Bangladesh Water Development Board (BWDB)

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

Bi-annual Environment Monitoring Report
for
January – June 2020

CEIP-1 PMU
with the assistance of
DDCS&PMS Consultants and M&E Consultants

December 2020

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Acronyms and Abbreviations

BOD	Biochemical Oxygen Demand
BWDB	Bangladesh Water Development Board
CEIP-1	Coastal Embankment Improvement Projet,Phase-1
CIF	Climate Investment Fund
COD	Chemical Oxygen Demand
Covid-19	Causal agent for corona virus disease
DDCS&PMSC	Detailed Design, Construction Supervision and Project Management Support Consultant
DO	Dissolved Oxygen
DoE	Department of Environment
DOF	Department of Forest
DPP	Development Project Pro-forma
EAP	Environmental Action Plan
ECC	Environment Clearance Certificate
ECR	Environment Conservation Rules
EIA	Environmnental Impact Assessment
EHS	Environment and Health Safety
EMF	Environment Management Framework
ESMP	Environment and Social Management Plan
EMP	Environmental Management Plan
GoB	Government of Bangladesh
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
ISM	Implementation Support Mission
KUET	Khulna University of Engineeing& Technology
LPG	LiquifiedPetrolium Gas
M&E	Monitoring and Evaluation
OHS	Occupational Health Safety
PAD	Project Appraisal Document
pH	Acidity/alkalinity
PMU	Project Management Unit
PPCR	Pilot Program for Climate Resilience
PPE	Personal Protective Equipment
RAP	Resettlement Action Plan
R/S	River Side
TDS	Total Dissolved Solids
WB	World Bank

Executive Summary

Introduction: This Bi-annual Environmental Monitoring Report for Coastal Embankment Improvement Project (CEIP-1) has been prepared during the period January to June, 2020 to fulfill the safeguard policy requirement of GOB and the WB. The Government of Bangladesh (GOB) has undertaken the implementation of the Coastal Embankment Improvement Project, Phase-1 (CEIP-1) with loan assistance of the World Bank (WB) and grant assistance of the Climate Investment Fund's Pilot Program for Climate Resilience (PPCR). The Project includes rehabilitation and improvement of 17 polders, to be implemented in three packages. Two packages covering 10 Polders are currently underway. The present Phase-1 activities belong to part of the total of 139 polders of Bangladesh Water Development Board (BWDB) having nearly 5,700 km embankment along with various water management structures. During the sixties, polderization started in the coastal areas to mainly protect land and people from diurnal tidal flooding and control salinity. Lack of proper maintenance, damage by the recent cyclones/storm surges (mainly Sidr and Aila which took place in 2007 and 2009 respectively) and siltation of the peripheral rivers have necessitated the adoption of CEIP, which will not only rehabilitate the embankment, but also raise the embankment height to combat high tides and storm surges which have been intensified by global warming and sea level rise. CEIP-1 includes 17 number of coastal polders located in the districts of Khulna, Bagerhat, Satkhira, Pirojpur, Barguna and Patuakhali. But due to resource constraint 10 nos. of Polders in the district of Khulna, Bagerhat, Pirojpur, Barguna and Patuakhali have been taken up for rehabilitation under 2 nos. of Packages. At present decision - has been taken to improve the remaining 7 numbers of Polders in the next phase of CEIP. CEIP has also emphasized on improvement of the environment and that environmental, social and economic issues be addressed during its pre-construction, construction and operation and maintenance phases. Due to outbrake of Covid-19 from December 2019 all over the world, it was essential to take emergency precautionary measures for minimsing spead of corona infection. The Project tried to adopt OHS protocol for Covid-19 in all it's construction sites to ensure the health and safety of the project workers.

Project Objectives: The project development objective as approved and agreed upon by the World Bank and the Government of Bangladesh is to increase the resilience of coastal population to natural disasters and climate change. More specifically, the project aims at

- reducing the loss of assets, crops and livestock during natural disasters;
- reducing the time of recovery after natural disaster such as cyclone;
- improving agricultural production by reducing saline water intrusion which is expected to worsen due climate change; and
- 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.

