

GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH

MINISTRY OF WATER RESOURCES



BANGLADESH WATER DEVELOPMENT BOARD

Coastal Embankment Improvement Project – Phase I (CEIP-I)

TERMS OF REFERENCE (TOR)

FOR

Environmental Specialist

Under Project Management Unit

CEIP-1/D1/S16

February , 2016

TERMS OF REFERENCE (TOR)
FOR
Environmental Specialist

1. BACKGROUND

1. Bangladesh is a low lying country. Most of the land in the coastal zone is within 1 to 1.5 meter PWD and gets inundated with saline water during tides. In 1960s, polderization (i.e., land surrounded by embankment) had been started to make these land a permanent agricultural land. The coastal embankment system of Bangladesh was originally designed to protect against the tides and the associated salinity intrusion, without much attention to storm surges. Recent cyclonic storm surges brought substantial damage to the embankments and further threatened the integrity of the coastal polders. The above reasons have led the Government to re-focus its strategy on the coastal area from one that only protects against high tides to one that provide protection against frequent storm surges. The long term objective of the Government is to increase the resilience of the entire coastal population to tidal flooding and natural disasters by upgrading the whole embankment system. With an existing network of embankment of nearly 5,700 km long with 139 polders, the magnitude of such a project is daunting and requires prudent planning. Hence a multi-phased approach of embankment improvement and rehabilitation will be adopted over a period of 15 to 20 years. The **Coastal Embankment Improvement Project – Phase 1 (CEIP-1)** is the first phase of this long term program.

2. The overall **objective** of the CEIP-1 is to increase the resilience of coastal population to natural disasters and climate change. More specifically, the project aims at (a) reducing the loss of assets, crops and livestock during natural disasters; (b) reducing the time of recovery after natural disaster such as cyclone; (c) improving agricultural production by reducing saline water intrusion which is expected to worsen due climate change; and (d) improving the Government of Bangladesh's capacity to respond promptly and effectively to an eligible crisis or emergency. This objective will be achieved by **rehabilitating and improving the polder system in the coastal area**. The project is expected to be implemented over 7-8 years.

3. The Government of Bangladesh (GOB) has received financing from International Development Association (IDA) to meet part of the cost of the CEIP-1. The Project would be implemented by the Ministry of Water Resources (MOWR), through the Bangladesh Water Development Board (BWDB). BWDB has set up a Project Management Unit (PMU) to oversee the development and execution of the project. The PMU is led by a Project Director and located in BWDB's headquarters in Dhaka. Also, one Field Level Offices (FO), at Khulna has been set up headed by an Executive Engineer. PMU is being assisted by a Detailed Design & Construction and Supervision (DDCS) & Project Management Support (PMS) Consultants and a Monitoring and Evaluation (M&E) Consultants. The PMU will /has appoint/appointed an Independent Panel of Experts (IPOE) to oversee the technical implementation of the project. PMU has already appointed a Senior Environmental Specialist who is now working based at Dhaka.

4. As part of the Field Offices at Khulna, Bagerhat, Patuakhali and Borguna, BWDB plans to hire a highly qualified **Environmental Specialist** with sound knowledge, clear understanding and expertise of (i) assessing the environmental impacts of coastal polders addressing coastal ecology, river morphology, water resource management, social environments, climate and disaster risk; (ii) managing of environmental safeguards compliance issues in projects under the World Bank Environmental Safeguards Operational Policies; and (iii) ensuring environmental and occupational safety during project implementation and emergency response of embankment failure and natural and anthropogenic disaster.

2. OBJECTIVE

5. The main objective of appointing the Environmental Specialist is to make available technical expertise within PMU on **environmental safeguards compliance** under national and the Bank guidelines. The Jr. Environmental Specialist will assist PMU in four main tasks (i) assist in updating EIA for Polders of the Project, ii) ensuring Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA) for the Polders of the Project following the Environmental Management Framework of the project & (iii) the supervision of tasks related to environmental compliance (iv) reporting and capacity building for environmental compliance.

