



Government of the People's Republic of Bangladesh
Bangladesh Water Development Board (BWDB)

Coastal Embankment Improvement Project, Phase-1 (CEIP-1)



**Consultancy Services for Feasibility Studies and
Preparation of Detailed Design for the Following Phase (CEIP-2)**

**Progress Report No. 3
October 2021**



nhc
northwest hydraulic consultants



DEVELOPMENT
DESIGN
CONSULTANTS
LIMITED



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1. General

1.1 Introduction

A Consultancy Contract was signed on 19th July 2021 between the Bangladesh Water Development Board (BWDB) and the Consultant to provide Consultancy Services for Feasibility Studies and Detailed Design for the next Phase of the Coastal Embankment Improvement Project. The Consultant is represented by the Joint Venture (JV), being Royal HaskoningDHV (RHDHV) lead firm from The Netherlands, Northwest Hydraulic Consultants (NHC) from Canada and Inros Lackner (INROS) from Germany. The JV will implement the Consultancy Services in association with Bangladesh sub-consultants Development Design Consultants (DDC), Strategic Planning and Management Consultants (SPMCS), Knowledge Management Consultants (KMC) and Center for Environmental and Geographic Information Services (CEGIS).

As per the Terms of Reference the main objective of the Consultancy Services is to support BWDB in preparation of comprehensive coastal embankment improvement program and implementation of the following phases of CEIP.

Following CEIP-1, the next phase of CEIP is intended to improve certain polders of the remaining 122 polders and to that end a selection will have to be made of a next batch of 13 polders. These 13 polders will be combined with the 7 polders from the envisaged Package 3, and an optimal investment option will be selected. From this investment plan the first batch of polders will be taken forward for the preparation of tender documents for the next phase of CEIP.

The Consultancy Services comprise the preparation of a Feasibility Study according to the international standards, which will form the basis for project appraisal by the World Bank and the Government of Bangladesh (GoB) and will also cover the preparation of detailed designs and bidding documents of a batch of works to be implemented under the next phase of CEIP. Preparation of feasibility studies for the 13 selected polders as identified in the investment plan and tender documents for the first batch of polders as identified in the investment plan to be implemented under the next phase of the project.

This Monthly Progress Report (MPR) is over the month of October 2021 and will provide information and details on the activities and progress of this month.

1.2 Key challenges, risks and recommendations

1.1.1 Key challenges and risks

Some key challenges and risks are summarised as follows:

- In the month of October 2021 COVID-19 measures were relieved making it easier to travel, conduct meetings and make field visits;
- Since the Polder Screening Report (including Preliminary List of screening of 23 Polders) and Prioritization Report, including Prioritization List of 13 Polders with detailed Report updating MCA of 2013 and the Strategic Plan report on selection of an optimal investment option including 20 Polders, could not be submitted for reasons mentioned in the Progress Report No. 2, delays may occur;

1.1.2 Recommendations

Although the Polder Screening Report and Prioritization Report could not be submitted (see above), Consultants will proceed with their activities as much as is possible.

1.3 Contractual Tasks of Consultants as per Terms of Reference

The main tasks of the Consultancy Services as per Terms of Reference are listed in Table 1-1.

Table 1-1: Contractual Tasks of Consultants

Task 1: Prioritization to select the next batch of polders for CEIP	
Task 1.1	Prioritization of 122 polders and selection of 23 polders for detailed prioritization
Task 1.2	Detailed prioritization of 23 polders and selection of 13 polders for Feasibility Study
Task 1.3	Selection of an optimal investment option
Task 2: Preparation of Feasibility Studies for the 20 polders (including updating/reviewing 7 Polders of Package-1 of CEIP-1) selected in Task 1	
Task 2.1:	Preparation of feasibility level designs
Task 2.2	Project benefits and economic analysis
Task 2.3:	Social assessment and beneficiary participation aspects
Task 2.4	Environmental and Social Management Framework (ESMF)
Task 2.5	Update framework for Monitoring and Evaluation
Task 2.6	Assessment of International Waterway aspects
Task 3: Preparation of Detailed Design and Bidding Documents, ESIA's and LAP/RAP	
Task 3.1	Detailed Designs and Bidding Documents
Task 3.2	Environmental and Social Impact Assessments (ESIAs)
Task 3.3	Resettlement Action Plan (RAP)
Task 3.4	Preparation of Land Acquisition (LA) Plans and LA Proposals
Task 3.5	Project Implementation Plan and Procurement Packaging
Task 3.6.	Operation and Maintenance (O&M)

2. Summary of Key Achievements during the reporting month

A summary of Key Achievements during the reporting month is listed in Table 2-1.

