

Environmental Assessment and Review Framework

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Bangladesh: Coastal Climate-Resilient Infrastructure Project

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ENVIRONMENTAL ASSESSMENT AND REVIEW FRAMEWORK

A. Introduction

1. The Coastal Climate-Resilient Infrastructure Project (CCRIP) will enhance longevity, climate proofing and sustainability of infrastructure in 12 rural vulnerable coastal districts¹ which have deficient mobility and accessibility. The Project will upgrade about 130 kilometers (km) of Upazila roads, 174 km of Union roads, 233 km Village roads, 15 km cyclone shelter access tracks, 88 growth centre and rural markets, 186 community markets, 37 boat landing stages, and 25 cyclone shelters. Improving rural roads and associated infrastructure will provide local inhabitants with efficient transport to markets and trading centers and access to social and welfare services. The potential subproject roads will be identified using pre-determined selection criteria during project implementation. Therefore, environmental assessments cannot be prepared prior to the project's approval for all sub-projects. The project is a sector type lending project which requires an EARF as per the Safeguard Policy Statement 2009 of the Asian Development Bank (ADB) to guide the environmental assessment and review process for sub-projects identified after project approval. The assessment and review procedures to be adopted during the Project implementation are presented in this Framework.

B. Assessment of Legal Framework and Institutional Capacity

2. The Environmental Assessment and Review Framework (EARF) has been developed on the basis of the findings and recommendations of the Project Feasibility Study - conducted by the LGED of the Ministry of Local Government, Rural Development and Cooperatives in the preparation of the CCRIP. The purpose of the EARF is to guide the LGED and the consultants on environmental issues in the task of implementing the subprojects of various components of the Project. During the implementation period, all activities related to potential environmental impacts will be carried out in accordance with ADB's Safeguard Policy Statement (2009) in tandem with the Government of Bangladesh's environmental assessment requirements.

1. Assessment of Legal Framework

3. Bangladesh has a wide range of laws and regulations related to environmental parameters. The most recent and the most important of the environmental laws are the Environment Conservation Act (ECA) of 1995, Environment Conservation Rules (ECR) of 1997 and Environment Court Act of 2000. The ECR spells out rules and regulations for the enforcement of the ECA. Under the ECR, various development interventions are grouped into three main categories: Green (no environmental assessment required), Orange A (IEE required), Orange B (IEE required) and Red (EIA required) – in accordance with increasing potentials for adverse environmental impacts. The project interventions under the CCRIP fall into Orange category, and thus require the preparation of IEEs. Both the ECA and the ECR cover a wide range of environmental issues, but they are neither fully comprehensive nor clear, and comprised of ad-hoc rules. A more recent legislation for enforcement has been the formulation of the Environment Court Act of 2000, which is authorized to try cases related to offences under the ECA/ ECR. The Cabinet has also approved the Environment Court Bill 2010.

4. The Government has so far signed, ratified and acceded to over 25 environment-related international conventions, protocols and treaties. Some of the notable ones are the Ramsar

¹ These districts are: Satkhira, Khulna, Bagerhat, Perojpur, Barisal, Jhalokati, Bhola, Patuakhali, Barguna, Madaripur, Gopalganj, and Shariatpur.

Convention on Wetlands, Montreal Protocol on Ozone Layer Depletion, Agenda 21, United Nations Framework Convention on Climate Change (UNFCCC) and Kyoto Protocol, Convention on Biological Diversity, and Convention to Combat Desertification. The close relationship between environment and national development planning is embodied in the National Environment Management Action Plan (NEMAP), completed in 1995 with assistance from the United Nations Development Programme (UNDP). As a follow-up of the NEMAP, the Government executed a UNDP funded Sustainable Environment Management Program (SEMP) between 1998 and 2004, which emphasized several capacity building components of environmental management.