3. SCOPE OF SERVICES

6. The Environmental Specialist will provide technical assistance to ensure environmental compliance in the physical, ecological, social, river morphological dimension of coastal polder. S/He will assist in ensuring compliance with all environmental legislation during the identification, preparation, design, implementation and operation of subprojects. The scope of work for the position are as follows:

Task 1: Updating EIA for Polders and Environmental related functions of CEIP-1, over all

- (i) Assist in reviewing the detailed engineering design of embankments and water control structures of the polders with respect to environmental concern and share with the local communities – beneficiaries and likely affected persons, and seek their feedback.
- (ii) Have dialogue back with the design engineers and planners to further review the engineering design, alignment of embankments and structures to avoid environmental negative impacts
- (iii) Assist in ensuring updating the EIA for Polders of the Project
 - ✓ when location of the afforestation component, construction camp, borrow pits, stacking of construction material and dredged spoil will be finalized, type, time and number of equipment, vehicles, dredger etc. to be used by the contractors will be selected, plan and design of land acquisition will be completed, and the contractor's work plan will be received.
 - ✓ if discrepancy in the baseline information of any polder is observed
 - ✓ if any aspect with environmental consequence is overlooked and needs to be addressed
 - ✓ if the design of the above polders are revised
 - ✓ based on the recommendations from the Independent Panel of Expert (IPOE)
- (iv) Any other tasks as assigned by the PD on updating the EIA of above 6 polders.

Task 2: Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA)

- (i) Assist to prepare the TORs for IEE and EIA for Polders of the Project, as required;

- (ii) Assist in reviewing the inception report of IEE and EIA prepared by the DDCCS & PMS Consultants (Contract No. CEIP-1/B2, B3, C1/S2) and make sure that the surveys and consultations are done on schedule and adequate resources and appropriate expertise are applied;
- (iii) Assist the DDCCS & PMS Consultants and BWDB community organizer to carryout participatory consultation during planning, design and implementation;
- (iv) Ensure local consultation on environmental issues has been performed before polder design finalization by the DDCCS & PMS Consultants;
- (v) Assist in reviewing the design to ensure environmental issues raised from public consultation have been addressed in the final design;
- (vi) Visit and monitor polders during the IEE and EIA preparation to ensure environmental safeguards are being properly conducted;
- (vii) Assist in reviewing the IEEs/EIAs along with EMPs prepared during project preparation, resolve any information gaps, and initiate a program of preconstruction monitoring if it has not already begun;
- (viii) Assist the Project Director for obtaining World Bank and DoE clearance on the EIA and IEE reports;
- (ix) Any other tasks as assigned by the PD on EIA and preparation and approval of EMPs.

Task 3: Monitoring and Evaluation: Implementation of EMP

- (i) Assist Senior Environmental Specialist to approve the Contractor's Environmental Action Plan (EAP), as per the EMP in all the 17 Polders under the project;
- (ii) Liaison with the officers in each field office and make spot checks during implementation to ensure that environmental plans are being properly implemented and report to Senior Environmental Specialist ;
- (iii) Liaison with the Contract DDCCS & PMS Consultants for the Implementation of the EMP;
- (iv) Interact with the NGOs and Community based organizations to be involved in the project for EMP implementation;
- (v) Dialogue with the project affected persons (PAPs) and ensure that the environmental concerns and suggestions are incorporated and implemented in the project;
- (vi) Report to the PD and Senior Environmental Specialist on the environmental aspects pertaining to the project;
- (vii) Assist in updating of EMP and EIA after receiving information from the contractors and the DDCCS & PMS Consultants;
- (viii) Supervise construction work and monitor the implementation of mitigation measures under the EMP;
- (ix) Conduct regular field visit during the project preparation, implementation and operation to ensure environmental safeguards are being properly conducted;

- (x) Supervise and monitor of the project activities in the field level and provide technical advice to ensure compliance of the mitigation measures by the Contractors;
- (xi) Monitor the disclosure of project environmental safeguard documents throughout the project cycle, including the EMF/IEE/EIAs at the local, regional and national level.
- (xii) Liaison with M&E Consultants.