Table 2-1: Key Achievements during this reporting month

No.	Item	Key Achievements during this reporting month
1	Field surveys	<ul style="list-style-type: none"> Commencement of necessary surveys to able to prepare RPFs, LAPs, RAPs and other associated documents; Conduct drone surveys
2	Consultations	<ul style="list-style-type: none"> Meetings with Honourable State Minister Consultations with Officials in the field and local people

3. Progress of Tasks

3.1 Introduction

The progress of each of the Tasks is described in this chapter together with possible challenges and risk and recommendations for improvements if any. The Tasks of the Terms of Reference (ToR) are guiding in this respect.

3.2 Various tasks

3.2.1 Replying to comments on the Draft Inception Report

Within the month of September, Consultants received a first batch of comments from the World Bank (26th September 2021). Consultants replied to the first batch of comments via the World Bank Project Tracker on 10th October 2021.

A second batch of comments has been received by the World Bank on 11th October 2021. Consultants replied to the second batch of comments via the World Bank Project Tracker in November (see next Report).

3.2.2 Meetings with Honourable State Minister

On 3rd October 2021 (see Figure 3-1) meetings were held with the Honourable State Minister, where the following phase of CEIP has been presented. The objectives of the next phase of CEIP have been elaborated as well as the methodology. Special focus was given to the polder screening and prioritization. The views and insights of the Honourable Key Stakeholders have been taken into consideration for the selection procedure. In preparation of these meetings Consultants prepared innovative concept design solutions and layout designs. Meetings were attended by High Officials of the BWDB, World Bank and Consultants.

In continuation to above, a combined physical and virtual meeting was held with the Honourable Additional Secretary on 24th October 2021 with the same attendance agenda items.



Figure 3-1: Meetings with Honourable State Minister at BWDB Venue

3.3 Task 1: Prioritization to select the next batch of polders for CEIP

3.3.1 Task 1.1: Prioritization of 122 polders and selection of 23 polders for detailed prioritization

The MCA tool was further developed and applied to the pre-screening of 122 polders and narrowing down to 23 polders by means of a high-level assessment.

3.3.2 Task 1.2: Detailed prioritization of 23 polders and selection of 13 polders for Feasibility Study

The first activities for this Task 1.2 continued as described in the Progress Report over the month of September 2021.

3.4 Task 2: Preparation of Feasibility Studies for the 20 polders (including updating/reviewing 7 polders of Package-3 of CEIP-1) selected in Task 1

3.4.1 Task 2.1: Preparation of feasibility level designs

The Design Team set-up formats for the design drawings and collected both Bangladesh Design Standards and International Design Standards.

3.4.2 Task 2.2: Project benefits and economic analysis

The following activities were conducted:

- Data collection: physical asset and GIS data (for damage modelling);
- Damage model development;
- CBA-model development: cost and benefits estimation and result indicator quantification (NPV, IRR etc.);
- Risk and sensitivity analysis (including analysing switching values for the results of the CBA).

3.4.3 Task 2.3: Social assessment and beneficiary participation aspects

The following activities commenced in the month of October 2021:

- Consultations with project beneficiaries to assess attitudes and responses to the Project and ascertain the nature and scope of local participation in project planning and implementation;
- Stakeholder consultation with women group, gender analysis, and recommend mechanisms to enhance women's participation in project planning and implementation;

- Socio-economic survey among the households in the project influenced area to assess the social impacts of the project on the potential project affected persons and other stakeholders;
- Summarize major issues and recommendation for addressing social impacts and poverty issues of target beneficiary population;

Furthermore, the overall social & human development and poverty profile of the project areas based on primary and secondary data such as statistical yearbooks, poverty was examined and assessed. The report will be based on the findings of the census, socioeconomic surveys, field visits and small group discussion and PRA with the people in the project influenced area.