5. The Government prepared a National Adaptation Program of Action (NAPA) in 2005, revised in 2009, which outlines several climate change adaptation options for the country. A more comprehensive document on climate change, titled 'Bangladesh Climate Change Strategy and Action Plan' (BCCSAP), released in 2008 was further revised in 2009 with 44 programs under six thematic areas. The Government has set up climate change cells in several relevant ministries and line agencies to monitor the activities to mitigate climate change impacts and suggest remedial programs. The Government is planning to set up a climate change department under the MOEF.

2. Assessment of the Institutional Capacity

6. LGED has moderate institutional capacity in environmental assessment and monitoring and hence support from an environment consultant is required. The Environmental Unit (EU) of LGED is now headed by a Superintending Engineer. EU has two full-time positions at present: one Executive Engineer and one Assistant Engineer. EU will be expanded into a team of environmental scientists/engineers with provision for mid- and junior level environmental scientists. The EU will also play a proactive role in environmental screening and categorization, monitoring during project implementation as well as in undertaking post-project evaluation of projects in order to assess environmental compliance and develop future strategies on the basis of 'lessons learned'. The EU will also be entrusted with the task of organizing and administering training modular courses for the LGED staff and other stakeholders on environmental assessment and monitoring, social impact assessment, and public consultation/ participation.

3. ADB Environmental Requirements

7. The environmental assessment of subprojects must fulfill requirements of ADB, as described in ADB's Safeguard Policy Statement (2009). At an early stage of subproject preparation, potential direct, indirect, cumulative and induced environmental impacts on and risks to physical, biological, socioeconomic, and physical cultural resources will be identified and their significance and scope determined, in consultation with stakeholders, including affected people. Depending on the significance of project impacts and risks, the assessment may comprise a full-scale EIA for category 'A category' projects, or an IEE or equivalent process for 'category B' projects. No environmental assessment is required for 'C category' project, although environmental implications need to be reviewed.

C. Anticipated Environmental Impacts

8. The Project will upgrade rural roads, and rehabilitate/construct markets, and cyclone shelters. Improving rural roads and associated infrastructure will provide local inhabitants with efficient transport to markets and trading centers and access to social and welfare services. The project will help reduce poverty in the rural communities it covers. The beneficiaries will be

(i) road users, namely bus and truck owners and operators, passengers, and businesses using freight services; (ii) market operators, traders, and market users; and (iii) communities in the areas of influence of subprojects who will have improved access to services and increased employment opportunities. An estimated 3.5 million people will directly benefit from the project. In addition to the direct and indirect benefits from subprojects, there will be a creation of jobs due to subproject construction.

9. The project has no major significant adverse environmental impacts and it will make a significant contribution to the environmental enhancement. Significant social and economic benefits including poverty alleviation and income generation are expected. However, some short term potential adverse impacts are likely to be soil, air, noise and water pollution, disturbance of aquatic and wildlife habitats, removal of trees and socioeconomic impacts from slight realignment of the road that may cause relocation of households, etc.

10. Typical impacts associated with rural road rehabilitation and construction of markets and other small facilities, include dust generation, erosion, and disruption to traffic and possible temporary disruption of access to those living adjoining the working areas. Dust will be generated during haulage of construction material, from exposed working areas, and at crusher plants, and borrow pits. This can be mitigated through the adoption of suitable mitigation measures, such as covering of material during transport and stockpiling, proper compaction of base and regular watering during construction, and adoption of sufficient numbers of sprinklers at various plant sites. In addition, soil erosion from exposed surfaces too will create adverse impacts, such as blocking of drainage paths, and silting of productive lands. These will have to be managed through the adoption of temporary and permanent erosion control measures.

11. These potential adverse environmental impacts can be mitigated through proper engineering designs, by including the specific environmental provisions in contract documents, by requiring appropriate design and construction methods during implementation, and adoption of the environmental management plan. However, effective monitoring will have to take place. Therefore, this framework has recommended several measures for institutional strengthening of environmental management. Land acquisition will be minimal since all the construction and civil works will be on the existing road networks. Growth center market will also be constructed on the existing structure and hence no land acquisition will be required.

