impacts and risks on biodiversity and natural resources as an integral part of the environmental assessment process. The assessment will focus on the major threats to biodiversity, which include destruction of habitat and introduction of invasive alien species, and on the use of natural resources in an unsustainable manner. PMCU will need to identify measures to avoid, minimize, or mitigate potentially adverse impacts and risks and, as a last resort, propose compensatory measures, such as biodiversity offsets, to achieve no net loss or a net gain of the affected biodiversity.

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[11] In case where responsibility is delegated to subproject contractors during construction phase, PMCU shall ensure that the responsibilities on occupational health and safety as described herein are included in the contract documents.

[12] Including nonemployee workers engaged by LGED through contractors or other intermediaries to work on project sites or perform work directly related to the project's core functions.

[13] World Bank Group. 2007. *Environmental, Health, and Safety General Guidelines.* Washington, D.C.

35. **Environmental Audit.** When the subproject involves existing activities or facilities, PMCU is responsible to ensure that relevant external experts will perform environmental audits to determine the existence of any areas where the subproject may cause or is causing environmental risks or impacts. If the subproject does not foresee any new major expansion, the audit constitutes the environmental assessment for the subproject.

36. **Bidding and Contract Documents.** The IEEs and EMPs are to be included in bidding and contract documents and verified by the PIUs. The PMCU and PIUs shall also ensure that bidding and contract documents include specific provisions requiring contractors to (i) comply with all other conditions required by ADB,[14] and (ii) to submit to PIU, for review and approval, a SEMP, including (a) proposed sites/locations for construction work camps, storage areas, hauling roads, lay down areas, disposal areas for solid and hazardous wastes; (b) specific mitigation measures following the approved EMP; (c) monitoring program as per EMP; and (d) budget for SEMP implementation. No works can commence prior to approval of SEMP. A copy of the EMP and/or approved SEMP will be kept on site during the construction period at all times. Non-compliance with, or any deviation from, the conditions set out in the EMP and/or SEMP constitutes a failure in compliance and shall require corrective actions.

37. **Conditions for Award of Contract and Commencement of Work.** The PMCU shall not award any works contract for a subproject until (i) relevant provisions from the EMP are incorporated into the works contract; (ii) the IEE is updated to reflect subproject's detailed design and PMCU has obtained ADB's clearance of such IEE; and (iii) Department of Environment (DOE)-approved IEE (i.e., IEE in compliance with Environmental Conservation Rules (ECR), 1997) and other necessary permits from relevant government agencies have been obtained. For "design, build, and operate" type contracts, PMCU shall ensure no works for a subproject which involves environmental impacts shall commence until (i) relevant provisions from the EMP are incorporated into the works contract; and (ii) the IEE is updated to reflect subproject's detailed design and PMCU has obtained ADB's clearance for such IEE.

B. National Environmental Impact Assessment Law

38. **Environmental Conservation Act, 1995**. Provides for the conservation of environment, improvement of environmental standards and control and mitigation of environmental pollution. In line with these provisions of the Act, the Environmental Conservation Rules, 1997 have been framed. This act provides for (i) remedial measures for injury to ecosystem; (ii) provides for any affected person due to environmental pollution to apply to Department of Environment (DOE) for remediation of the damage; (iii) discharge of excessive environmental pollutants; (iv) inspection of any activity for testing any equipment or plant for compliance to the environment act, including power to take samples for compliance; (v) power to make rules and standards with reference to environment; and (vi) penalty for non-conformance to environment act under the various sections.

39. **Environmental Conservation Rules, 1997**. The Rules outline the processes and requirements of environmental clearances for specific type of projects indicated therein and stipulates that "no industrial unit or project shall be established or undertaken without obtaining, in the manner prescribed by rules, an Environmental Clearance Certificate (ECC) from the Director General" of the DOE. Schedule 1 of the Rules classifies industrial units and projects into

[14] Contractors to comply with (i) all applicable labor laws and core labor standards on (a) prohibition of child labor as defined in national legislation for construction and maintenance activities; (b) equal pay for equal work of equal value regardless of gender, ethnicity, or caste; and (c) elimination of forced labor; and with (ii) the requirement to disseminate information on sexually transmitted diseases, including HIV/AIDS, to employees and local communities surrounding the project sites.

four categories according to their site and impact on the environment, namely (i) green, (ii) orange-A, (iii) orange–B, and (iv) red. The rules specify the procedures for issuing ECC for the various categories of projects. Table 6 summarizes the requirements for environmental clearance application for each category.

Table 6: Summary Environmental Clearance Application Requirements Per Category[a]

Category	Requirements
Green	(i) Completed Application for Environmental Clearance Certificate (ECC); (ii) Payment of the appropriate fee based on Schedule 3 of ECR, 1997; (iii) General information about the project; (iv) Exact description of the raw materials to be used and the product to be manufactured (where relevant); and (v) No objection certificate from the local authority.
Orange-A	(i) Completed Application for ECC; (ii) Payment of the appropriate fee based on Schedule 3 of ECR, 1997; (iii) General information about the project; (iv) Exact description of the raw materials to be used and the product to be manufactured (where relevant); (v) No objection certificate from the local authority; (vi) Prior issued location clearance certificate (LCC) from Department of Environment; (vii) Process flow diagram; (viii) Layout plan (showing location of effluent treatment plant or ETP); (ix) Effluent discharge arrangement; and (x) Outlines of the plan for relocation and rehabilitation (if applicable).
Orange-B	(i) Completed Application for ECC; (ii) Payment of the appropriate fee based on Schedule 3 of ECR, 1997; (iii) Report on the feasibility of the project (if still being proposed); (iv) Report on the initial environmental examination (IEE) of the project, including process flow diagram, layout plan (showing ETP), design of ETP of the project (if still being proposed); (v) Report on the environmental management plan (EMP); (vi) No objection certificate from the local authority; (vii) Prior issued LCC from DOE; (viii) Emergency plan relating to adverse environmental impact and plan for mitigation of the effect of pollution; (ix) Outline of the relocation and rehabilitation plan (where applicable); and (x) Other necessary information as may be required.
Red	(i) Completed Application for ECC; (ii) Payment of the appropriate fee based on Schedule 3 of ECR, 1997; (iii) Report on the feasibility of the project (if still being proposed); (iv) Report on the IEE of the project and the terms of reference (TOR) for environmental impact assessment of the project; or environmental impact assessment (EIA) report on the basis of the TOR previously approved by DOE, including process flow diagram, layout plan (showing ETP), design of ETP of the project (if still being proposed); (v) Report on the EMP; (vi) No objection certificate from the local authority; (vii) Prior issued LCC from DOE; (viii) Emergency plan relating to adverse environmental impact and plan for mitigation of the effect of pollution; (ix) Outline of the relocation and rehabilitation plan (where applicable); and (x) Other necessary information as may be required.

[a] A Guide to Environmental Clearance Procedure, DOE, Bangladesh Ministry of Environment and Forests, August 2010.

40. Schedule 1 of ECR, 1997 provides the classification for industrial projects and types of development that are common in Bangladesh. Table 7 indicates the subproject categories and their likely classifications based on this schedule.

Table 7: Likely Government of Bangladesh Classification of Subproject Components

	Subproject	Component	Equivalent in Schedule I of Environmental Conservation Rules	Department of Environment Classification
1.	Roads	Roads	Construction, re-construction and extension of road (feeder road, local road)	Orange – B
		Bridges and culverts	Construction, re-construction and extension of bridge/culvert (length below 100 meters)	Orange – B
			Construction, re-construction and extension of bridge/culvert (with length of more than 100 meters)	Red
	Drainage	Drainage	Construction/reconstruction/ expansion of flood control embankment, polder, dike, etc.	Orange – B or Red[a]
2.	Solid waste management	Composting Plants and associated facilities	No similar facility	Orange – B
		Transfer stations	No similar facility	Orange – B

[a] Drainage projects are classified as either Orange-B or Red, depending on the extent of works. From experience of LGED, all LGED projects having drainage components have always been classified by DOE as Orange-B due to their relatively small scale and environmental impact. Thus, drainage subprojects are expected to be classified as Orange-B.

C. Application for Environmental Clearance

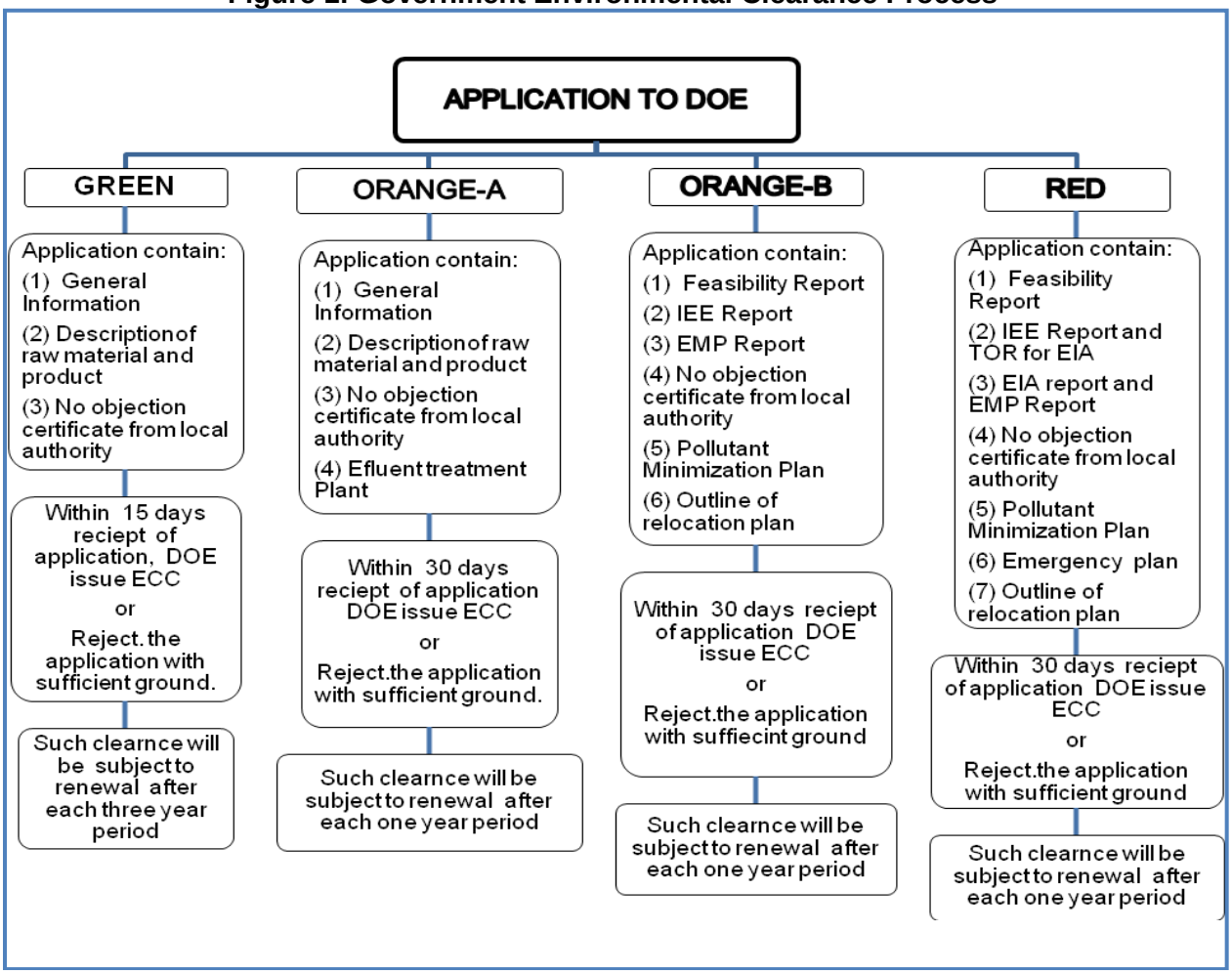
41. The application and requirement for issuance of ECC are described in the ECR, 1997 and summarized in Table 6. This involves the completion and submission of an application using a form available from the DOE website,[15] which is revised from time to time. Appendix 9 shows the template being used of this date. The accomplished application form is submitted to DOE together with requirements as enumerated in Table 6. The proponent is also required to pay equivalent application fee prescribed in Schedule 13 of ECR, 1997.

42. The ECC is issued within 30 days from receipt of the application by DOE. Such ECC is required to be renewed every year from the date of its effectivity. One ECC will be obtained from DOE that will cover the entire project. The required fee for ECC application and necessary documents have been submitted to the DOE (per ECR 1997). PMCU will utilize the sample IEEs approved for ADB project processing. These sample IEEs will be submitted to DOE as part of the ECC application requirements. This arrangement has been agreed upon by the various local governments involved in the project (specifically the PIUs).

43. Figure 1 shows the summary of review process and timelines set under ECR, 1997, leading to the issuance of environmental clearance certificate (ECC) by DOE.

[15] Government of Bangladesh. *Department of Environment*.

Figure 1: Government Environmental Clearance Process



DOE = Department of Environment, EAI = environmental impact assessment, ECC = environmental clearance certificate, EMP = environmental management plan, IEE = initial environmental examination, TOR = terms of reference.

D. Applicable Environmental Standards

44. The ECR, 1997 also provides the environmental standards applicable to the project. Schedule 2 presents the national standards for ambient air quality and Schedule 4 presents the national standards for ambient noise. Following requirements of ADB SPS, 2009, the project shall apply pollution prevention and control technologies and practices consistent with international good practice, as reflected in EHS Guidelines. When the government regulations differ from these levels and measures, the executing agency shall achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific subproject circumstances, will provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented in ADB SPS, 2009. In view of this, Table 8 and Table 9 show the ambient air quality standards and noise level standards to be followed by the subprojects.

Table 8: Ambient Air Quality Standards

Parameter	Location	Bangladesh Ambient Air Quality Standard (µg/m³)[a]	WHO Air Quality Guidelines (µg/m³)		Applicable Per ADB SPS[d] (µg/m³)
			Global Update[b] 2005	Second Edition[c] 2000	
TSP	Industrial and Mixed	500	-	-	500
	Commercial and Mixed	400			400
	Residential and Rural	200			200
	Sensitive	100	-	-	100
PM_{10}	Industrial and Mixed	-	50 (24-h)	-	50 (24-h)
	Commercial and Mixed	-	50 (24-h)		50 (24-h)
	Residential and Rural	-	50 (24-h)		50 (24-h)
	Sensitive	-	50 (24-h)	-	50 (24-h)
PM_{25}	Industrial and Mixed	-	25 (24-h)	-	25 (24-h)
	Commercial and Mixed	-	25 (24-h)		25 (24-h)
	Residential and Rural	-	25 (24-h)		25 (24-h)
	Sensitive	-	25 (24-h)	-	25 (24-h)
SO_2	Industrial and Mixed	120	20 (24-h)	-	20 (24-h)
	Commercial and Mixed	100	20 (24-h)	-	20 (24-h)
	Residential and Rural	80	20 (24-h)		20 (24-h)
	Sensitive	30	20 (24-h)	-	20 (24-h)
NO_2	Industrial and Mixed	100	200 (1-h)	-	100
	Commercial and Mixed	100	200 (1-h)	-	100
	Residential and Rural	80	200 (1-h)		80
	Sensitive	30	200 (1-h)	-	30
CO	Industrial and Mixed	5,000	-	10,000 (8-h) 100,000 (15-min)	5,000
	Commercial and Mixed	5,000	-	10,000 (8-h) 100,000 (15-min)	5,000
	Residential and Rural	2,000	-	10,000 (8-h) 100,000 (15-min)	2,000
	Sensitive	1,000	-	10,000 (8-h) 100,000 (15-min)	1,000

[a] Schedule 2 of ECR, 1997.