3.4.4 Task 2.4: Environmental and Social Management Framework (ESMF)

In this reporting month no activities to report on this Task.

3.4.5 Task 2.5: Update framework for Monitoring and Evaluation

In this reporting month no activities to report on this Task.

3.4.6 Task 2.6: Assessment of International Waterway aspects

Reports and masterplans concerning waterways were collected with specific focus on international connections; the Jamuna River corridor which transboundary connections with India was reviewed and the impact on the coastal zone. The latter holds for developments for Payra, Chattogram and Mongla Ports.

3.5 Task 3: Preparation of Detailed Design and Bidding Documents EIA's and LAP/RAP

3.5.1 Task 3.1 Detailed Designs and Bidding Documents

Detailed designs should follow functional requirements and standards and to this end a Basis of Design (BOD) is prepared and activities to this commenced this month. The BOD documents the principles, assumptions, rationale, criteria, and considerations used for calculations and decisions required during design. The BOD is developed by the Designer and builds upon the Contracts Technical Specifications and Employer Requirements.

The BOD describes the technical approach planned for the project. The BOD is used as the basis for design calculations and other design decisions. It includes among others, the minimum levels of quality, as per relevant Codes, Standards, Guidelines and/or Good Engineering Practices, or the performance set by the design. It also includes a description of the design approach and evolves into a more detailed document that can be used later by maintenance and operations personnel for operation, monitoring, recommissioning, and maintenance.

It is noted that the BOD is not the Detailed Design Report but does set out its principles, assumptions, rationale, criteria, and considerations used for calculations and decisions required during design.

3.5.2 Task 3.2 Environmental Impact Assessments (EIAs)

In this reporting month no activities to report on this Task.

3.5.3 Task 3.3 Resettlement Action Plan (RAP)

The following activities commenced in the month of October 2021:

- *Video capturing of the alignment:* Drone videos are being made (see Figure 3.2) and will be captured for all affected properties including vacant land, crops, structures, trees, pond etc. after household numbering but before starting the census and IOL survey. This video capturing is generally called a 'running video' which will be carried out to prevent fraudulent claims in the future and to fulfil the requirement of the ARIPA 2017. After conducting the census and IOL survey, a video will be captured of the affected properties along with the household head or his/her senior proxy.

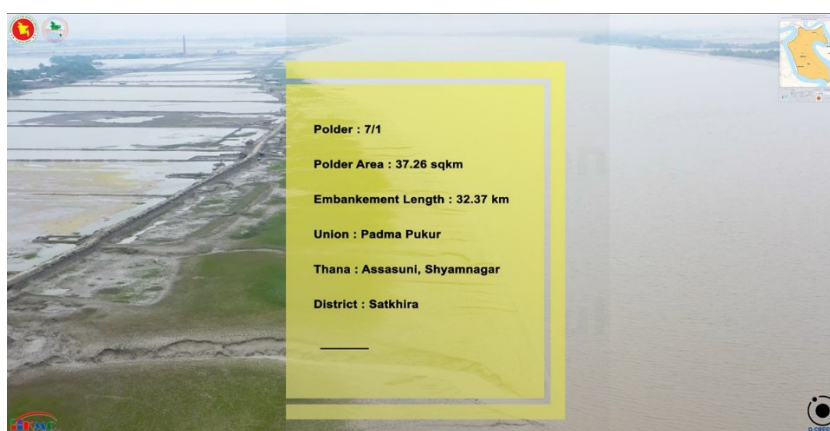


Figure 3.2: Drone video of Polder 7/1

- *Carry out social Screening:* Social screening of each polder is carried out as per requirement of the World ESF. People living inside the polder, on the embankment and outside the polder are being interviewed during social regarding social inclusion, participation and gender issues, public health implication due to project interventions, tidal effect, GBV risks, etc.;
- *Stakeholders Consultation Meetings (SCM):* SCMs were initiated with various stakeholders in small groups in open and accessible places considering the COVID 19 pandemic situation. The sessions are organised to disclose the objectives of the project and seek broader community support to ensure stakeholders engagement in project planning and implementation stage. The meetings will also confirm the cut-off-date of the affected properties. The meeting will be held prior to the census and IOL. Necessary COVID norms (wearing masks, hand sanitizing, distancing) will be followed during these consultation meetings;
- *Census and detailed measurement of losses:* 100% of the census will be carried out for Project Affected Persons (PAPs) with their housing, income and livelihood resources and the current users of the agricultural lands to be acquired.