Task 4: Documentation & Capacity Building

- (i) Assist in the preparation of bid documents and construction contracts to ensure that environmental safeguards are incorporated;
- (ii) Contribute the environmental part of the monthly, quarterly, annual, midterm and final reports;
- (iii) Document the experience in the implementation of the environmental process;
- (iv) Responsible for maintaining Polders Specific Database for Environmental Management and ensuring Update of Database for polder specific environmental information
- (v) Assist the PD to arrange for the Environmental Auditing and follow up action on the Audit recommendation.
- (vi) Assist in development of training program with regard to the environmental aspects of the project for the key stakeholders (BWDB, contractors, public representatives and local government institutions/ NGOs, WMOs) in collaboration with the field level junior Environmental Specialist;
- (vii) Assist in capacity Building of the project officials responsible for environmental sustainability assurance of BWDB project
- (viii) Guide and assist the PD and the key stakeholders (BWDB, contractors, public representatives and local government institutions/ NGOs, WMOs) to strengthen the environmental management practices in polder rehabilitation, hydraulic structure construction
- (xiii) Assist the BWDB Engineers at site by providing appropriate environmental advice, and developing appropriate environmental mitigation measures for each polder;

4. WORKING CONDITION

7. The Environmental Specialist shall be stationed at the CEIP Field Offices at Khulna, Bagerhat, Patuakhali and Borguna. He will be required to travel various sites of all the 17 Polders encompassing the project area, as and when needed and work under pressure.

5. DURATION

8. Duration of the consultancy services would be for **two (2) years** starting from FY 2016-2017 to FY 2018-2019. However the performance for first year will determine the continuity of the contract for the remaining years. The contract may be extended based on project needs and subject to satisfactory performance of the consultant during the contract period.

6. REPORTING REQUIREMENT

9. In addition to various deliverable ; the Environmental Specialist will submit a brief quarterly report for BWDB covering achievement/progress towards all the tasks indicated above and as per requirement of PD, PMU, CEIP-I.

7. RESPONSIBILITIES OF BWDB

10. The Environmental Specialist will be based in the CEIP Field Offices at Khulna, Bagerhat, Patuakhali and Borguna. The counterpart officials will be designated as required for conducting the services. BWDB will provide the facilities required for the services including office accommodation, office equipment & stationeries, etc. The specialist will have to arrange own transportation for attending office on all regular workdays. BWDB will bear the Remuneration/Daily allowances and Travel cost as per financial negotiation.

8. QUALIFICATION AND EXPERIENCE

11. The Environmental Specialist must have
- at least Master's degree in Environmental Engineering/Environmental Science/Environmental Resources and Planning.;
 - at least seven (7) years of working experience related to preparation of EIA, and integration of environmental and social issues in the design, implementation and operation of polder related projects.
 - demonstrated sound technical expertise in international good practices on environmental safeguards and have proven track record of providing social safeguard oversight functions.
 - experience in forestry, hydraulic structure, river morphology, coastal ecology, climate change impact and World Bank funded project is preferred.
 - excellent communication and writing skills with higher-level computer skills in Windows operating system (Word, Excel, Access, etc.). Knowledge on GIS mapping will be an added advantage.

(Md. Delwar Hossain)
Addl. Chief Engineer & Project Director
CEIP, BWDB
House-15(4th Floor), Road-24
Gulshan-2, Dhaka-1212, Bangladesh
Tel: +880-2- 9899363, 9899373
E-mail: pdpmuceip@gmail.com
Web site: www.bwdb.gov.bd