[b] IFC World Bank Group. Environmental, Health and Safety General Guidelines. Washington, D.C.

[c] World Health Organization Regional Office for Europe. 2000. Air Quality Guidelines for Europe, Second Edition. Copenhagen.

[d] If less stringent levels or measures are appropriate in view of specific project circumstances, PMCU will provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented in ADB SPS, 2009.

Table 9: Ambient Noise Quality Standards

Receptor/ Source	National Noise Standard Guidelines, 1997[a] (dB)		WHO Guidelines Value For Noise Levels Measured Out of Doors[b] (One Hour LA_q in dBA)		Applicable Per ADB Safeguard Policy Statement[c] (dBA)	
	Day	Night	07:00 – 22:00	22:00 – 07:00	Day time	Night time
Industrial area	75	70	70	70	70	70
Commercial area	70	60	70	70	70	60
Mixed Area	60	50	55	45	55	45
Residential Area	50	40	55	45	50	40
Silent Zone	45	35	55	45	45	35

[a] Schedule 4 of ECR, 1997.

[b] WHO. 1999. Guidelines for Community Noise; World Bank Group. 2007. Environmental, Health and Safety General Guidelines. Washington, D.C.

[c] If less stringent levels or measures are appropriate in view of specific project circumstances, PMCU will provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented in ADB SPS, 2009.

E. Other Relevant National Laws

45. The implementation of subprojects proposed under the project will be governed by Government of Bangladesh Environmental Acts, Rules, Policies, and Regulations. Table 10 summarizes the applicable national and local laws, regulations, and standards for environmental assessment and management, including applicable international environmental agreements.

Table 10: Summary of Relevant Government Laws, Regulations, and Environmental Standards

Laws, Regulations, and Standards	Details	Relevance to the project
Environmental Court Act, 2000	Enacted to establish environment courts and make rules for protection of environmental pollution. Environment Courts are situated at the district-level, but the government may by notification in the official Gazette, establish such courts outside the districts. Environment Courts were given power to directly take into cognizance of any offence relating to environmental pollution. Proceeding of this Court will be similar to criminal courts. One important feature of this Act is that it has been given retrospective effect of any crime committed under environment laws and thus any crime previously committed but is not taken before any court can be taken before the Environment Court or any special Magistrate.	Environmental courts have been established in Dhaka and Khulna city regions where subprojects are to be located. These courts have jurisdiction over any subproject-related environmental cases or litigations or complaints elevated to them.
The *Pourashava* (Municipality) Ordinance of 1977, the City Corporation Ordinances of 1983 and the recently revised unified ordinance for all City Corporations of 14 May 2008 (Local Government Ordinances 16, and 17 of 2008); City Corporation Act 2009, 15 Oct 2009,	These ordinances have clearly assigned responsibilities to the LGIs to ensure the provision of a wide range of primary and public health services including primary health care, sanitation, water supply, drainage, food and drink, birth and death registration, vector and infectious disease control, etc. for the residents. LGIs have the authority to address all related issues within their legal and administrative mandate.	All subprojects are designed to help LGIs achieve or fulfill these mandates.

Laws, Regulations, and Standards	Details	Relevance to the project
and; *Pourashava* Act 2009, 6 Oct 2009.		
National Forestry Policy, 2016	This policy specifically states the following relevant objectives (among many other objectives): (i) to arrest deforestation, and degradation of forest resources, enrich and extend areas under tree cover, through appropriate programs and projects, to ensure that at least 20% of the country comes under tree cover by 2035, with at least a canopy density of 50%; and (ii) to significantly increase tree cover outside state forest, through appropriate mechanisms, in both public and private land including urban areas.	The urban roads and drainage subprojects may have potential tree cutting activities during construction or rehabilitation activities. The subproject activities should implement measures to comply and ensure support to the policy objectives.
Bangladesh Labor Act, 2006	The Bangladesh Labor Act, 2006 provides the guidance of employer's extent of responsibility and workmen's extent of right to get compensation in case of injury by accident while working.	Provides for security and safety of work force during construction period. The project will ensure to comply with the provisions of this Act.

DOE = Department of Environment, ECC = Environmental Clearance Certificate, EMP = environmental management plan, IEE = initial environmental examination, LGI = local government institutions.

F. International Environmental Agreements

46. Table 11 below lists the relevant international environmental agreements that the government is party to, and their relevance to various subprojects under the project.

Table 11: International Environmental Agreements Relevant to Second City Region Development Project

International Environmental Agreement	Year Ratified	Details	Relevance
United Nations Framework Convention on Climate Change (UNFCCC)	1997	Parties to take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects.	All subprojects are subject to impact of climate change. Engineering designs of these subprojects should consider climate change impacts, such as flooding and river water level rise.
Paris Convention on Protection of the World Cultural and Natural Heritage, 1972	1983	Parties to ensure the protection and conservation of the cultural and natural heritage situated on territory of, and primarily belonging to, the State.	Construction works under the project may impact undiscovered cultural and natural heritage sites or relics. The project and its subprojects will ensure to integrate in the environmental management plans chance finds procedures necessary for prevention of damage or destruction of culturally and/or historically

International Environmental Agreement	Year Ratified	Details	Relevance
			significant sites, monuments, etc.
Ramsar Convention on Wetlands of International Importance, 1971	1992	Parties to conserve and wisely use wetlands (i.e., maintaining their ecological character) as a contribution towards achieving sustainable development locally and throughout the world	Construction works under the project may impact wetlands. Subprojects will ensure to integrate in the environmental management plans necessary for the protection of significant wetland and prevention of draining or filling during construction or operation.
Convention on Biological Diversity, 1992	1997	Parties to require the environmental assessment of projects that are likely to have significant adverse effects on biological diversity with a view of avoiding or minimizing such effects	Construction works under the project may impact biodiversity sites. The project and its subprojects will ensure to integrate in the environmental management plans necessary measures to protect biodiversity, if any, during construction and operation.

V. ENVIRONMENTAL ASSESSMENT FOR SUBSEQUENT SUBPROJECTS

47. After selecting subprojects based on the criteria in Section II, this section provides the plan for carrying out the environmental assessment and planning for such subprojects in the subsequent phases of the project. This section includes environmental assessment procedures for subprojects, both in accordance with the ADB SPS, 2009 and the environmental clearance procedures of the government through the DOE. Consultation has been conducted with DOE personnel and confirmed the government environmental assessment and procedures as outlined and discussed below in this section.

A. Environmental Assessment Process for Subprojects

48. Subprojects must comply with national and state legislation (Section IV) and ADB SPS. The steps to be followed are shown in Table 12.

49. The IEEs of the sample subprojects included environmental management plans (EMPs) which describe and address the potential impacts and risks identified by the environmental assessment. The EMPs included proposed mitigation measures, environmental monitoring and reporting requirements, emergency response procedures, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators.

50. The IEEs and EMPs will be included in bidding and contract documents with specific provisions requiring contractors to (i) comply with all other conditions required by ADB,[16] and (ii)

[16] Contractors to comply with (i) all applicable labor laws and core labor standards on (a) prohibition of child labor as defined in national legislation for construction and maintenance activities; (b) equal pay for equal work of equal value regardless of gender, ethnicity, or caste; and (c) elimination of forced labor; and with (ii) the requirement to disseminate information on sexually transmitted diseases, including HIV/AIDS, to employees and local communities surrounding the project sites.

to submit a site-specific environmental management plan (SEMP), including (a) proposed sites/locations for construction work camps, storage areas, hauling roads, lay down areas, disposal areas for solid and hazardous wastes; (b) specific mitigation measures following the approved EMP; (c) monitoring program per SEMP; and (d) budget for SEMP implementation.

51. For drainage subprojects located in areas with potential sources of chemicals or toxic substances such as chemical or heavy industries, excavated or desilted materials should be tested for toxic substances to determine the appropriate method of disposal. The method of disposal shall comply with local laws and regulations and World Bank's EHS Guidelines on Waste Management (footnote 6).

52. For any small composting facilities that will be established under the project, the design and location shall comply with the recommendations of the SWM planning and World Bank's EHS Guidelines on Waste Management (footnote 6), including the requirement of 500m buffer zone.

Table 12: ADB and Environmental Safeguards Procedures Per ADB SPS and Government of Bangladesh Laws

Project Stage	ADB	Government of Bangladesh
Subproject Identification/ Categorization	Subproject selection in line with the EARF subproject selection criteria.	Categorization of industries and projects for those included in the various categories specified in Schedule I of Environmental Conservation Rules,1997 (classification of industrial units or projects, based on location and impact on environment)
	Rapid environmental assessment (REA) checklist completed and Project Categorization carried out at the earliest stage of project preparation when sufficient information is available for this purpose. Any REA checklist prepared and completed by PMCU shall be submitted to ADB for concurrence or approval. REA checklists applicable to this project are attached in Appendix 2 and Appendix 3. Category A subprojects will not be considered under the project.	
Detailed Design and IEE Preparation	**Environmental Assessment**. Detailed design and environmental assessment shall be in line with the EARF.	For both orange B and Red category projects, application for Location Clearance Certificate as initial step. As next step after securing Location Clearance Certificate: For Orange-B projects – Submission of IEE report for the project. For Red projects – Submission of TOR for the EIA; or EIA report prepared on the basis of TOR previously approved by DOE.
	Public Consultation: Consultation will be carried out in a manner commensurate with the impacts on affected communities. The consultation process and its results are to be documented and reflected in the environmental assessment report.[a]	ECR does not mention the requirement of public consultation.

Project Stage	ADB	Government of Bangladesh
	IEE and EMP Preparation. Drafting of IEE and EMP follow the outline of ADB, which include the following: (i) results of baseline information gathering, (ii) assessment of environmental impacts and mitigation measures, (iii) development of an EMP, (iv) EMP implementation budget, (v) institutional arrangements, (vi) results of public consultations done and future consultation plans, (vi) GRM, (vii) capacity assessment, and (viii) monitoring and reporting arrangements, among others.	ECR does not prescribe specific outline of IEE or EMP. The project will need to satisfy all the applicable requirements for the issuance of ECC as enumerated in Form 3 attached to ECR.
	Disclosure: Disclosure by ADB on its website the following: (i) EARF before project appraisal, and (ii) final IEE reports after securing government endorsement of the reports. Disclosure by government on its website or any accessible place all environmental information and documents such as IEE reports in a form or language understandable to affected people and other stakeholders. For illiterate people, other suitable communication methods will be used.	ECR does not mention requirement of disclosure of information.
	Mitigation measures specified in the IEE study incorporated in project design.	
	EMP implementation and monitoring responsibilities incorporated in the bid and contract documents.	
Approval	Executing agency after review of IEE will forward to ADB for review. Cleared IEE is sent back to executing agency for endorsement. Cleared and endorsed IEE is required prior to approval and issuance of tender documents and shall form part of the said tender documents.	For green category projects, within 15 days (green) from receipt of the application and accompanying documents, DOE will issue ECC or reject application giving reasons for its decision. For orange and red category projects, within 30 days and 60 days, respectively, from receipt of the application and accompanying documents, DOE will issue the Location Clearance Certificate (LCC) or will reject the application giving reasons for its decision. For orange-B category projects, within 30 days, DOE will issue the ECC or reject the application giving reasons for its decision. For category red projects, the proponent submits TOR for EIA and other accompanying documents or EIA based

Project Stage	ADB	Government of Bangladesh
		on a TOR previously approved by DOE. Within a further 30 days period, DOE will approve the EIA and issue the ECC or reject the application giving reasons for its decision. Once ECC is granted, construction work may begin.
Procurement/ Contract Award	No contract award until: (i) Environmental clearances required by the Government have been obtained; (ii) IEE has been finalized, cleared by ADB, and disclosed to public; (iii) IEE and other safeguard requirements are included in bidding documents and civil works contracts; and (iv) EMP implementation is reflected in PAM.	ECR has no reference to procurement and contract rules.
Implementation	ADB supervision missions shall review effective EMP implementation. Executing agency will submit to ADB the following documents for disclosure on ADB's website: (i) updated/final IEE (if updated/finalized due to change in scope and/or detailed design); (ii) corrective action plan prepared during project implementation, if any; and (iii) semi-annual environmental monitoring reports.	ECR has no requirement for post ECC monitoring or reporting. For orange and red category projects, the ECC must be renewed every year, for which the fee is 25% of the original application.

ADB = Asian Development Bank, DOE = Department of Environment, EARF = environmental assessment and review framework, ECC = Environmental Clearance Certificate, ECR = Environmental Conservation Rules, EIA = environmental impact assessment, EMP = environmental management plan, IEE = initial environmental examination, LCC = location clearance certificate, REA = rapid environmental assessment, TOR = terms of reference.

[a] ADB requires meaningful consultation, which is defined as a process that (i) begins early in the project preparation stage and is carried out on an ongoing basis throughout the project cycle; (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people; (iii) undertaken in an atmosphere free of intimidation or coercion; (iv) gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enables the incorporation of all relevant views of affected people and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues. This is required of all projects.

VI. CONSULTATION, INFORMATION DISCLOSURE, AND GRIEVANCE REDRESS MECHANISM

A. Consultation

53. ADB SPS, 2009 requires meaningful consultation (footnote 10) with affected people that:
- (i) begins early in the project preparation stage and is carried out on an ongoing basis throughout the project cycle;
- (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people;
- (iii) is undertaken in an atmosphere free of intimidation or coercion;
- (iv) is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and
- (v) enables the incorporation of all relevant views of affected people and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues.

54. As a minimum, stakeholders will be consulted regarding the scope of the environmental study and will then be informed during IEE preparation about the likely impacts of the subprojects and proposed mitigation measures. The report will record the views of stakeholders and indicate how these have been taken into account in subproject development. A variety of approaches for consultations include public meetings, focus group discussions, workshops, and public information campaigns. Public consultations include newspaper advertisement in the provincial and regional newspapers before 2 weeks of the consultations giving brief project description, location, and specific contact data (including telephone numbers). In the meetings, presentations will be provided about the subproject potential environmental and social impacts. Consultation sessions must have attendance sheets prepared and included as part of the documentation. See Table 13 below for the template.

Table 13: Template of Attendance Sheet for Consultation Meetings

S.N.	Name of Attendees	Gender (M/F)	Age	Affiliation and Position	Signature

55. Public consultation and involvement will be given highest priority in the implementation of mitigation measures. Public consultation will take place and on the basis of decision of the consultation meeting, implementation of mitigation measures will be prioritized and will be carried out with the involvement of the local people.

B. Information Disclosure

56. Information will be disclosed through public consultation and more formally by making documents and other materials available in a form and at a location in which stakeholders can easily access. This will involve making reports available at public locations in the subproject locations and providing a mechanism for the receipt of comments and making documents available more widely by lodging them on the ADB and the executing agencies' websites.