3.5.4 Task 3.4 Preparation of Land Acquisition (LA) Plans and LA Proposals

In this month no activities to report on this Task.

3.5.5 Task 3.5 Project Implementation Plan and Procurement Packaging

In this month no activities to report on this Task.

3.5.6 Task 3.6. Operation and Maintenance (O&M)

In this month no activities to report on this Task.

4. Summary of Staff Inputs

A summary of inputs of Consultant's Staff in each of the Tasks are summarised in Table 4-1.

Table 4-1: Inputs of Consultant's Staff in each of the Tasks this month

Inputs of Consultant's Staff in each of the Tasks this month**		Task 3.6: Operation and Maintenance (O&M)	Task 3.5: Project Implementation Plan and Procurement Packaging	Task 3.4: Preparation of Land Acquisition (LA) Plans and LA Proposals	Task 3.3: Resettlement Action Plan (RAP)	Task 3.2: Environmental and Social Impact Assessments (ESIA)	Task 3.1: Detailed Designs and Bidding Documents	Task 3: Preparation of Detailed Design and Bidding Documents, ESIA and RAP	Task 2.6: Assessment of Interim Waterway aspects	Task 2.5: Update framework for Monitoring and Evaluation	Task 2.4: Environmental and Social Management Framework (ESMF)	Task 2.3: Social assessment and beneficiary participation aspects	Task 2.2: Project benefits and economic analysis	Task 2.1: Preparation of feasibility level designs	Task 2: Preparation of Feasibility Studies for the 20 polders (including updating/reviewing 7 Polders of Package-1 of CEIP-1) selected in Task 1	Task 1.3: Selection of an optimal investment option.	Task 1.2: Detailed prioritization of 23 polders and selection of 13 polders for Feasibility Study.	Task 1.1: Prioritization of 122 polders and selection of 23 polders for detailed prioritization.	Task 1: Prioritization to select the next batch of polders for CEIP	Task 0: Inception Phase
Position	Task																			
International Staff																				
Team Leader *)																				
Hydraulic Structural Engineer *)																				
Geotechnical Engineer *)																				
Coastal Zone Management Specialist																				
Social Scientist / Sociologist / Resettlement																				
MIS Specialist *)																				
Economist																				
Project Coordinator *)																				
Survey Coordinator *)																				
River Modeller *)																				
Project Director *)																				
Additional Coastal Engineer *)																				
Additional River and Coastal Dynamics Expert *)																				
Additional Civil Engineer *)																				
National Staff																				
Deputy Team Leader																				
Cyclone and Storm Surge Modelling Specialist																				
Coastal and Estuarine Morphologist																				
Senior Hydraulic Engineer - 1																				
Senior Hydraulic Engineer - 2																				
River Engineer																				
Resettlement and Indigenous Peoples Specialist																				
Environmental Specialist																				
Design Engineer - 1																				
Design Engineer - 2																				
Design Engineer - 3																				
Geo-technical Engineer																				
GIS/Remote Sensing Specialist																				
Procurement / Contract Management Specialist																				
Agricultural / Irrigation Specialist																				
Economist																				
Survey Engineer / Quantity Surveyor - 1																				
Survey Engineer / Quantity Surveyor - 2																				
Survey Engineer / Quantity Surveyor - 3																				
Land Acquisition Specialist - 1																				
AutoCAD Specialist - 1																				
AutoCAD Specialist - 2																				
Ecologist																				
Forestry Specialist																				
Fishery Specialist																				

Notes
 *) Bangladesh inputs
 **) Consultants Staff input to this Task =