D. Environmental Assessment for Subprojects and/ or Components

1. Major Components of the Project

12. The Project will include the following components: Output 1: Improved Road Connectivity, Output 2: Improved Market Services, and Output 3: Enhanced Climate Change Adaptation Capacity.

2. Environmental Criteria of Subproject Selection

13. All the 12 districts under the project were prioritized for project intervention on the basis of climate change sensitive area like flooding, drainage congestion, water logging, soil condition, salinity intrusion, etc. and a number of social, economic and environmental indicators such as poverty level, food security, land use, agricultural production, input availability, land suitability, location specificity, environment-friendliness as well as accessibility. Environmental conditions which will influence the selection procedure will include such parameters as (a) flood proneness and regional hydro-meteorology, (b) surface and groundwater availability, (c) transportation

requirements for accessibility of product to the market and for the population, and (d) potential impacts of climate change and variability including climate induced disasters. On the other hand, the following criteria will be used for excluding sites which might have significant negative environmental impacts:

- (i) Ecologically sensitive area such as reserved forests, critical wetlands, protected areas, etc.;
- (ii) Potential for disrupting the life and property of the indigenous population;
- (iii) Need for significant amount of land acquisition and resultant compensation;
- (iv) Encroachment on cultural features like places of worship, cultural heritage sites, graveyards/ cemeteries, historical monuments, etc. (no such encroachments are envisaged); and
- (v) The Project will not fund any sub-projects that could possibly be Category A type projects.

3. Procedures for Environmental Assessment of Subprojects

14. The initial sub projects identified under CCRIP are classified as 'Category B' and an IEE report for three subprojects has been prepared during the project formulation phase. The basic infrastructural facilities for the proposed CCRIP is mainly an improvement/ upgrading or 'climate proofing' of project comprising a large number of schemes, and does not involve new and major road construction and will neither have any adverse environmental effect nor will require any significant resettlement task. The environment consultant will be able to identify potential adverse environmental and social impacts of any project action, and propose mitigation measures, if needed. They will also perform the role of facilitators for training and sensitizing the project implementation staff on environmental issues, especially climate change issues.

15. The first task of the project preparation phase is to screen and identify the category of the project (based on ADB's and the Government's requirements) and determine potential positive and negative environmental impacts of the subproject, and review the available literature and data on environmental conditions of the area in which the subproject is located. This will be followed by preparing a detailed checklist of environmental parameters to be examined and assessed for the subproject through field inspection. To ensure that the Project meets ADB's environmental safeguard requirements, as stipulated in the Safeguard Policy Statement 2009, sub-projects will be screened, and the level of environmental assessment required (EIA/IEE) will be determined. Based on preliminary information on type of project activities, the Project will not fund any sub-projects that could possibly be Category A type projects. The Environmental Specialist attached to the PMO will prepare the IEE to meet ADB's SPS 2009 and Government's requirements and monitor the implementation of the EMP, observe for any unforeseen impacts and advise the PMO on climate adaptation and disaster risk reduction options to cope with climate change impacts. The consultant will also advise and support the LGED in building its in-house capacity for environmental and climate risks assessment through training programs and workshops; and motivate the stakeholders/ beneficiaries on all aspects of the changing climate in the region.

16. During the post project phase, the environmentally trained and sensitized LGED staff will mainly focus on environmental monitoring tasks with a view to identifying long term impacts. The monitoring plan prepared in the IEE report will involve supervision and surveillance of local drainage conditions, local flood protection needs and measures, measuring awareness and acceptance levels of adaptation options and coping strategies for climate change impacts, etc.