57. The executing agency through the PMCU will submit to ADB the following documents for disclosure on ADB's website:

(i) environmental assessment and review framework;
(ii) the final IEE report for each subproject;
(iii) new or updated IEE reports and corrective action plan prepared during project implementation, if any; and
(iv) semi-annual environmental monitoring reports.

58. PMCU will provide relevant environmental information, including information from the relevant documents in a timely manner, in an accessible place and in a form and language(s) understandable to affected people and other stakeholders. For illiterate people, other suitable communication methods will be used. For the benefit of the community, the summary of the IEE will be translated in Bangla and made available at: (i) offices of PMCU; and (ii) offices of the PIUs.

59. Hard copies of the IEE will be available in the PMCU and PIUs, and accessible to citizens as a means to disclose the document and at the same time creating wider public awareness. On demand, the person seeking information can obtain a hard copy of the complete IEE document at the cost of photocopy from the offices of the PMCU or PIUs, on a written request and payment for the same to the Project Director. Electronic version of the IEE will be placed in the official website of LGED after approval of the documents by Government and clearance from ADB. PMCU will issue notification on the disclosure mechanism in local newspapers, ahead of the initiation of implementation of the project, providing information on the project, as well as the start dates, etc. The notice will be issued by the PMCU and PIUs in local newspapers one month ahead of the implementation works. This will create awareness of the project implementation among the public. PMCU and the concerned PIU will consider other additional means of information disclosure depending on practicability, such as the distribution of posters to libraries within the locality of a subproject to mass campaign the basic tenets of the IEE.

C. Grievance Redress Mechanism

60. The project will adopt the grievance redress mechanism (GRM) outline of the first CRDP. The GRM shall be set up to register grievances of the people regarding technical, social and environmental aspects. Also, the GRM welcomes all kinds of technical and safeguards-related queries, comments, suggestions and complaints from anyone, including the workers and community people. The process will be designed to be transparent, gender responsive, culturally appropriate and commensurate to the risks and adverse impacts of the project, as well as readily accessible to all segments of the affected people. The project GRM will not supersede any legal government grievance procedures.

61. Affected people are to be informed about the mechanism through information caravan and orientation in the community to be conducted by the project officers and staff, printing of pamphlets and brochures, media and public outlets. To ensure wider coverage, complaints or grievances can be reported through but not limited to: letters, e-mails, text messages, verbal narration from walk-in complainants, phone calls, fax, online grievance registration form (in local dialects) through the project website, installation of Grievance Intake Box at the project area and other mode of filing that the affected people have access to. For those affected people who cannot read and write, a community leader/volunteer will be identified in every project area. The community leader/volunteer will serve as the focal person who will assist the affected people in filing the complaints. This participatory process shall ensure that all views of the people are adequately reviewed and suitably incorporated in the design and implementation process. The GRM will be implemented in three levels. See Figure 2 for the outline.

62. **First Level**. The first level and most accessible and immediate venue for the fastest resolve of grievances is the PIU, chiefly through the environment and/or social safeguard officers and project manager (or equivalent), with assistance from the environmental and social safeguard specialists of the preparation, design and supervision consultant (PDSC). The contact phone number will be posted in the project areas and at PMU and PIU websites and notice boards. Grievances will be resolved through continuous interactions with affected persons and the PIU will answer queries and resolve grievances regarding various issues including EMP implementation, land acquisition, structures acquisition, livelihood impacts, entitlements, and assistance. Corrective measures will be undertaken at the field-level itself within five days and feedback provided to the complainant on actions taken for resolution. All grievances will be documented with full information of the person and issue. A sample grievance form that may be used is in Appendix 10. The suggested format for record-keeping of grievance is in Appendix 11.

63. **Second Level**. Should the grievance remain unresolved, the PIU project manager (or equivalent), will activate the second level of the GRM by referring the issue (with written documentation) to the local grievance redress committee (GRC) of the *pourashava* or city corporation, who will, based on review of the grievances, address them in consultation with the safeguards officers of the PIU and PMCU, and affected persons. A hearing will be called, if necessary, where the affected person can present his/her concern/issues. The process will promote conflict resolution through mediation. The PIU project manager will be responsible for processing and placing all papers before the GRC, recording decisions, issuing minutes of the meetings, providing feedback to complainants and taking follow up actions so that formal orders are issued, and decisions are carried out. The local GRC will consist of the following persons: (i) chief executive officer or secretary of the *pourashava* or city corporation (GRC Chair); (ii) representative of the mayor of the *pourashava* or city corporation; (iii) representative of the affected persons; (iv) official of the land registry department; (v) official of the DOE divisional office; (vi) town planner of the *pourashava* or city corporation; and (vii) environmental and/or social safeguards officers of the PIU. The local GRC shall meet weekly, unless the Head of the PIU informs that there are no grievances to address, or they shall meet as needed as per the severity of the grievance. The local GRC will suggest corrective measures at the field level and assign responsibilities for implementing its decisions.

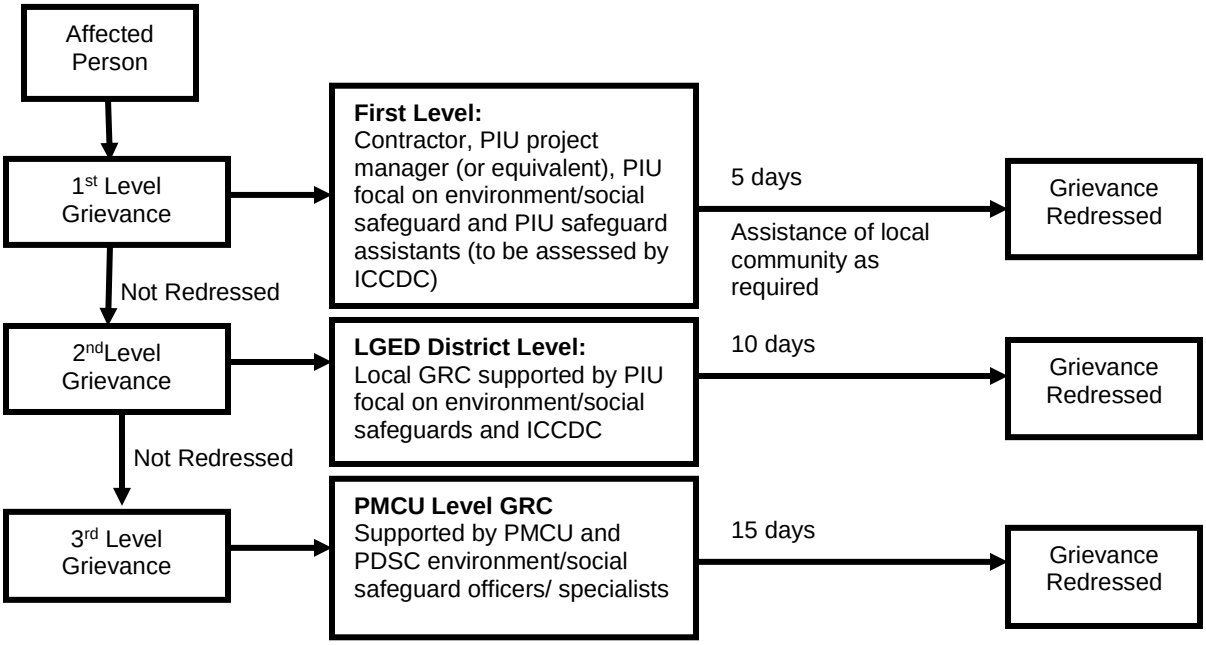
64. The functions of the local GRC are as follows: (i) provide support to affected persons on problems arising from land acquisition (temporary or permanent), asset acquisition and eligibility for entitlements, compensation and assistance, and other environmental or social safeguard issues unresolved at the first level of GRM; (ii) record grievances of affected persons, categorize and prioritize them and provide solutions within 10 days from receipt of grievance from the first level; and (iii) report to the aggrieved parties about developments regarding their grievances and decisions of the GRC.

65. **Third Level**. Should the grievance remain unresolved, the PIU head will activate the third level of the GRM by informing the PMCU project director who will, based on review of the local GRC minutes and consultation with the local GRC chair, activate the PMCU level GRC. This committee shall comprise the following representatives: (i) project director, PMCU, (ii) deputy project director, PMCU; (iii) environmental/resettlement safeguards officer of the PMCU; (iv) representative from Land Ministry; (v) representative from DOE; (vi) representative of the affected persons; and (vii) environmental and/or social safeguards officers of the PIU. The project director will sign off on all grievances received by the PMCU.

66. The GRC at the PMCU level shall meet based on the receipt of grievances, and the meeting shall be convened, and grievance redressed within 15 days of receipt of the grievance

by the PMCU. The environmental and/or social safeguards officer of the PMCU will be responsible for processing and placing all papers before the PMCU GRC, recording decisions, issuing minutes of the meetings and taking follow up action to see that formal orders are issued, and the decisions carried out, and final decision conveyed to the complainant.

Figure 2: Project Grievance Redress Mechanism[a]



GRC = grievance redress committee; ICCDC = institutional capacity and community development consultant, LGED = Local Government Engineering Department; PDSC = preparation, design and supervision consultant; PIU = project implementation unit; PMCU = project management coordination unit.

[a] Outline adopted from GRM of the first CRDP and revised to conform with new arrangements and nomenclatures of the project.

67. The GRM notwithstanding, an aggrieved person shall have access to the country's legal system at any stage. This can run parallel to accessing the GRM and is not dependent on the negative outcome of the GRM.

68. If the established GRM is not in a position to resolve the issue, the affected persons can also use the ADB Accountability Mechanism through directly contacting (in writing) the complaint receiving officer at ADB headquarters. The complaint can be submitted in any of the official languages of ADB's Developing Member Countries. The ADB Accountability Mechanism information will be included in the project information document to be distributed to the affected communities, as part of the project GRM.

VII. INSTITUTIONAL ARRANGEMENT AND RESPONSIBILITIES

A. Project Management Coordination Unit

69. LGED will be the executing agency responsible for overall guidance of the project and implementation of urban roads and solid waste management subprojects. The PMCU, headed by a project director will be responsible[17] for planning, management, coordination, supervision and progress monitoring of the project in the two city regions. The PMCU has the responsibility of fulfilling environmental requirements of the government and conducting required level of environmental assessment as per ADB SPS. To ensure effective implementation of the environmental aspects, one full-time environmental safeguards officer who is a permanent employee of LGED is assigned for PMCU. The environmental safeguards officer will primarily be responsible for the compliance to the statutory and legal requirements, including overall supervision of the implementation of the environmental management provisions in the IEEs and/or EMPs for the subprojects. The PDSC will assist the PMCU in this regard.

B. Project Implementation Units

70. The PIUs will be responsible for the day-to-day activities of project implementation in the field and will have direct supervision to all contractors at subproject sites. Each PIU will appoint least one environment staff responsible for day-to-day monitoring of the project progress and implementation of the environmental provisions in the EMP. The environment staff will ensure compliance with government and ADB requirements on environmental safeguards. The PIU will prepare quarterly progress reports on all aspects concerning environmental assessment, management, monitoring, and report to the PMCU.

C. Preparation, Design and Supervision Consultants

71. The preparation, design and supervision consultant (PDSC) team shall include the following environmental safeguards expertise to effectively implement the EARF and relevant provisions of the IEE reports of the subprojects: (i) an international environmental safeguards specialist (to be hired on “as needed” basis); and (ii) two national environmental specialists (for duration of implementation). These personnel will provide technical support to the PMCU and PIUs including implementation of the environmental requirements, according to ADB SPS, and assist in monitoring impacts and mitigation measures associated with subprojects. The PDSC safeguards specialists will support environmental management functions including updating subproject IEEs with respect to environmental management plans, assisting in preparing IEEs, and assist in monitoring impacts and mitigation measures associated with subprojects. The consultants will also provide needed training and capacity building support to the PMCU and PIUs. The indicative terms of reference for project environmental personnel is provided in Appendix 12.

72. The contractors of subprojects will have specific roles in the implementation of the EMPs. Each contractor shall have at least one full time environmental health and safety officer (or equivalent) responsible for implementing applicable measures in the EMP. All these specific roles and responsibilities will be defined in the IEE reports, which shall form part of the contract documents. PIUs will monitor contractors’ environmental performance.

[17] PMCU responsibilities shall include management of (i) Local Government Grant facility; (ii) Investment components under the Second CRDP; and (iii) Institutional Strengthening and Capacity building of the local governments. The Second CRDP PMCU will be advised by a Technical Advisory and Selection Committee and an Urban Management Support unit.

73. Table 14 summarizes the overall roles and responsibilities of PMCU, PIUs, and ADB. More specific roles and responsibilities of these institutions, including the roles and responsibilities of PDSC and contractors shall be defined in the corresponding IEE reports of subprojects.

Table 14: Institutional Roles and Responsibilities

Project Management Coordination Unit	Project Implementation Unit	ADB
Pre-construction stage		
Environmental officer of the PMCU, with assistance from the environmental specialist(s) of the PDSC to conduct Rapid Environmental Assessment (REA) for each subproject using checklists available on ADB's website. Based on the REA, categorize the project based on ADB's SPS. Submit all categorization forms to ADB.	PDSC will assist the PIU and conduct IEE (or update existing IEE) for all Category B subprojects, which will include an EMP. PIU with assistance from the Environmental Officer of the PMCU and the Environmental specialist of the PDSC to carry out public consultation during IEE process and incorporate consultation findings into project designs and IEE.	ADB to review the REA checklists and reconfirm the categorization.
PMCU based on review, will approve the IEE and send to ADB for review and clearance before contract award. The IEE also made available on request. Ensure IEE with the corresponding EMP is part of contract documents for category B subprojects and/or components. If the subproject and/or component is of category 'C', the PMCU to provide generic mitigation measures, if any, to be implemented. For Category C subprojects, no IEE/EIA is required, only a review of the environmental implications.	After the approval of IEE by PMCU and clearance by ADB, PIU with the assistance of PDSC to disclose the IEE and EMP to public information as required by ADB's SPS. PDSC, on behalf of the PIU, to incorporate mitigation measures in project design, specified in IEE and incorporate environmental mitigation and monitoring measures that need to be incorporated into contract document.	ADB will review and grant clearance of IEE/EMPs for subprojects before award of contracts. ADB will disclose cleared and government-endorsed IEEs on its website.
Environmental officer of PMCU to provide guidance to the PIU to ensure conformance of all subprojects to the regulatory compliance, with regard to environment. This shall include guidance in preparation of the documents as required for the issuance of ECC under the ECR and other necessary clearances such as for example tree cutting permits from the Ministry of Environment and Forests, submission of application forms, and liaising with agencies towards obtaining ECC, tree-cutting permits, and other clearances from relevant government agencies. Environmental officer of PMCU shall notify the ADB on obtaining of these clearances, including the conditions specified if any in the clearances, and integration of these into the contracts/EMP.	ECR stipulates that for (i) green, (ii) orange-A, (iii) orange–B, and (iv) red category projects, obtaining of environmental clearance certificate from DOE is a prerequisite. The environmental support staff of the PIU with assistance from PDSC environmental specialists shall compile the necessary information required for submission of application forms for clearances, obtaining NOC from local authorities, etc. Until the obtaining of clearance certificate from DOE, the environmental support staff will interact with the DOE on a regular basis and provide necessary documentation and clarifications as required.	ADB to ensure that the clearance requirements are included in the contract provisions/EMP.
Environmental officer of PMCU to ensure that the IEE containing the EMP of each subproject is included in the bid and	The environmental support staff of PIU to ensure that: (i) each contractor prepares its SEMP	

Project Management Coordination Unit	Project Implementation Unit	ADB
contract documents. At the same time, the Environmental officer of PMCU to ensure that the total budget for implementing the EMP is included in the bid and contract documents.	based on the EMP in the subproject IEE, and (ii) budget is included in the SEMP.	
Construction stage		
PMCU to review the PIU monthly monitoring reports to ensure that all mitigation measures are implemented. PMCU to consolidate the monthly reports and submit semi-annual reports to ADB for review. Corrective actions to be undertaken if needed.	Contractors to conduct environmental monitoring and implement EMPs. PIU with support of the environmental specialist(s) of PDSC to (i) review and approve the contractors' implementation plan for the environmental provisions in the EMP, and (ii) monitor the implementation of mitigation measures by contractor. The PDSC with PIU to prepare monthly progress reports including a section on implementation of the mitigation measures and submit to PMCU for review. PMCU to submit semi-annual monitoring report to ADB.	ADB to review the reports and provide necessary advice/guidance needed to the PMCU.
Operation Stage		
LGED and PIUs to conduct monitoring, as specified in the environmental monitoring plan of EMP. The DOE to monitor the performance, if required and as specified in monitoring plan of EMP.		ADB to review semi-annual environmental monitoring report and disclose on its website. ADB to prepare Project Completion Report
PMCU to continue submission of semi-annual environmental monitoring report to ADB until ADB issues a Project Completion Report.		

ADB = Asian Development Bank, DOE = Department of Environment, ECC = Environmental Compliance Certificate, ECR = Environmental Conservation Rules, EIA = environmental impact assessment, EMP = environmental management plan, IEE = initial environmental examination, PDSC = preparation, design, and supervision consultant, NOC = no objection certificate, PIU = project implementation unit, PMCU = project management coordination unit, REA = rapid environmental assessment, SPS = Safeguards Policy Statement.

D. Capacity Development

74. The PMCU safeguards experts (environmental and social) with support from PDSC will be responsible for training the PIUs' safeguards officers (environmental and social). Training modules will need to cover safeguards awareness and management in accordance with both ADB and government requirements as specified below:

(i) Environmental Safeguards
  (a) sensitization on ADB's safeguard policy on environment;
  (b) introduction to environment and environmental considerations in roads, drainage and solid waste management projects;
  (c) review of IEEs and integration into the project detailed design;
  (d) community and occupational health and safety considerations;
  (e) consultation and participation requirements;

(f) project GRM and ADB's Accountability Mechanism;
(g) improved coordination within nodal departments; and
(h) monitoring and reporting system. The contractors will be required to conduct environmental awareness and orientation of workers prior to deployment to work sites.

(ii) Social Safeguards
(a) sensitization on ADB's policies on Involuntary Resettlement and Indigenous People;
(b) introduction to social safeguards assessment and document requirements;
(c) Consultation and participations requirements;
(d) Project GRM and ADB's Accountability Mechanism; and
(e) monitoring and reporting system.

E. Staffing Requirement and Budget

75. Costs required for implementing the EARF will cover the following activities:

(i) Conducting environmental assessments of new subprojects, preparing and submitting reports and meaningful consultations and disclosure;
(ii) Application for Environmental Clearance; and
(iii) Implementation of EMP and long-term surveys.

76. For budgeting purposes, it is assumed that all new subprojects will be classified by ADB as Category B (requiring IEE), and that the report will also be deemed satisfactory by DOE. Some subprojects may require a simpler environmental review, but this is discounted for budgeting purposes. LGED will aim to produce a single document that is acceptable to both ADB and DOE to avoid duplication of effort.

77. Each of the IEE reports prepared to date involved approximately two working weeks equivalent of effort by an experienced environmental specialist, conducting the following activities: (i) site visit to assess environmental conditions and potential impacts of the scheme; (ii) liaison with the city corporation and others to obtain any environmental/social data that might be available locally (e.g. population figures, designated sites, etc.); (iii) consultation with the local community to inform them about the scheme and identify their views and concerns; (iv) assessment of impacts and development of mitigation; and (v) desk study and report preparation.

78. The infrastructure involved in each scheme is generally straightforward and will take between one to two years to build. Environmental monitoring during construction will also be straightforward and will involve periodic site observations and interviews with workers and others, plus checks of reports and other documents. This will be conducted by a national environmental management specialist of the management and supervision consultant and assisted by the PMCU environment officer. The environmental safeguard specialist of the PDSC will prepare EIAs (under ECR, 1997), IEEs, or environmental reviews for new subprojects. The budget therefore includes the full cost of the Environmental Specialist.

79. The cost of mitigation measures and surveys during construction stage will be incorporated into the contractor's costs, which will be binding upon the contractor. The surveys will be conducted by the contractor.

80. The operation phase mitigation measures are again of good operating practices, which will be the responsibility of the PIUs. All monitoring during the operation and maintenance phase will be conducted by and costs borne by LGED.

81. The indicative costs of EARF implementation are shown in Table 15.

Table 15: Indicative Cost of Environmental Assessment and Review Framework Implementation

Component	Description	Number	Cost Per Unit ($)	Cost ($)	Source of Funds
A. Consultants Costs					
PDSC-1 Environmental Safeguards Specialist	Responsible for preparation of IEEs for new subprojects and updating of existing IEEs based on detailed design and preparation of new IEEs	9-person months	$4,000	$36,000	Remuneration and budget for travel covered in the PDSC contract
PDSC-2 Environmental Safeguards Specialists	Responsible for environmental safeguards of the project	40-person months (spread over entire project implementation period)	$4,000	$160,000	Remuneration and budget for travel covered in the PDSC contract
B. Administrative Costs					
Legislation, permits, and agreements	Permit for excavation, tree-cutting permits, etc.	Lump sum	$1,000	$1,000	These consents are to be obtained by contractor at its own expense.
	Environmental assessment and environmental clearances as per ECA and ECR requirements Obtaining right of way clearances with related national agencies.	Lump sum	$10,000	$10,000	LGED cost for infrastructures
C. Environmental Monitoring Costs					
Baseline monitoring prior to construction	During detailed design stage to establish existing environmental conditions	Lump sum	$5,000	$5,000	Included in the PDA and PDSC contract
	Before start of construction works	1 sample each for noise, ambient air quality, receiving/adjacent body of water	$1,000 per subproject	$20,000	Contractor's cost

Component	Description	Number	Cost Per Unit ($)	Cost ($)	Source of Funds
Monitoring during construction	Sampling sites near sensitive areas (schools, hospitals, places of worship, historical/cultural areas)	Portable noise meters	Contractor's liability	Not applicable	Contractor's cost
D. Other Costs					
Public consultations and information disclosure	Information disclosure and consultations during preconstruction and construction phase, including public awareness campaign through media	As per requirement	Lump sum	$15,000	Covered under PDSC (including ICCDC) contracts
Capacity building	(i) Orientation workshop for officials involved in the project implementation on ADB Safeguards Policy Statement, Government of Bangladesh environmental laws and regulations, and environmental assessment process; (ii) induction course contractors, preparing them on EMP implementation and environmental monitoring requirements related to mitigation measures; and taking immediate action to remedy unexpected adverse impacts or ineffective mitigation measures found during the course of implementation; and (iii) lessons learned information sharing	Module 1 – immediately upon engagement of the PDSC environmental safeguards specialist Module 2 – prior to award of civil works contracts (twice a year for 4 years) Module 3 – prior to start of Phase 2 and upon completion of the project	Module 1 - $500 Module 2 - $200 Module 3 - $500	$4,700	Covered under PDSC (including ICCDC) contracts
GRM implementation	Costs involved in resolving complaints (meetings, consultations, communication, and reporting/information dissemination)	Lump sum	Part of administration cost of PMCU	$1,500 per year	PMCU cost
Any unanticipated impact due to project implementation	Mitigation of any unanticipated impact arising during construction phase and defect liability period	Lump sum	Contractor's liability	As per insurance requirement	Contractor's insurance

ADB = Asian Development Bank, EARF = environmental assessment and review framework, ECA = Environmental Conservation Act, ECR = Environmental Conservation Rules, EMP = environmental management plan, GRM = grievance redress mechanism, ICCDC = institutional capacity and community development consultant, IEE = initial environmental examination, LGED = Local Government Engineering Department, PDSC= preparation, design and supervision consultant, PMCU = project management coordination unit, PDA = project design advance.

VIII. MONITORING AND REPORTING

82. PMCU will monitor the safeguards compliance and progress of EMP implementation in the different subproject jurisdictions. The PMCU and PIU will undertake site inspections and document review to verify compliance and progress toward the final outcome of the subproject. The contractor will conduct day to day implementation of the SEMP.

83. The contractor will submit monthly reports to the PIU with jurisdiction over the subproject sites. The monthly reports will include compilation of copies of monitoring sheets accomplished and duly signed by the contractor's EHS supervisor (or equivalent) on a daily basis. A sample daily monitoring sheet which can be used by the contractors is in Appendix 13. This monitoring sheet is indicative which can be further enhanced depending on the actual situations at subproject construction sites.

84. The PIU will submit quarterly environmental monitoring reports to PMCU, which will include summary of daily monitoring activities of contractor and results of any independent monitoring or inspection activities of the PIU. In the conduct of these independent inspection activities, PIU will be supported by PDSC in this regard. A sample inspection checklist is in Appendix 14. This checklist is indicative which can be further enhanced depending on the actual situations at subproject construction sites.

85. PMCU shall consolidate quarterly reports from the PIUs and results of its independent monitoring or inspection activities. PMCU shall accomplish semi-annual environmental monitoring report (SEMRs), which shall be submitted to ADB for review and disclosure on ADB website. Submission of SEMR will continue until ADB issues a Project Completion Report. The template for the SEMR is attached as Appendix 15.

86. ADB will carry out the following monitoring actions to supervise the project implementation:

(i) on a need basis, conduct site visits for subproject with potential adverse environmental or social impact;
(ii) conduct supervision missions with detailed review by ADB's environment and social safeguard specialists and/or officers and/or consultants for subprojects with adverse environmental and social impacts;
(iii) review the SEMRs submitted by PMCU to ensure that adverse impacts and risks are mitigated as planned in the EMP;
(iv) work with LGED to rectify to the extent possible any failures to comply with its environmental safeguard commitments, as covenanted in the loan agreement and elaborated in all environmental safeguard documents; and formulate and implement a corrective action plan to re-establish compliance as appropriate; and
(iv) prepare a project completion report that assesses whether the objective and desired outcomes of the safeguard plans have been achieved, taking into account the baseline conditions and the results of monitoring.

87. ADB's monitoring and supervision activities are carried out on an on-going basis until a Project Completion Report is issued. ADB issues a Project Completion Report within 1-2 years after the project is physically completed and in operation.

INDICATIVE LIST OF SUBPROJECT PACKAGES REQUIRING CIVIL WORKS

Package Number	General Description
GCC/W-01	Improvement of road (Shahid Niamat road, Aambagh Municipal road, IUT to Icharkandi and Signboard to Kamarjuri road)
GCC/W-02	Improvement of road (Jarun road, East Enayetpur road and Bhabanipur to Mother Textile road.)
Savar/LGED/W-01	Improvement of road (Jahangir Nagar-Bhasani Hall-Daskhin Sinduria; Kaliakoir-Chakula; and Dhaka Aricha Highway Savar UP road)
Savar/LGED/W-02	Improvement of road (Nayarhat GC-Savar GC, Dairy Farm Gate - Pathalia UP and other roads)
Savar/LGED/W-03	Improvement of road (Kornapara-Nama Genda road, Shadhapur- Bongaon UP road. Shadhapur-Goperbari Razashon Bridge road)
Savar/LGED/W-04	Improvement of road (Balivadra GC-Dhamshona UP – Simulia UP; and Nabinagar-Kaliakoir RHD)
Savar/LGED/W-05	Improvement of road (Bangobandhu road at RHD Miabarimorh to Baliarpur; and Sadullahpur Bazar to Chakulia Bazar)
Savar/LGED/W-08	Construction of 125.00m Bridge at Ch.4700 m on Zirani Bazar to Shimulia GC road)
Savar/LGED/W-09	Construction of 150.00 m Bridge at Ch.00 m on Saitsh Kandi at Turag River bank to Zirabo via Toyebpur – Yearpur
Savar/ LGED/W-10	Construction of 120.00 m Bridge at Ch.1825 m on Boliarpur Bazar – Bangaon UP – Chakulia Bazar Road
Savar/Pou/W-01	Improvement of roads in Savar Pourashava
Rupganj/LGED/W-01	Improvement of roads (Rupshi GC-Kanchan GC; and Murapara GC-Mohishvita - RHD road)
Rupganj/LGED/W-02	Improvement of roads (Kanchan GC-Sorankhali bazar Chanpara RHD; Kanchan GC – Atlapur Bazar – Danga RHD Road; and Sornokhali Bazar – Bolabo UP)
Rupganj/LGED/W-03	Improvement of roads (Rupshi-Kanchon GC to Dogarkhal; Tarabo GC – Rupshi Bazar; and Borpa RHD – Mohajampur UP road)
Rupganj/LGED/W-04	Improvement of roads (Rupganj Deboi – Beldi bazar – Kaligonj road; and Porshi GC – Murapara GC via Rupganj road)
Araihazar/LGED/W-01[a]	Improvement of roads (Binairchar to Kamrangir Char; Fakirbari to Kamrangirchar; Bagbari to Nowagoan; and Mukundi to Araihazar)
Araihazar/LGED/W-02	Improvement of roads (Govt. Safar Ali College to Araihazar Upazilla Parishad; RHD Araihazar bazar-Araihazar Purinda; Laskardi to Langardi Bazar; Kalibari Bazar to Panchrukhy; Duptara to Buntim Pullah)
Araihazar/LGED/W-03	Improvement of roads (Araihazar to Purinda bazar; Nowdha –Charigram; Noapara –Abdullahpur via Bailakandi)
Araihazar/LGED/W-04	Improvement of roads (Gopaldi GC to Mollarchar RHD; and Uchitpura GC to Gopaldi GC)
Araihazar/LGED/W-05	Improvement of roads (Uzangobindir morh to Fausha; KalibariDewanpara to Bashtala Ghat link to Manehar Madrasha; Kalibari to Monohordi; Duptara RHD to Panchrukhi)
Tarabo/W-01	Drainage Improvement of Tarabo Pourashava.
Sonargaon/W-01	Drainage Improvement of Sonargaon Pourashava.
Singair/W-01	Drainage Improvement of Singair Pourashava.
Narsingdi/W-01	Drainage Improvement of Narsingdi Pourashava.
Manikganj/W-01[a]	Drainage Improvement of Manikganj Pourashava
Kanchon/W-01	Drainage Improvement of Kanchon Pourashava.
Kaliakoir/W-01	Drainage Improvement of Kaliakoir Pourashava.
Dhamrai/W-01	Drainage Improvement of Dhamrai Pourashava.
Jessore/W-01	Drainage improvement of Jessore Pourashava including improvement of Central Bus Terminal of Jessore

Package Number	General Description
Nowapara/ W-01	Drainage Improvement of Nowapara Pourashava.
Jhikorgacha/ W-01	Drainage Improvement of Jhikorgacha Pourashava.
Mongla/ W-01	Drainage Improvement of Mongla Port Pourashava.
Chalna/ W-01	Drainage Improvement of Chalna Pourashava.
Khulna city corporation/ Composting Plant[a]	Comprehensive Solid Waste Management Plan and Small Works (Composting Plant) for Khulna City Corporation

[a] Subprojects with sample IEE prepared for loan processing.