17. The implementation period is six years and it is recommended that the implementation tasks be closely monitored in order to evaluate the project's efficiency and effectiveness. Hence, regular reviews are to be carried out by ADB on a quarterly basis and will be supplemented by a mid-term review. The mid-term review will be conducted jointly by the government and the ADB during the third year of project implementation. The mid-term review will evaluate all aspects of the project design, implementation and management, including environmental and social impacts.

18. Both ADB and the GOB require that development projects do not result in unacceptable damage to any physical cultural resources. The CCRIP is involved in the improvement/upgrading and/ or rehabilitation project comprising a large number of schemes, and does not involve new and major road construction and the project actions do not have any potential for adverse environmental impacts to sites and structures of cultural value (viz., mosques, temples, churches, graves, archaeological remains, aesthetic locations).

E. Consultation, Information Disclosure, and Grievance Redress Mechanism

19. The approach adopted for the Project ensures that all subprojects are community driven. Accordingly, design and implementation involves the groups potentially affected by the schemes, ensuring a very high level of public awareness and involvement at each stage. Procedures for public consultation and disclosure will be incorporated in subproject implementation guidelines. To facilitate the resolution of affected people's concerns, complaints, and grievances about the social and environmental performance of the project, a grievance redress mechanism will be established which aims to provide a time bound and transparent mechanism to voice and resolve social and environmental concerns. The EU of LGED will establish a mechanism to receive and facilitate resolution of affected peoples' concerns, complaints, and grievances about the project's environmental performance. The grievance mechanism should be scaled to the risks and adverse impacts of the project. It should address affected people's concerns and complaints promptly, using an understandable and transparent process that is gender responsive, culturally appropriate, and readily accessible to all segments of the affected people at no costs and without retribution. The mechanism should not impede access to the country's judicial or administrative remedies. The affected people will be appropriately informed about the mechanism.

20. The project management Office (PMO) and PIOs will make the public aware of the grievance redress mechanism (GRM) through public awareness campaigns and local consultation. The contact phone number of the respective PIOs and the PMU will serve as a hotline for complaints, and shall be publicized through the media and placed on notice boards outside their offices and at construction sites. The project information brochure will include information on the GRM and shall be widely disseminated.

21. The grievance redress system will include a system by which parties affected by project activities, could raise their concerns to contractors, relevant government officials, and officers of the LGED. A grievance redress committee will be established which includes representatives of the project-affected persons, contractors, government officials, and the LGED. The Committee should establish a procedure on how complaints will be received and resolved, and have regular meetings to discuss and resolve complaints. The meeting will be open to the public, and decisions will be recorded and distributed among those present. All records of the committee meetings and how grievances were addressed will be maintained by LGED, and the public will have access to these records.

22. Public consultation will be conducted both at screening stage as well as IEE stage. Public consultations will be held at three levels as:

- (i) Local level (village level/ block level) villagers through which roads are passing;
- (ii) District level consultations involving Deputy Commissioner, Executive Engineers, revenue department;
- (iii) Project Implementation Office (PIO) officials, Upazila Engineers of LGED; and
- (iv) Institutional level consultations.

23. The LGED will provide relevant environmental information in a timely manner, in an accessible place and in a form and language(s) understandable (in Bengali) to affected people and other stakeholders. For illiterate people other suitable communication methods will be used. It will also organize meetings and seminars in the locality to inform people effectively.

F. Institutional Arrangement and Responsibilities

1. Institutional Arrangement and Responsibilities

24. The executing agency will be LGED of the Ministry of Local Government, Rural Development, and Cooperatives. A project steering committee will provide policy guidance for project implementation. The committee will meet twice a year to review the progress of project implementation. A suitably staffed project management office (PMO), to be established by LGED at its headquarters in Dhaka, will implement the project. The Chief Engineer of LGED, assisted by the project monitoring and evaluation unit, will be responsible for project implementation and coordination. The PMO will have one office in each of the three regions. A project director in the Dhaka headquarters will be assisted by two deputy project directors; regional office will be responsible for the day-to-day implementation and supervision of project activities. The PMO will be assisted by consultants with expertise in engineering design and supervision, climate resilience, economics and finance, social and gender development, participatory approaches, environmental and climate assessment, monitoring and evaluation, and local governance.