RAPID ENVIRONMENTAL ASSESSMENT CHECKLIST FOR ROADS AND DRAINS PROJECT

1. Roads and Bridges

Country/Project Title: **Bangladesh / Second City Region Development Project**

Subproject / Package No.:

Screening Questions	Yes	No	Remarks
A. Project Siting Is the project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site			
▪ Protected Area			
▪ Wetland			
▪ Mangrove			
▪ Estuarine			
▪ Buffer zone of protected area			
▪ Special area for protecting biodiversity			
B. Potential Environmental Impacts Will the Project cause…			
▪ encroachment on historical/cultural areas; disfiguration of landscape by road embankments, cuts, fills, and quarries?			
▪ encroachment on precious ecology (e.g. sensitive or protected areas)?			
▪ alteration of surface water hydrology of waterways crossed by roads, resulting in increased sediment in streams affected by increased soil erosion at construction site?			
▪ deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?			
▪ increased local air pollution due to rock crushing, cutting and filling works, and chemicals from asphalt processing?			
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation during project construction and operation?			
▪ noise and vibration due to blasting and other civil works?			
▪ dislocation or involuntary resettlement of people?			
▪ dislocation and compulsory resettlement of people living in right-of-way?			
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
▪ other social concerns relating to inconveniences in living conditions in the project areas that may trigger cases of upper respiratory problems and stress?			

Screening Questions	Yes	No	Remarks
▪ hazardous driving conditions where construction interferes with pre-existing roads?			
▪ poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases (such as STI's and HIV/AIDS) from workers to local populations?			
▪ creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents?			
▪ accident risks associated with increased vehicular traffic, leading to accidental spills of toxic materials?			
▪ increased noise and air pollution resulting from traffic volume?			
▪ increased risk of water pollution from oil, grease and fuel spills, and other materials from vehicles using the road?			
▪ social conflicts if workers from other regions or countries are hired?			
▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?			
▪ community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning.			

A Checklist for Preliminary Climate Risk Screening

Country/Project Title: Bangladesh / Second City Region Development Project

Subproject / Package No.:

Screening Questions		Score	Remarks[a]
Location and Design of project	Is siting and/or routing of the project (or its components) likely to be affected by climate conditions including extreme weather-related events such as floods, droughts, storms, landslides?		
	Would the project design (e.g. the clearance for bridges) need to consider any hydro-meteorological parameters (e.g., sea-level, peak river flow, reliable water level, peak wind speed etc.)?		
Materials and Maintenance	Would weather, current and likely future climate conditions (e.g., prevailing humidity level, temperature		

Screening Questions		Score	Remarks[a]
	contrast between hot summer days and cold winter days, exposure to wind and humidity hydro-meteorological parameters likely affect the selection of project inputs over the life of project outputs (e.g. construction material)?		
	Would weather, current and likely future climate conditions, and related extreme events likely affect the maintenance (scheduling and cost) of project output(s) ?		
Performance of project outputs	Would weather/climate conditions, and related extreme events likely affect the performance (e.g. annual power production) of project output(s) (e.g. hydro-power generation facilities) throughout their design life time?		

[a] If possible, provide details on the sensitivity of project components to climate conditions, such as how climate parameters are considered in design standards for infrastructure components, how changes in key climate parameters and sea level might affect the siting/routing of project, the selection of construction material and/or scheduling, performances and/or the maintenance cost/scheduling of project outputs.

Options for answers and corresponding score are provided below:

Response	Score
Not Likely	0
Likely	1
Very Likely	2

Responses when added that provide a score of 0 will be considered low risk project. If adding all responses will result to a score of 1-4 and that no score of 2 was given to any single response, the project will be assigned a medium risk category. A total score of 5 or more (which include providing a score of 1 in all responses) or a 2 in any single response, will be categorized as high-risk project.

Result of Initial Screening (Low, Medium, High): _____

Other Comments: _____

Prepared by: _____

RAPID ENVIRONMENTAL ASSESSMENT CHECKLIST FOR SOLID WASTE MANAGEMENT PROJECT

Country/Project Title: Bangladesh / Second City Region Development Project

Subproject / Package No.:

Sector Division:

Screening Questions	Yes	No	Remarks
A. Project Siting Is the project area…			
▪ Densely populated?			
▪ Heavy with development activities?			
▪ Adjacent to or within any environmentally sensitive areas?			
• Cultural heritage site			
• Protected Area			
• Wetland			
• Mangrove			
• Estuarine			
• Buffer zone of protected area			
• Special area for protecting biodiversity			
• Bay			
B. Potential Environmental Impacts Will the Project cause…			
▪ impacts associated with transport of wastes to the disposal site or treatment facility			
▪ impairment of historical/cultural monuments/areas and loss/damage to these sites?			
▪ degradation of aesthetic and property value loss?			
▪ nuisance to neighboring areas due to foul odor and influx of insects, rodents, etc.?			
▪ dislocation or involuntary resettlement of people?			
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
▪ risks and vulnerabilities related occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?			
▪ public health hazards from odor, smoke from fire, and diseases transmitted by flies, insects, birds and rats?			
▪ deterioration of water quality as a result of contamination of receiving waters by leachate from land disposal system?			
▪ contamination of ground and/or surface water by leach ate from land disposal system?			
▪ land use conflicts?			
▪ pollution of surface and ground water from leach ate coming from sanitary landfill sites or methane gas produced from decomposition of solid wastes in the absence of air, which could enter the aquifer or escape through soil fissures at places far from the landfill site?			

Screening Questions	Yes	No	Remarks
▪ inadequate buffer zone around landfill site to alleviate nuisances?			
▪ road blocking and/or increased traffic during construction of facilities?			
▪ noise and dust from construction activities?			
▪ temporary silt runoff due to construction?			
▪ hazards to public health due to inadequate management of landfill site caused by inadequate institutional and financial capabilities for the management of the landfill operation?			
▪ emission of potentially toxic volatile organics from land disposal site?			
▪ surface and ground water pollution from leach ate and methane gas migration?			
▪ loss of deep-rooted vegetation (e.g. tress) from landfill gas?			
▪ explosion of toxic response from accumulated landfill gas in buildings?			
▪ contamination of air quality from incineration?			
▪ public health hazards from odor, smoke from fire, and diseases transmitted by flies, rodents, insects and birds, etc.?			
▪ health and safety hazards to workers from toxic gases and hazardous materials in the site?			
▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ social conflicts if workers from other regions or countries are hired?			
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?			
▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components (e.g., landfill or incinerator) of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

A Checklist for Preliminary Climate Risk Screening

Country/Project Title: Bangladesh / Second City Region Development Project

Subproject / Package No.:

Screening Questions		Score	Remarks[a]
	Is siting and/or routing of the project (or its components) likely to be affected by climate conditions including		

Screening Questions		Score	Remarks[a]
Location and Design of project	extreme weather-related events such as floods, droughts, storms, landslides?		
	Would the project design (e.g. the clearance for bridges) need to consider any hydro-meteorological parameters (e.g., sea-level, peak river flow, reliable water level, peak wind speed etc.)?		
Materials and Maintenance	Would weather, current and likely future climate conditions (e.g. prevailing humidity level, temperature contrast between hot summer days and cold winter days, exposure to wind and humidity hydro-meteorological parameters likely affect the selection of project inputs over the life of project outputs (e.g. construction material)?		
	Would weather, current and likely future climate conditions, and related extreme events likely affect the maintenance (scheduling and cost) of project output(s)?		
Performance of project outputs	Would weather/climate conditions, and related extreme events likely affect the performance (e.g. annual power production) of project output(s) (e.g. hydro-power generation facilities) throughout their design life time?		

[a] If possible, provide details on the sensitivity of project components to climate conditions, such as how climate parameters are considered in design standards for infrastructure components, how changes in key climate parameters and sea level might affect the siting/routing of project, the selection of construction material and/or scheduling, performances and/or the maintenance cost/scheduling of project outputs.

Options for answers and corresponding score are provided below:

Response	Score
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Very Likely	2

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Result of Initial Screening (Low, Medium, High): _____

Other Comments: _____

Prepared by: _____

CHECKLIST FOR NO MITIGATION SCENARIO FOR THE SECOND CITY REGION DEVELOPMENT PROJECT

Checklist 1: Scoping Checklist Part 1 - Questions on Project/Subproject Characteristics

No.	Questions to be considered in Scoping	Yes/No/?	Which Characteristics of the Project / Subproject Environment could be affected and how?	Is the effect likely to be significant? Why?
1. Will construction, operation or decommissioning of the Project / Subproject involve actions which will cause physical changes in the locality (topography, land use, changes in waterbodies, etc.)?				
1.1	Permanent or temporary change in land use, landcover or topography including increases in intensity of land use?			
1.2	Clearance of existing land, vegetation and buildings?			
1.3	Creation of new land uses?			
1.4	Pre-construction investigations e.g. boreholes, soil testing?			
1.5	Construction works?			
1.6	Demolition works?			
1.7	Temporary sites used for construction works or housing of construction workers?			
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations?			
1.9	Underground works including mining or tunneling?			
1.10	Reclamation works?			
1.11	Dredging?			
1.12	Coastal structures e.g., seawalls, piers?			
1.13	Offshore structures?			
1.14	Production and manufacturing processes?			
1.15	Facilities for storage of goods or materials?			
1.16	Facilities for treatment or disposal of solid wastes or liquid effluents?			
1.17	Facilities for long term housing of operational workers?			
1.18	New road, rail or sea traffic during construction or operation?			
1.19	New road, rail, air, waterborne or other transport infrastructure including new			

No.	Questions to be considered in Scoping	Yes/No/?	Which Characteristics of the Project / Subproject Environment could be affected and how?	Is the effect likely to be significant? Why?
	or altered routes and stations, ports, airports etc.?			
1.20	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?			
1.21	New or diverted transmission lines or pipelines?			
1.22	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?			
1.23	Stream crossings?			
1.24	Abstraction or transfers of water from ground or surface waters?			
1.25	Changes in waterbodies or the land surface affecting drainage or run-off?			
1.26	Transport of personnel or materials for construction, operation or decommissioning?			
1.27	Long term dismantling or decommissioning or restoration works?			
1.28	Ongoing activity during decommissioning which could have an impact on the environment?			
1.29	Influx of people to an area in either temporarily or permanently?			
1.30	Introduction of alien species?			
1.31	Loss of native species or genetic diversity?			
1.32	Any other actions?			
2. Will construction or operation of the Project / Subproject use natural resources such as land, water, materials or energy, especially any resources which are non-renewable or in short supply?				
2.1	Land especially undeveloped or agricultural land?			
2.2	Water?			
2.3	Minerals?			
2.4	Aggregates?			
2.5	Forests and timber?			
2.6	Energy including electricity and fuels?			
2.7	Any other resources?			

No.	Questions to be considered in Scoping	Yes/No/?	Which Characteristics of the Project / Subproject Environment could be affected and how?	Is the effect likely to be significant? Why?
3. Will the Project / Subproject involve use, storage, transport, handling or production of substances or materials which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health?				
3.1	Will the Project / Subproject involve use of substances or materials which are hazardous or toxic to human health or the environment (flora, fauna, water supplies)?			
3.2	Will the Project / Subproject result in changes in occurrence of disease or affect disease vectors (e.g., insect or water borne diseases)?			
3.3	Will the Project / Subproject affect the welfare of people e.g., by changing living conditions?			
3.4	Are there especially vulnerable groups of people who could be affected by the Project / Subproject e.g., hospital patients, the elderly?			
3.5	Any other causes?			
4. Will the Project / Subproject produce solid wastes during construction or operation or decommissioning?				
4.1	Spoil, overburden or mine wastes?			
4.2	Municipal waste (household and or commercial wastes)?			
4.3	Hazardous or toxic wastes (including radioactive wastes)?			
4.4	Other industrial process wastes?			
4.5	Surplus product?			
4.6	Sewage sludge or other sludges from effluent treatment?			
4.7	Construction or demolition wastes?			
4.8	Redundant machinery or equipment?			
4.9	Contaminated soils or other material?			
4.10	Agricultural wastes?			
4.11	Any other solid wastes?			
5. Will the Project / Subproject release pollutants or any hazardous, toxic or noxious substances to air?				

No.	Questions to be considered in Scoping	Yes/No/?	Which Characteristics of the Project / Subproject Environment could be affected and how?	Is the effect likely to be significant? Why?
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources?			
5.2	Emissions from production processes?			
5.3	Emissions from materials handling including storage or transport?			
5.4	Emissions from construction activities including plant and equipment?			
5.5	Dust or odors from handling of materials including construction materials, sewage and waste?			
5.6	Emissions from incineration of waste?			
5.7	Emissions from burning of waste in open air (e.g., slash material, construction debris)?			
5.8	Emissions from any other sources?			
6. Will the Project / Subproject cause noise and vibration or release of light, heat energy or electromagnetic radiation?				
6.1	From operation of equipment e.g., engines, ventilation plant, crushers?			
6.2	From industrial or similar processes?			
6.3	From construction or demolition?			
6.4	From blasting or piling?			
6.5	From construction or operational traffic?			
6.6	From lighting or cooling systems?			
6.7	From sources of electromagnetic radiation (consider effects on nearby sensitive equipment as well as people)?			
6.8	From any other sources?			
7. Will the Project / Subproject lead to risks of contamination of land or water from releases of pollutants onto the ground or into sewers, surface waters, groundwater, coastal waters or the sea?				
7.1	From handling, storage, use or spillage of hazardous or toxic materials?			

No.	Questions to be considered in Scoping	Yes/No/?	Which Characteristics of the Project / Subproject Environment could be affected and how?	Is the effect likely to be significant? Why?
7.2	From discharge of sewage or other effluents (whether treated or untreated) to water or the land?			
7.3	By deposition of pollutants emitted to air, onto the land or into water?			
7.4	From any other sources?			
7.5	Is there a risk of long-term build-up of pollutants in the environment from these sources?			
8. Will there be any risk of accidents during construction or operation of the Project / Subproject which could affect human health or the environment?				
8.1	From explosions, spillages, fires etc. from storage, handling, use or production of hazardous or toxic substances?			
8.2	From events beyond the limits of normal environmental protection e.g. failure of pollution control systems?			
8.3	From any other causes?			
8.4	Could the Project / Subproject be affected by natural disasters causing environmental damage (*e.g.* floods, earthquakes, landslip, *etc.*)?			
9. Will the Project / Subproject result in social changes, for example, in demography, traditional lifestyles, employment?				
9.1	Changes in population size, age, structure, social groups *etc.*?			
9.2	By resettlement of people or demolition of homes or communities or community facilities e.g. schools, hospitals, social facilities?			
9.3	Through in-migration of new residents or creation of new communities?			
9.4	By placing increased demands on local facilities or services e.g. housing, education, health?			
9.5	By creating jobs during construction or operation or			

No.	Questions to be considered in Scoping	Yes/No/?	Which Characteristics of the Project / Subproject Environment could be affected and how?	Is the effect likely to be significant? Why?
	causing the loss of jobs with effects on unemployment and the economy?			
9.6	Any other causes?			
Question - Are there any other factors which should be considered such as consequential development which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality?				
9.1	Will the Project / Subproject lead to pressure for consequential development which could have significant impact on the environment e.g. more housing, new roads, new supporting industries or utilities, etc.?			
9.2	Will the Project / Subproject lead to development of supporting facilities, ancillary development or development stimulated by the Project / Subproject which could have impact on the environment e.g.: • supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) • housing development • extractive industries • supply industries other?			
9.3	Will the Project / Subproject lead to after-use of the site which could have an impact on the environment?			
9.4	Will the Project / Subproject set a precedent for later developments?			
9.5	Will the Project / Subproject have cumulative effects due to proximity to other existing or planned projects with similar effects?			

Checklist 2: Scoping Checklist Part 2 - Characteristics of the Project/Subproject Environment (Environmental Sensitivity)

Question - Are there features of the local environment on or around the Project / Subproject location which could be affected by the Project / Subproject? • Areas which are protected under international or national or local legislation for their ecological, landscape, cultural or other value, which could be affected by the Project / Subproject? • Other areas which are important or sensitive for reasons of their ecology e.g. • Wetlands, • Watercourses or other waterbodies, • the coastal zone, • mountains, • forests or woodlands • Areas used by protected, important or sensitive species of fauna or flora e.g. for breeding, nesting, foraging, resting, overwintering, migration, which could be affected by the Project / Subproject? • Inland, coastal, marine or underground waters? • Areas or features of high landscape or scenic value? • Routes or facilities used by the public for access to recreation or other facilities? • Transport routes which are susceptible to congestion or which cause environmental problems? • Areas or features of historic or cultural importance?	
Question - Is the Project / Subproject in a location where it is likely to be highly visible to many people?	
Question - Is the Project / Subproject located in a previously undeveloped area where there will be loss of greenfield land?	
Question - Are there existing land uses on or around the Project / Subproject location which could be affected by the Project / Subproject? For example: • Homes, gardens, other private property, • Industry, • Commerce, • Recreation, • public open space, • community facilities, • agriculture, • forestry, • tourism, • mining or quarrying	
Question - Are there any plans for future land uses on or around the location which could be affected by the Project / Subproject?	
Question - Are there any areas on or around	

the location which are densely populated or built-up, which could be affected by the Project / Subproject?	
Question - Are there any areas on or around the location which are occupied by sensitive land uses which could be affected by the Project / Subproject? • hospitals, • schools, • places of worship, • community facilities	
Question - Are there any areas on or around the location which contain important, high quality or scarce resources which could be affected by the Project / Subproject? For example: • groundwater resources, • surface waters, • forestry, • agriculture, • fisheries, • tourism, • minerals.	
Question - Are there any areas on or around the location of the Project / Subproject which are already subject to pollution or environmental damage e.g. where existing legal environmental standards are exceeded, which could be affected by the Project / Subproject?	
Question - Is the Project / Subproject location susceptible to earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions e.g. temperature inversions, fogs, severe winds, which could cause the Project / Subproject to present environmental problems?	
Question - Is the Project / Subproject likely to affect the physical condition of any environmental media? • The atmospheric environment including microclimate and local and larger scale climatic conditions? • Water – e.g., quantities, flows or levels of rivers, lakes, groundwater. Estuaries, coastal waters or the sea? • Soils – e.g., quantities, depths, humidity, stability or erdodibility of soils? • Geological and ground conditions?	
Question - Are releases from the Project / Subproject likely to have effects on the quality of any environmental media? • Local air quality? • Global air quality including climate change and ozone depletion • Water quality – rivers, lakes, groundwater.	

Estuaries, coastal waters or the sea? • Nutrient status and eutrophication of waters? • Acidification of soils or waters? • Soils • Noise? • Temperature, light or electromagnetic radiation including electrical interference? • Productivity of natural or agricultural systems?	
Question - Is the Project / Subproject likely to affect the availability or scarcity of any resources either locally or globally? • Fossil fuels? • Water? • Minerals and aggregates? • Timber? • Other non-renewable resources? • Infrastructure capacity in the locality - water, sewerage, power generation and transmission, telecommunications, waste disposal roads, rail?	
Question - Is the Project / Subproject likely to affect human or community health or welfare? • The quality or toxicity of air, water, foodstuffs and other products consumed by humans? • Morbidity or mortality of individuals, communities or populations by exposure to pollution? • Occurrence or distribution of disease vectors including insects? • Vulnerability of individuals, communities or populations to disease? • Individuals' sense of personal security? • Community cohesion and identity? • Cultural identity and associations? • Minority rights? • Housing conditions? • Employment and quality of employment? • Economic conditions? • Social institutions?	

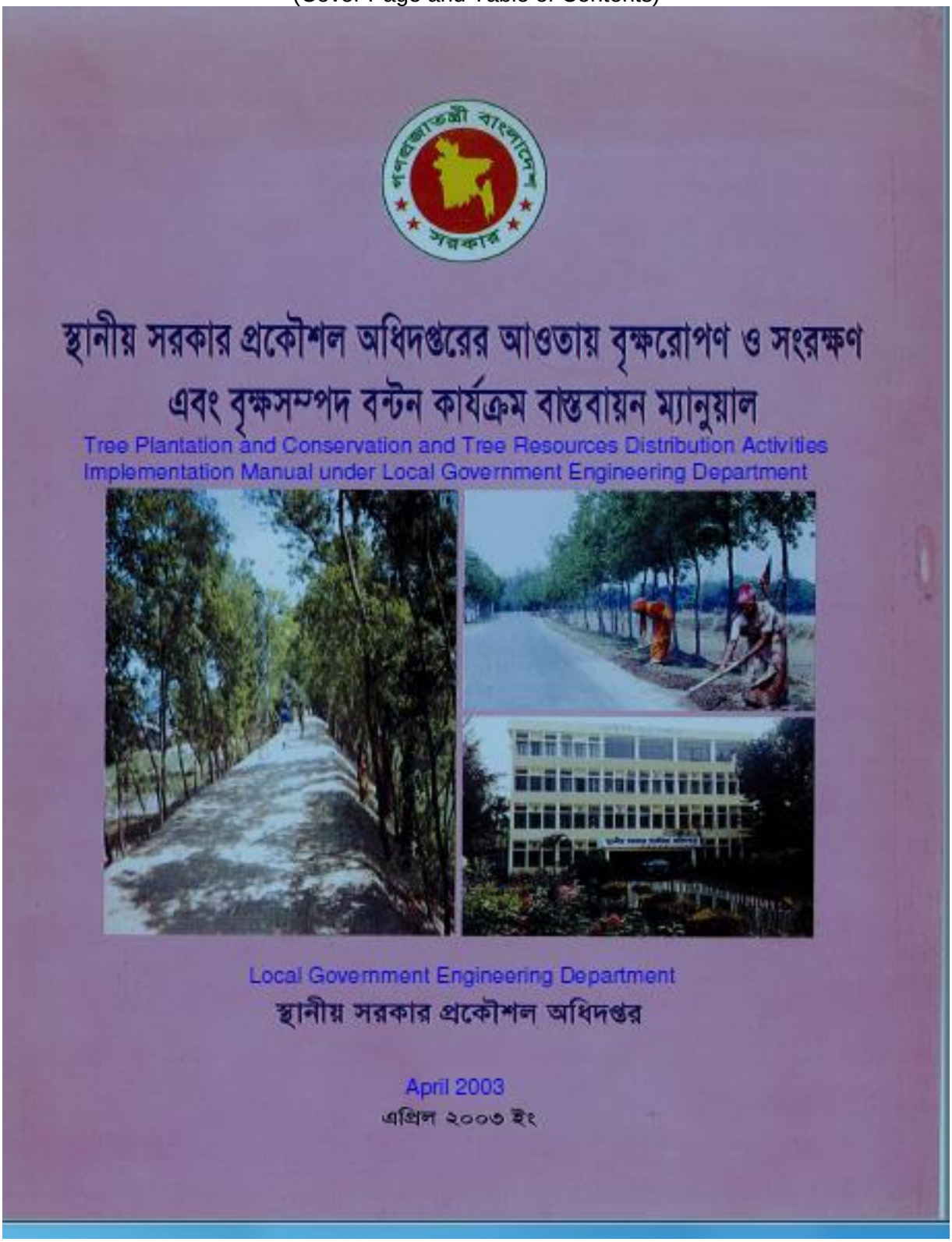
Checklist 3: Significance of Impacts

Questions to be Considered	
1. Will there be a large change in environmental conditions?	
2. Will new features be out-of-scale with the existing environment?	
3. Will the effect be unusual in the area or particularly complex?	
4. Will the effect extend over a large area?	
5. Will there be any potential for transboundary impact?	
6. Will many people be affected?	
7. Will many receptors of other types (fauna and flora, businesses, facilities) be affected?	
8. Will valuable or scarce features or resources be affected?	

Questions to be Considered	
9. Is there a risk that environmental standards will be breached?	
10. Is there a risk that protected sites, areas, features will be affected?	
11. Is there a high probability of the effect occurring?	
12. Will the effect continue for a long time?	
13. Will the effect be permanent rather than temporary?	
14. Will the impact be continuous rather than intermittent?	
15. If it is intermittent will it be frequent rather than rare?	
16. Will the impact be irreversible?	
17. Will it be difficult to avoid, or reduce or repair or compensate for the effect?	

LOCAL GOVERNMNET ENGINEERING DIVISION TREE PLANTATION PROGRAM MANUAL

(Cover Page and Table of Contents)



Note: Copy of the full manual is available upon request at the PMCU Office.

Tree Plantation and Conservation and Tree Resources Distribution Activities Implementation Manual under Local Government Engineering Department

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ADB'S PRACTICAL GUIDE ON INTEGRATED SOLID WASTE MANAGEMENT FOR LOCAL GOVERNMENTS

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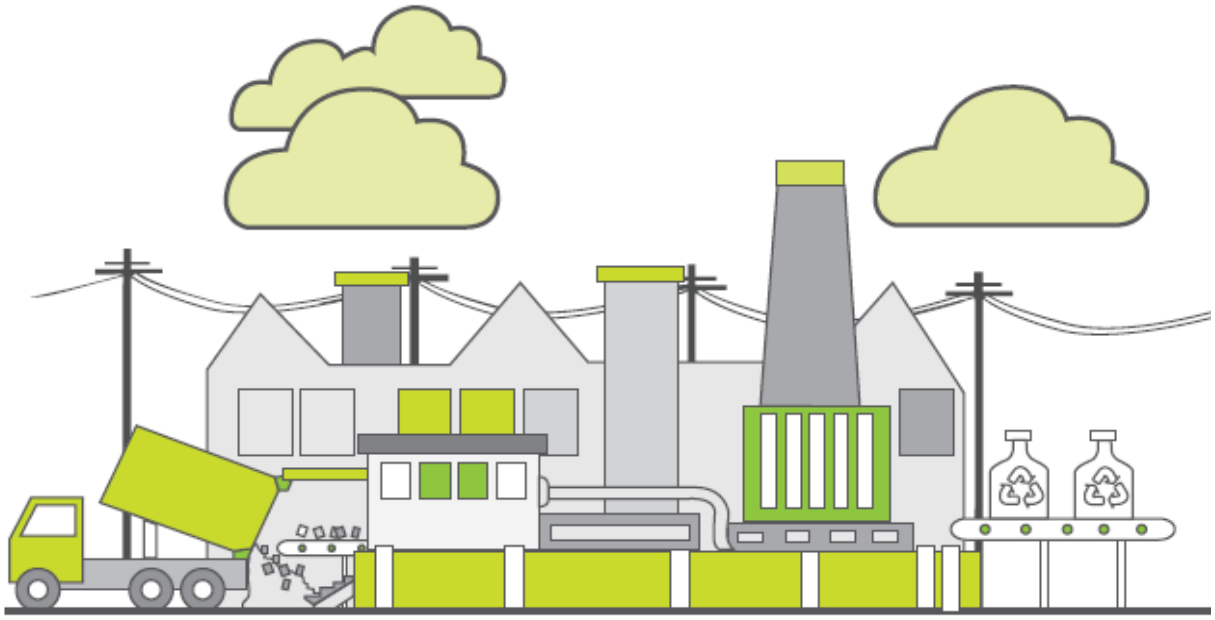

INTEGRATED SOLID WASTE MANAGEMENT FOR LOCAL GOVERNMENTS

A Practical Guide

ASIAN DEVELOPMENT BANK

Note: Full text available at https://www.adb.org/documents/solid-waste-mgt-local-gov.

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INDICATIVE PRELIMINARY ACTIVITIES FOR SWM SUBPROJECT PREPARATION OF DETAILED DESIGN AND BIDDING DOCUMENTS

Step 1: Conduct a feasibility study specific for Khulna City on the implementation of an integrated solid waste management. The study should include, among others, the following aspects of solid waste management planning:

(i) municipal solid waste characterization audit;
(ii) solid waste weight and volume (tonnage) determination;
(iii) impact of climate change and seasonal weather;
(iv) assessment of existing solid waste handling from collection to disposal;
(v) assessment of existing and future logistics (manpower and equipment) needs;
(vi) assessment of existing and future financial requirements to sustain SWM implementation;
(vii) status of existing dumpsites, including planned remediation or closure;
(viii) analysis of waste processing and treatment options given the impact of climate change and the limited land area for sanitary landfill development (e.g., recycling, composting, waste-to-energy/biodigestion, sanitary landfill, etc.)
(ix) in case of landfill development option, assessment of siting and geotechnical aspects of the site;
(x) budget requirements for logistics and transport, infrastructure components, and operation and maintenance; and
(xi) other aspects as may be determined by the SWM experts, and ADB's Practical Guide on Integrated Solid Waste Management for Local Governments (Appendix 6).[1]

[1] ADB. 2017. *Integrated Solid Waste Management for Local Governments: A Practical Guide*. Manila.

Step 2: With direct collaboration with Khulna City Corporation, conduct an environment audit on any existing dumpsites and/or transfer stations, which may be considered as associated facilities of the proposed SWM subproject. This is a requirement of ADB SPS.

Step 3: Complete the engineering designs of all infrastructure components, including sanitary landfill, of the SWM program based on the options provided in the output of the feasibility study. For a sanitary landfill option, ensure that the following are considered in the design:

(i) characteristics and volume of wastes to be handled;
(ii) exclusion of medical wastes;
(iii) lining systems;
(iv) leachate collection system;
(v) leachate treatment system;
(vi) stormwater runoff system;
(vii) landfill gas collection system;
(viii) layout of cells and other landfill site components, including access road and areas to be utilized for equipment parking and maneuvering;
(ix) cell depth and projected height relative to ground level;
(x) waste compaction;
(xi) litter handling;
(xii) perimeter fence and buffer zone; and
(xiii) other design considerations as may be determined by the SWM experts.