25. The consultants will assist the LGED to screen and categorize the sub-projects.

26. The following review procedure will be adopted to facilitate identification and mitigation of potential environmental problems/risks related to each subproject:

a. LGED's Responsibilities

- (i) Determine the environmental category of the sub-projects using rapid environmental assessment checklist
- (ii) Prepare IEE reports (it is unlikely that any of the sub-projects will be categorized as A, given the nature of the sub-projects and the selection criteria), including EMPs, and submit to ADB for review.
- (iii) Obtain environmental clearance from relevant Government agencies and ADB for environmental compliance before awarding any civil works contracts for that subproject.
- (iv) Basic environmental safeguards to be adopted during construction shall be included in all contract documents. For sub-projects that require an IEE, the contract documents shall also include clauses for the

implementation of environmental mitigation measures as described in the IEE report and EMP, and any Governmental clearances.

b. ADB's Responsibilities

- (i) Review IEE reports and approve qualifying subprojects.
- (ii) Disclose the findings of IEEs in accordance with *ADB's Safeguard Policy Statement, 2009*.
- (iii) Monitor the implementation of mitigation measures through project review missions, and conduct environmental performance monitoring as necessary.

2. Capacity Development

27. Capacity on environmental management and climate risk assessment and adaptation needs to be strengthened at all levels of the EA including LGED/ MOLGRD&C, Project Implementation Unit (PIO)/ CRIIP. CCRIP will implement capacity building measures through training, exposure visit to climate vulnerable areas.

Table 1: Capacity Development Program

Sl. No.	Particular of Activities	Remarks
1.	Orientation of ADB's and country specific environmental safeguards and compliance measure	BRM will invite relevant participants nominated by CCRIP
2.	Orientation on climate risks, vulnerability and adaptation assessment	CCRIP will organize training with support from the consultant and resource person
3.	'Climate-proofing' of vulnerable infrastructure	CCRIP will organize training with support from consultants and resource person
4.	Promotion of 'Green Road'	CCRIP will organize training with support from resource person
5	Integrating climate change in project design and operation	BRM will invite relevant participants nominated by CCRIP

G. Monitoring and Reporting

28. The EU of LGED will monitor and measure the progress of implementation of the EMP. The extent of monitoring activities will be commensurate with the project's risks and impacts. In addition to recording information to track performance, the LGED will undertake inspections to verify compliance with the EMP and progress toward the expected outcomes. The EU of LGED will document monitoring results, identify the necessary corrective actions, and reflect them in a corrective action plan. The EU of LGED will implement these corrective actions and follow up on these actions to ensure their effectiveness.

29. The EU of LGED will prepare periodic monitoring reports that describe progress with implementation of the EMP and compliance issues and corrective actions, if any. The EU of LGED will submit at least semiannual monitoring reports during construction for sub-projects.

H. Staffing Requirements and Budget

30. Environmental assessment and related monitoring/ supervision tasks will be carried out by one environmental consultant with climate change expertise. The Terms of Reference of the environment consultant is in Annex 2. It is expected that the environmental consultant of the project will work in close collaboration with the Department of Environment to remain updated on all environmental assessment requirements and comply with all rules and regulations. The environmental consultant will work in close collaboration with the environmentally trained LGED staff at the district and upazila levels. The environmental consultant will work in collaboration with the Project Management Office (PMO) and LGED, in advising LGED and Project-related staff and consultants on environmental matters including climate change impact issues, mitigating actions, and adaptation strategies and options.

31. The cost estimates for environmental assessment/ monitoring/supervision under the project will be worked out in detail by the PMO.