Step 4: Conduct consultation meetings with KCC to:

(i) discuss current SWM status and presentation of proposed SWM program taken from the feasibility study;
(ii) identify the funding requirements to sustain the SWM program;
(iii) discuss the source of fund to operate sustainably the SWM program;
(iv) measures to ensure availability of the funding requirements, including timeline to execute these measures (e.g., if planned funding source is through new tax or user charging scheme, how soon can a local regulation be passed by KCC?);
(v) secure commitment from KCC management to undertake these measures;
(vi) secure endorsement and acceptance by the KCC management of the results of the feasibility study;
(vii) secure endorsement and acceptance by KCC management of the engineering designs developed based on the feasibility study; and
(viii) other important matters requiring management approvals, commitments and decisions as may be determined by project management coordination unit (PMCU) and SWM experts.

Step 5: Draft the appropriate environmental assessment report. The technical information in the environmental assessment report should be based from all information gathered in Steps (i) – (iv) above. Drafting of IEE may commence after the output of Step 1 (Feasibility Study) and Step 3 (Detailed designs) are already available and accepted. All other information from the outputs of Steps 2 and 4 may be integrated in the course of drafting the report. In addition, PMCU should develop the following Khulna City-specific programs with assistance from the SWM experts and include results in the environmental assessment report:

(i) appropriate grievance redress mechanism;
(ii) appropriate and implementable training program;

(iii) appropriate and implementable information, education, and communication (IEC) plan;
(iv) appropriate capacity building and training program;
(v) appropriate and implementable waste collection and storage plan; and
(vi) efficient SWM vehicle scheduling and deployment plan.

OUTLINE OF INITIAL ENVIRONMENTAL EXAMINATION REPORT

1. An initial environmental examination (IEE) report is required for all environment B projects. Its level of detail and comprehensiveness is commensurate with the significance of potential environmental impacts and risks. An IEE report will follow the outline below. The substantive aspects of this outline will guide the preparation of environmental impact assessment reports, although not necessarily in the order shown. Sample IEEs have been prepared during loan processing, which will serve as actual reference for the preparation of IEE reports of future subprojects.

2. **Executive Summary**. Describe concisely the critical facts, significant findings, and recommended actions.

3. **Policy, Legal, and Administrative Framework.** Discuss the national and local legal and institutional framework within which the environmental assessment is carried out. Identify project-relevant international environmental agreements to which Government of Bangladesh is a party.

4. **Description of the Project.** Describe the project, its major components, and its geographic, ecological, social, and temporal context, including any associated facility required by and for the subproject/package (for example, access roads, power plants, water supply, quarries and borrow pits, and spoil disposal). Include drawings and maps showing the project's layout and components, the subproject site, and the subproject's area of influence.

5. **Description of the Environment (Baseline Data).** Describe relevant physical, biological, and socioeconomic conditions within the subproject area. Include any known current and proposed development activities within the subproject's area of influence, including those not directly connected to the subproject. Indicate the accuracy, reliability, and sources of the data.

6. **Anticipated Environmental Impacts and Mitigation Measures.** Predict and assess the subproject's likely positive and negative direct and indirect impacts to physical, biological, socioeconomic (including occupational health and safety, community health and safety, vulnerable groups and gender issues, and impacts on livelihoods through environmental media and physical cultural resources in the subproject's area of influence, in quantitative terms to the extent possible; identify mitigation measures and any residual negative impacts that cannot be mitigated; explore opportunities for enhancement; identify and estimate the extent and quality of available data, key data gaps, and uncertainties associated with predictions and specify topics that do not require further attention; and examine global, trans boundary, and cumulative impacts as appropriate.

7. **Analysis of Alternatives.** Examine alternatives to subproject or subproject component site, technology, design, and operation—including the no project alternative—in terms of their potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements. State the basis for selecting the particular subproject design proposed and, justify recommended emission levels and approaches to pollution prevention and abatement.

8. **Information Disclosure, Consultation, and Participation.** (i) Describe the process undertaken during subproject design and preparation for engaging stakeholders, including information disclosure and consultation with affected people and other stakeholders; (ii) Summarize comments and concerns received from affected people and other stakeholders and how these comments have been addressed in subproject design and mitigation measures, with

special attention paid to the needs and concerns of vulnerable groups, including women, the poor, and Indigenous Peoples; and (iii) Describe the planned information disclosure measures (including the type of information to be disseminated and the method of dissemination) and the process for carrying out consultation with affected people and facilitating their participation during subproject implementation.

9. **Grievance Redress Mechanism.** Describe the grievance redress framework (both informal and formal channels), setting out the time frame and mechanisms for resolving complaints about environmental performance.

10. **Environmental Management Plan.** Describe and discuss the set of mitigation and management measures to be taken during subproject implementation to avoid, reduce, mitigate, or compensate for adverse environmental impacts (in that order of priority). Include multiple management plans and actions, if necessary. Include the following key components (with the level of detail commensurate with the subproject's impacts and risks):

(i) **Mitigation.** Identify and summarize anticipated significant adverse environmental impacts and risks; describe each mitigation measure with technical details, including the type of impact to which it relates and the conditions under which it is required (for instance, continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate; and provide links to any other mitigation plans (for example, for involuntary resettlement, Indigenous Peoples, or emergency response) required for the subproject.

(ii) **Monitoring.** Describe the monitoring measures with technical details, including parameters to be measured, methods to be used, sampling locations frequency of measurements, detection limits and definition of thresholds that will signal the need for corrective actions; and describe monitoring and reporting procedures to ensure early detection of conditions that necessitate particular mitigation measures and document the progress and results of mitigation.

(iii) **Implementation arrangements.** Specify the implementation schedule showing phasing and coordination with overall project implementation; describe institutional or organizational arrangements, namely, who is responsible for carrying out the mitigation and monitoring measures, which may include one or more of the following additional topics to strengthen environmental management capability: technical assistance programs, training programs, procurement of equipment and supplies related to environmental management and monitoring, and organizational changes; and estimate capital and recurrent costs and describe sources of funds for implementing the environmental management plan.

(iv) **Performance indicators.** Describe the desired outcomes as measurable events to the extent possible, such as performance indicators, targets, or acceptance criteria that can be tracked over defined time periods.

11. **Conclusion and Recommendation.** Provide the conclusions drawn from the assessment and provide recommendations.

FORM FOR APPLICATION FOR ENVIRONMENTAL CLEARANCE CERTIFICATE FROM DEPARTMENT OF ENVIRONMENT

Application for Environmental Clearance Certificate

[See Rule 7(5) of ECR]

Director/Deputy Director
Department of Environment
Dhaka Division/Chittagong Division/Khulna Division/Rajshahi Division (Bogra),

Sir,

I do hereby apply for Environmental Clearance Certificate for my proposed industrial unit or project, or for the existing industrial unit or project, and enclose papers and furnish information as follows:

1.	(a) Name of the industrial unit or project	:
	Address of location of the industrial unit of Project	:
	(b) Address of the present office	:
2.	(a) Proposed industrial unit or project	
	Expected date of starting construction	:
	Expected date for completion of construction	:
	Expected date of trial production, in case of industrial unit, in other cases, date of starting operation of the project	:
	(b) Existing industrial unit or project	
	Date of starting trial production in case of industrial unit, in other cases, date of starting operation of the project	:
3.	Name of product and quantity to produced (daily/monthly/yearly)	:
4.	(a) Name of raw material and quantity (daily/monthly/yearly)	:
	(b) Source of raw material	:
5.	(a) Quantity of water to be used daily	:
	(b) Source of water	:
6.	(a) Name of fuel and quantity (daily/monthly/yearly)	:
	(b) Source of fuel	:
7.	(a) Probable quantity of daily liquid waste	:
	(b) Location of waste discharge	:
	(c) Probable quantity of daily emission of gaseous substance	:
	(d) Mode of emission of gaseous substance	:
8.	Mouza (village) map indicating “Daag” (plot) and “Khatiyan” (land tax account) number	:
9.	Approval of Rajdhani Unnayan Katripakkhya / Chittagong Development Authority / Khulna Development Authority / Local Authority (if applicable)	:
10.	(a) Design and time schedule of proposed Effluent Treatment Plant	:
	(b) Fund allocated	:

	(c) Area	:
11.	Process Flow Diagram	:
12.	(a) Location map of industrial unit or project	:
	(b) Layout plan (with location of Effluent Treatment Plant)	:
13.	(a) IEE / EIA report * (if applicable)	:
	(b) Environmental Management Plan*(if applicable)	:
14.	Feasibility Report (if applicable)	:

Seal

Signature of the entrepreneur:
Name:
Address:
Phone:
Date:

Declaration

I do hereby declare that all information provided by me in this application are true to the best of my knowledge and no information has been concealed or distorted.

Name and Signature of Entrepreneur

* Each page must be countersigned by the person who fills out this application form and by the entrepreneur.

SAMPLE GRIEVANCE REGISTRATION FORM

(To be available in Bangla and Other Local Language, if any)

The _____Project welcomes complaints, suggestions, queries and comments regarding project implementation. We encourage persons with grievance to provide their name and contact information to enable us to get in touch with you for clarification and feedback.

Should you choose to include your personal details but want that information to remain confidential, please inform us by writing/typing *(CONFIDENTIAL)* above your name. Thank you.

Date		***Place of registration***			
Contact Information/Personal Details					
Name		**Gender**	■ **Male** ■ **Female**	**Age**	
Home Address					
Village / Town					
District					
Phone no.					
E-mail					
Complaint/Suggestion/Comment/Question Please provide the details (who, what, where and how) of your grievance below: If included as attachment/note/letter, please tick here:					
How do you want us to reach you for feedback or update on your comment/grievance?					

FOR OFFICIAL USE ONLY

Registered by: (Name of Official registering grievance)	
Mode of communication: ■ **Note/Letter** ■ **E-mail** ■ **Verbal/Telephonic**	
Reviewed by: (Names/Positions of Official(s) reviewing grievance)	
Action Taken:	
Whether Action Taken Disclosed:	■ **Yes** ■ **No**
Means of Disclosure:	

SUGGESTED TEMPLATE FOR RECORD-KEEPING OF GRIEVANCES

S. No.	Date of receipt of grievance	Name and contact details of complainant	Description of complaint	Nature of complaint	Decisions taken	Response given to complainant and date	Whether closed/ resolved

INDICATIVE TERMS OF REFERENCE FOR SAFEGUARDS SPECIALIST FOR PROJECT MANAGEMENT COORDINATION UNIT, PROJECT IMPLEMENTATION UNITS AND PREPARATION, DESIGN AND SUPERVISION CONSULTANT

A. Preparation, Design, and Supervision Consultants

1. Environmental Safeguards Specialist (National)

1. **Experience.** A civil engineer with specialization in environment, having at least 5-10 years of working experience related to the integration of environmental issues in design, and construction of infrastructure projects. Past experience working on donor projects preferable.

2. Detailed Tasks:

(i) Prepare initial environmental examination (IEE) in accordance with the Environmental assessment review framework (EARF) for subprojects;
(ii) Assist PMCU Environment Officer in ensuring prepared IEEs are submitted to ADB for review;
(iii) Assist PMCU in ensuring approved IEEs are disclosed on PMCU/LGED website;
(iv) Ensure approved final IEEs and environmental management plans (EMPs) are included in contract documents;
(v) Assist PMCU in ensuring compliance of the project and its subprojects with all relevant national laws;
(vi) Interact with the sector specialists and integrate environmentally sound practices into the detailed design of project components;
(vii) Work out the site-specific mitigation and adaptation measures for components as required and integrate the same into contractual provisions;
(viii) Assist the international environment/Climate Change specialist in environmental training programs and workshops for the staffs of the PMCU, PIU and contractors and in accordance to the Capacity Building Program;
(ix) Prepare activity plans as identified in IEE (includes site management plans, waste management plans, sludge management and disposal plans, occupational safety plans, etc.);
(x) Assist PIU in reviewing the contractors' SEMPs to ensure compliance with the IEE/EMP;
(xi) Assist PIU in supervising the implementation of the EMP and SEMP by the contractors;
(xii) Assist PIU in preparing quarterly environmental monitoring reports and submit to PMCU;
(xiii) Review site specific environmental enhancement/mitigation designs worked out by the contractor and assist PIU in approving such designs;
(xiv) Assist in providing occupational health and safety training for contractors' personnel before commencement of civil works for all sub-projects;
(xv) Assist the PMCU environment officer in preparing semi-annual environmental monitoring reports and submit to ADB;
(xvi) Establish dialogue with the affected communities and ensure that the environmental concerns and suggestions are incorporated and implemented in the project;
(xvii) Assist PMCU and PIUs in attending to or facilitating responses to any public grievances per GRM; and
(xviii) Assist in any other task assigned by the PMCU Environment Officer and/or supervising consultant in relevance to effective project implementation.

B. Project Management Coordination unit

1. Environmental Safeguards Officer – PMCU

1. **Experience.** An Environmental Engineer/scientist with experience in management of environmental issues of infrastructure projects and understanding of the regulatory framework for environmental management in Bangladesh.

2. Detailed Tasks:

(i) Ensure the conformance of all Subprojects proposed under the project to the regulatory compliance to the Government, with reference to environmental requirements, with support from the Environmental Officer of the PIUs. This shall include preparation of the documents as required under the Environmental Conservation rules, submission of application forms, and obtaining clearances from the DOE; and ensuring conformance to the clearance conditions laid down in the clearances for the Subprojects by the DOE;
(ii) Liaise with the various Government agencies on environmental and other regulatory matters pertaining to implementation of the subprojects;
(iii) Work closely with the PIUs and provide guidance on the shifting of utilities and services, including obtaining necessary clearances from the respective line agencies, prior to award of civil works contracts;
(iv) Provide support and assistance to the Government Agencies and the Asian Development Bank to supervise the implementation of the IEE during the construction as well as operation stage of the project;
(v) Monitor construction activities to ensure that identified and appropriate control measures are effective and in compliance with the IEE and advise PIUs for compliance with statutory requirements;
(vi) Work in close co-ordination with the Social Safeguards officer of the PMCU and participate in the Grievance Redressal Mechanism for all grievances that are brought forward to the PMCU. Monitor on a continuous basis the effective functioning of the Grievance mechanisms at the PIU and Pourashava levels on all grievances related to environmental issues; and
(vii) Jointly (with the environmental engineer of the PMCU), review the environmental performance of the project through an assessment of the periodic environmental monitoring reports submitted by the PDSC; provide a summary of the same to the Project Director, and initiate necessary follow-up actions.

2. Environmental Engineer - PMCU

1. **Experience.** A Civil Engineer with specialization in Environment with experience in implementation of environmental management plans of infrastructure projects, especially those funded by donor agencies.

2. Detailed Tasks.

(i) Review the IEE Document and contract clauses and ensure adequacy under ADB's Environmental Assessment Guidelines, 2003 and the updated Safeguards Policy Statement, 2009 and identify any areas for improvement.
(ii) Ensure that the subproject design and specifications adequately reflect the IEE.

(iii) Monitor construction activities to ensure that identified and appropriate control measures are effective and in compliance with the IEE.
(iv) Review and approve the Contractor's Implementation Plan for the environmental measures, as per IEEs/EMPs.
(v) Liaise with the Contractors and Consultants on the implementation of the Environmental management measures proposed in the IEE/EMP.
(vi) Jointly (with the environmental safeguards officer of the PMCU), review the environmental performance of the project through an assessment of the periodic environmental monitoring reports submitted by the PDSC; provide a summary of the same to the Project Director, and initiate necessary follow-up actions.
(vii) Document the good practices in the project, with support from Environmental Specialists of the PDSC and PIU on (a) incorporation and integration of environmental issues into engineering design and (b) on implementing environmental measures in the construction, and dissemination of the same.

C. Project Implementation Unit

1. Environmental Officer – PIU

1. **Experience.** A civil engineer with working experience related to the integration of environmental issues in design, and construction of infrastructure projects.

2. Detailed tasks:

(i) Support the Environmental Safeguards officer of the PMCU towards ensuring the conformance of the subproject to the regulatory compliance to the Government, with reference to environmental requirements; including preparation of documents required for clearances, obtaining clearances from the divisional office of the DOE, etc.
(ii) Work with the PDSC Environmental Specialists in the preparation of the Environmental Safeguards Documents; including integration of environmental provisions into the contract provisions of the respective subprojects.
(iii) With support of the PMCU and PDSC Environmental Specialists, monitor compliance of the implementation of the environmental provisions; and ensure that identified control measures are effective and in compliance with the IEE.
(iv) Review and approve the Contractor's Implementation Plan for the environmental measures, as per IEEs/EMPs.
(v) Liaise with the Contractors and Consultants on the implementation of the Environmental management measures proposed in the IEE/EMP; including the implementation of the environmental monitoring plan outlined in the IEE.
(vi) Establish dialogue with the affected communities and ensure that the environmental concerns and suggestions are incorporated and implemented in the project.
(vii) Participate in the Grievance redressal of all grievances pertaining to environment and support the PIU/Pourashava in redressal of the same.
(viii) Prepare and submit environmental monitoring and implementation progress reports with support from PDSC consultants, to the PMCU.
(ix) Assist Environmental Specialist of the PMCU to prepare good practice dissemination notes based on the experience gained from site supervision.

SAMPLE DAILY MONITORING SHEET FOR CONTRACTORS

SECOND CITY REGION DEVELOPMENT PROJECT
Contractor Monitoring Sheet

Name of Subproject: _____
Location of Subproject: _____
Chainage covered (for linear works): _____
Supervising PIU: _____
Contractor: _____
Contractor EHS Supervisor (or equivalent): _____
Date of monitoring: _____

Summary of Findings

Monitoring Item	Status	Remarks
1. Compliance with Local Permit Requirements	**(Secured / Application Submitted / Not Applicable)**	
Location/zoning permits		
Permit to construct		
Building permit		
Transport / hauling permits		
2. Compliance with IEE Requirements	**(Approved / Under Preparation / Submitted to PIU for Approval)**	
Site-specific EMP (SEMP)		
Corrective Action Plan, if any		
3. Compliance with SEMP		
Construction Site	**(Satisfactory / Needs Improvement / Not Implemented)**	
- Conduct of toolbox talk		
- Use of PPE		
- Rest areas for male and female workers		
- Toilets for male and female workers		
- Medical kits		
- Drinking water supply		
- Dust control		
- Noise control		
- Solid waste management		
- Wastewater management		
- Chemicals storage (fuel, oil, etc.)		
- Siltation or erosion control		
- Heavy equipment staging / parking area		
- Barricades around excavation sites		
- Access to residential houses/shops/businesses		
- Traffic routing signages		
- Lightings at night		
- Trench shoring / landslide protection		
Construction Workers' Camp Site	**(Available / Needs Improvement / Not Available)**	
- Quarters for male and female workers		

Monitoring Item	Status	Remarks
- Sleeping utilities (e.g. beds, pillows, blankets, mosquito nets, etc.)		
- Power/Electricity supply		
- Drinking water supply		
- Toilets for male and female workers		
- General purpose water supply (cooking, washing, bathing)		
- Cooking facilities and areas		
- Solid waste management		
- Wastewater management		
- Pest control		
4. Implementation of GRM	**(Yes / No or None / Under Resolution)**	
Complaints		
Complaints resolution		
5. Environmental Quality Measurement	**(Passed / Failed / Not Applicable)**	
Ambient air quality sampling		
Noise level measurement		
Receiving water quality sampling		

Other Issues: _____

_____

_____

_____

Attachments:
1. Copies of permits secured, if any.
2. Photos taken at worksites, if any.
(photos attached in previous monitoring sheets should not be used again).
3. Laboratory results of environmental quality measurements, if any.

Prepared by: _____
Name, Designation and Signature

SAMPLE INSPECTION REPORT FOR PROJECT MANAGEMENT COORDINATION UNIT AND PROJECT IMPLEMENTATIO UNITS

SECOND CITY REGION DEVELOPMENT PROJECT
SITE INSPECTION CHECKLIST

Subproject: _____ Date: _____
Location: _____
Chainage (for linear works): _____

	MONITORING/INSPECTION QUESTIONS	FINDINGS			COMMENTS / CLARIFICATIONS
1.	Supervision and Management On-SIte	Yes	No	NA	
	a. Is an EHS supervisor available?				
	b. Is a copy of the SEMP available?				
	c. Are daily toolbox talks conducted on site?				
2.	The Facilities	Yes	No	NA	
	a. Are there a medical and first aid kits on site?				
	b. Are emergency contact details available on-site?				
	c. Are there PPEs available? What are they?				
	d. Are the PPEs in good condition?				
	e. Are there firefighting equipment on site?				
	f. Are there separate sanitary facilities for male and female workers?				
	g. Is drinking water supply available for workers?				
	h. Is there a rest area for workers?				
	i. Are storage areas for chemicals available and with protection? in safe locations?				
3.	Occupational Health and Safety	Yes	No	NA	
	a. Are the PPEs being used by workers?				
	b. Are excavation trenches provided with shores or protection from landslide?				
	c. Is breaktime for workers provided?				
	d. How many for each type of collection vehicle is in current use?				
4.	Community Safety	Yes	No	NA	
	a) Are excavation areas provided with barricades around them?				
	b) Are safety signages posted around the sites?				
	c) Are temporary and safe walkways for pedestrians available near work sites?				
	d) Is there a record of treated wastewater quality testing/measurement?				
5.	Solid Waste Management	Yes	No	NA	
	a. Are excavated materials placed sufficiently away from water courses?				

MONITORING/INSPECTION QUESTIONS		FINDINGS			COMMENTS / CLARIFICATIONS
	b. Is solid waste segregation and management in place?				
	c. Is there a regular collection fo solid wastes from work sites?				
6.	Wastewater Management	Yes	No	NA	
	a) Are there separate sanitary facilities for various types of use (septic tanks, urination, washing, etc.)?				
	b) Is any wastewater discharged to storm drains?				
	c) Is any wastewater being treated prior to discharge?				
	d) Are measures in place to avoid siltation of nearby drainage or receiving bodies of water?				
	e) Are silt traps or sedimentation ponds installed for surface runoff regularly cleaned and freed of silts or sediments?				
7.	Dust Control	Yes	No	NA	
	a. Is the construction site watered to minimize generation of dust?				
	b. Are roads within and around the construction sites sprayed with water on regular intervals?				
	c. Is there a speed control for vehicles at construction sites?				
	d. Are stockpiles of sand, cement and other construction materials covered to avoid being airborne?				
	e. Are construction vehicles carrying soils and other spoils covered?				
	f. Are generators provided with air pollution control devices?				
	g. Are all vehicles regularly maintained to minimize emission of black smoke? Do they have valid permits?				
8.	Noise Control	Yes	No	NA	
	a) Is the work only taking place between 7 am and 7 pm, week days?				
	b) Do generators operate with doors closed or provided with sound barrier around them?				
	c) Is idle equipment turned off or throttled down?				
	d) Are there noise mitigation measures adopted at construction sites?				
	e) Are neighboring residents notified in advance of any noisy activities expected at construction sites?				
9.	Traffic Management	Yes	No	NA	
	a) Are traffic signages available around the construction sites and nearby roads?				

MONITORING/INSPECTION QUESTIONS		FINDINGS			COMMENTS / CLARIFICATIONS
	b) Are re-routing signages sufficient to guide motorists?				
	c) Are the excavation sites along roads provided with barricades with reflectors?				
	d) Are the excavation sites provided with sufficient lighting at night?				
10.	Recording System	Yes	No	NA	
	a) Do the contractors have recording system for SEMP implementation?				
	b) Are the daily monitoring sheets accomplished by the contractor EHS supervisor (or equivalent) properly compiled?				
	c) Are laboratory results of environmental sampling conducted since the commencement of construction activities properly compiled?				
	d) Are these records readily available at the site and to the inspection team?				

Other Issues: _____

_____

_____

_____

Prepared by: _____

Name, Designation and Signature

SEMI-ANNUAL ENVIRONMENTAL MONITORING TEMPLATE

Introduction

- Overall project description and objectives
- Environmental category as per ADB Safeguard Policy Statement, 2009
- Environmental category of each subproject as per national laws and regulations
- Project Safeguards Team

Name	Designation/Office	Email Address	Contact Number	Roles
1. PMU				
2. PIUs				
3. Consultants				

- Overall project and sub-project progress and status
- Description of subprojects (package-wise) and status of implementation (preliminary, detailed design, on-going construction, completed, and/or O&M stage)

Package Number	Components/List of Works	Contract Status (specify if under bidding or contract awarded)	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)[a]	If On-going Construction	
				%Physical Progress	Expected Completion Date

[a] If on-going construction, include %physical progress and expected date of completion.

Compliance status with National/State/Local statutory environmental requirements[a]

Package No.	Subproject Name	Statutory Environmental Requirements[b]	Status of Compliance[c]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[d]

[a] All statutory clearance/s, no-objection certificates, permit/s, etc. should be obtained prior to award of contract/s. Attach as appendix all clearance obtained during the reporting period. If already reported, specify in the "remarks" column.
[b] Specify (environmental clearance? Permit/consent to establish? Forest clearance? Etc.)
[c] Specify if obtained, submitted and awaiting approval, application not yet submitted
[d] *Example: Environmental Clearance requires ambient air quality monitoring, Forest Clearance/Tree-cutting Permit requires 2 trees for every tree, etc.*

Compliance status with environmental loan covenants

No. (List schedule and paragraph number of Loan Agreement)	Covenant	Status of Compliance	Action Required

Compliance status with the environmental management plan (refer to EMP Tables in Approved IEE/s)

- Confirm if IEE/s require contractors to submit site-specific EMP/construction EMPs. If not, describe the methodology of monitoring each package under implementation.

Package-wise IEE Documentation Status

Package Number	Final IEE based on Detailed Design				Site-specific EMP (or Construction EMP) approved by Project Director? (Yes/No)	Remarks
	Not yet due (detailed design not yet completed)	Submitted to ADB (Provide Date of Submission)	Disclosed on project website (Provide Link)	Final IEE provided to Contractor/s (Yes/No)		

- For each package, provide name/s and contact details of contractor/s' nodal person/s for environmental safeguards.

Package-wise Contractor/s' Nodal Persons for Environmental Safeguards

Package Name	Contractor	Nodal Person	Email Address	Contact Number

- With reference to approved EMP/site-specific EMP/construction EMP, complete the table below

Summary of Environmental Monitoring Activities (for the Reporting Period)

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring
Design Phase						
Pre-Construction Phase						
Construction Phase						
Operational Phase						

[a] Attach Laboratory Results and Sampling Map/Locations.

Overall Compliance with CEMP/ EMP

No.	Subproject Name	EMP/ CEMP Part of Contract Documents (Y/N)	CEMP/ EMP Being Implemented (Y/N)	Status of Implementation (Excellent/ Satisfactory/ Partially Satisfactory/ Below Satisfactory)	Action Proposed and Additional Measures Required

Approach and methodology for environmental monitoring of the project

- Briefly describe the approach and methodology used for environmental monitoring of each subproject.

Monitoring of environmental IMPACTS on PROJECT SURROUNDINGS (ambient air, water quality and noise levels)

- Discuss the general condition of surroundings at the project site, with consideration of the following, whichever are applicable:

- Confirm if any dust was noted to escape the site boundaries and identify dust suppression techniques followed for site/s.
- Identify if muddy water is escaping site boundaries or if muddy tracks are seen on adjacent roads.
- Identify type of erosion and sediment control measures installed on site/s, condition of erosion and sediment control measures including if these are intact following heavy rain;
- Identify designated areas for concrete works, chemical storage, construction materials, and refueling. Attach photographs of each area in the Appendix.
- Confirm spill kits on site and site procedure for handling emergencies.
- Identify any chemical stored on site and provide information on storage condition. Attach photograph.
- Describe management of stockpiles (construction materials, excavated soils, spoils, etc.). Provide photographs.
- Describe management of solid and liquid wastes on-site (quantity generated, transport, storage and disposal). Provide photographs.
- Provide information on barricades, signages, and on-site boards. Provide photographs in the Appendix.
- Indicate if there are any activities being under taken out of working hours and how that is being managed.

- Briefly discuss the basis for environmental parameters monitoring.
- Indicate type of environmental parameters to be monitored and identify the location.
- Indicate the method of monitoring and equipment used.
- Provide monitoring results and an analysis of results in relation to baseline data and statutory requirements.

As a minimum the results should be presented as per the tables below.

Air Quality Results

Site No.	Date of Testing	Site Location	Parameters (Government Standards)		
			PM10 µg/m3	**SO2** µg/m3	**NO2** µg/m3

Site No.	Date of Testing	Site Location	Parameters (Monitoring Results)		
			PM10 µg/m3	**SO2** µg/m3	**NO2** µg/m3

Water Quality Results

Site No.	Date of Sampling	Site Location	Parameters (Government Standards)					
			pH	**Conductivity** µS/cm	**BOD** mg/L	**TSS** mg/L	**TN** mg/L	**TP** mg/L

Site No.	Date of Sampling	Site Location	Parameters (Monitoring Results)					
			pH	Conductivity µS/cm	BOD mg/L	TSS mg/L	TN mg/L	TP mg/L

Noise Quality Results

Site No.	Date of Testing	Site Location	LA_{eq} (dBA) (Government Standard)	
			Day Time	Night Time

Site No.	Date of Testing	Site Location	LA_{eq} (dBA) (Monitoring Results)	
			Day Time	Night Time

Grievance Redress Mechanism

- Provide information on establishment of grievance redress mechanism and capacity of grievance redress committee to address project-related issues/complaints. Include as appendix Notification of the GRM (town-wise if applicable).

Complaints Received during the Reporting Period

- Provide information on number, nature, and resolution of complaints received during reporting period. Attach records as per GRM in the approved IEE. Identify safeguards team member/s involved in the GRM process. Attach minutes of meetings (ensure English translation is provided).

SUMMARY OF KEY ISSUES AND REMEDIAL ACTIONS

- Summary of follow up time-bound actions to be taken within a set timeframe.

APPENDIXES

- Photos
- Summary of consultations
- Copies of environmental clearances and permits
- Sample of environmental site inspection report
- all supporting documents including **signed** monthly environmental site inspection reports prepared by consultants and/or contractors
- Others