**Table 2: Tentative Costs for Environmental Assessment and Review of CCRIP
Subproject(s)**

Activity/Cost Item	Cost (US\$)
Baseline Survey	50,000
Hydro-meteorology data collection (secondary)	15,000
Consultants	144,000
Total	209,000

ANNEX 1: Outline of Initial Environmental Examination (IEE) Report

- I. Executive Summary
- II. Project Description
- III. Description of Existing Environment in the Project Area
 - Physical environment
 - Biological environment
 - Socio-economic and physical cultural resources
- IV. Potential Environmental Impacts and Mitigation Measures
 - Beneficial impacts and maximization measures
 - Adverse impacts and mitigation measures
- V. Analysis of Alternatives
- VI. Institutional Arrangements
- VII. Environmental Monitoring and Management Plan (EMP)
- VIII. Information Disclosure, Public Consultation and Participation
- IX. Grievance Redress Mechanism
- X. Conclusion and Recommendations

Annexes: (include approved TOR with approval letter; public notice certificate of deed; format of survey questionnaire, recommendation letter from Pourashova/municipalities; clearance letter from the Department of environment, maps, photographs; list of trees to be cleared; list of community infrastructures to be affected by the project etc.).

ANNEX 2: Terms of Reference for Environmental Specialist

1. The environmental specialist will (i) assess the environmental impacts of the project, including physical, ecological, social environments and climate and disaster risks; (ii) conduct a comprehensive appraisal of the environmental impact of the project activities in line with the ADB's Safeguard Policy Statement (2009); and (iii) propose appropriate mitigation measures for the identified environmental impacts. The main outputs from the environmental specialist are (1) supervision and monitoring of the project activities in the field level; (2) reporting about environmental compliance and implementation of suggested mitigation (environment) measures including climate adaptation and disaster risk reduction measures; (3) contribution to the environmental part of the monthly, quarterly, annual, midterm and final reports; (4) providing assistance for preparation of environmental audit report to be prepared by the externally deployed consultants; and (5) preparation of environmental due diligence report.

2. The environmental specialist must have a graduate degree in environmental science or environmental engineering or closely related field of study with 10 years experience in related areas including specific expertise in climate change issues in Bangladesh. Inputs may be intermittent over the period of 36 months until the submission of completion report for the CCRIP.

Output Requirements

3. Environment Specialist will prepare training materials; conduct training for staff/doctors/patients; prepare screening, IEE report of the subproject(s); review a certain percentage of the EMPs; and prepare the Annual Environmental Monitoring Reports (EMR) of the CCRIP and submitted annually. The consultant will be responsible for implementation of the EARF and its provisions, including compliance checking, facilitation, coordination and ensuring dissemination, orientations and capacity building activities. Additional human resources or an agency (e.g. Department of Environment) may be engaged, if necessary, in order to effectively implement the EMP.

4. Consultant will deliver, to the Project Director, an inception report, regular progress reports, and a final report on the completion of his/her inputs to project implementation in accordance with his/her terms of reference. The Project Director will determine the timing of consultant's outputs at the outset of their involvement with the project and deliver their reports, with comments on quality, to the PMO.

ANNEX 3: Public Consultation

1. Consultation and information disclosure will be a continuous process during the preparation of the environmental assessment document and implementation of the EMP. The PMO/ LGED will ensure to conduct meaningful consultation with affected people and concerned stakeholders, including civil society and facilitate their informed participation. The meaningful consultation shall begin early in the subproject preparation stage and carried out in an ongoing basis throughout the subproject cycle, timely disclosure in understandable format by the local stakeholders; consultation is organized in congenial environment without intimidation, and is gender sensitive. The process and results shall be documented and incorporated in the environmental assessment report. Some photographs of public consultation during preparation of EARF are given below:



Discussion with Upazila Engineer of Amtoli



Market committee of Amragachia



Mahipur Bazaar stakeholders



KII with Chairman of Sundarban Union



Dialogue with Rakhain leader



Fishermen village