Project Components: The Project has five components; four components are related to polder improvement and a fifth component (with a provisional zero amount) has been included to allow for rapid reallocation of loan proceeds during an emergency, under streamlined procurement and disbursement procedures:

Component A	-	Rehabilitation and Improvement of Polders.
Component B	-	Implementation of Social Action and Environment Management Plans.
Component C	-	Construction Supervision, Monitoring & Evaluation of Project Impact, Supervision of Social and Environment Plans, and Delta Monitoring
Component D	-	Project Management, Technical Assistance, Training and Strategic Studies.

Component E - Contingent Emergency Response Component

Environmental Category of the Project: According to Environmental Conservation Rules (ECR) 1997 of DoE, the project is categorized as "Red" requiring that EIA and RAP have to be submitted for obtaining and Environmental Clearance Certificate (ECC). According to WB safeguard policy, the project is classified as Category "A" involving significant environmental adverse impact. An Environmental Management Framework (EMF) has been formulated which includes various steps for protection of physical, ecological, socio-cultural resources along with economic development and protection of occupation health and safety (OHS). These steps were followed during the reporting period to address environmental considerations.

Project Location: Out of total 139 Polders in the country, CEIP-1 includes 10 Polders in 2 Packages. Their locations are given in table below along with the area of each Polder that will be protected by the embankment works.

Location and Gross Protected Area (ha) of CEIP-1 polders

Sl. No.	Polder No.	Location		Gross protected Area (ha)
		Upazila	District	
Package-1				
1	32	Dacope	Khulna	8,097
2	33	Dacope	Khuna	8,600
3	35/1	Sharankhola and Morelganj	Bagerhat	13,058
4	35/3	Bagerhat	Bagerhat	6,790
			Total=	**36,545**
Package-2				
5	39/2C	Bhandaria and Motbaria	Pirojpur	10,748
6	40/2	Patharghata	Barguna	4,453
7	41/1	BargunaSadar	Barguna	4,048
8	43/2C	Golachipa	Patuakhali	2,753
9	47/2	Kolapara	Patuakhali	2,065
10	48	Kolapara	Patuakhali	5,400
			Total=	**29,467**
			CEIP-1 Total	**66012**

Environmental Management Team Organization: An environmental management team exists in CEIP-1 which involves the Contractors, the Construction Supervision and Project Management Support Consultants and other GoB agencies as implementers and the CEIP-1 PMU headed by the Project Director provides coordination and oversight. Third Party M&E Consultants spot check compliance, evaluate impacts and report to the Project Director.

Environmental documents prepared: Environmental Impact Assessment (EIA) have been prepared for each polder of both the packages. EHS risk assessment been done for each polder also and based on these assessments Environmental Action Plan (EAP) for work Package W-01 and Contractor's Environmental and Social Management Plan (C-ESMP) have been prepared which have been concurred from the World Bank. These are live documents which are continuously being updating considering the need of the project.

Improvement in management EHS: There have been subtaintial achievement in EHS management of the Project during the reporting period which is depicted as follows

- Improvement in supply and use of Personal Protective Equipment (PPE) in all sites.
- Regular toolbox talks were held before start of work.

- Establishment of separate lane for forklift movement and for the pedestrians in CC block manufacturing plant site
- Establishing and maintaining improve/hygienic toilet facilities for workers' use
- Erection of Material Safety Data Sheet (MSDS) at hazardous (fuel and chemical) location along with Bangla translation
- Erection and implementation of safety procedure at work sites
- Introduced incident reporting in Accident register following the World Bank's Environment & Social Incident Response Tool-kit (ESIRT)

EMP Implementation Status: Various key EHS measures have been complied as per EAP and C-ESMP prepared for Package-1 and 2 respectively based on EHS risk assessment of the respective package. The measures taken as per EAP and C-ESMP of Package-1 and Package-2 are shown in the following 2 nos. tables

Measures taken on EHS Risk Management and EAP for Package-01

Sl. no.	Polder/site	Specific individual area	EHS Risk issues	Measures taken to mitigate the risk issues	Remarks
1	32 & 35/1 Re-sectioning of Embankment	Starting and ending of working length	May occur accident, top soil disruption	• Demarcated all work sites clearly • Installed cautionary/informative signals to indicate the entry and exits of vehicles and movement of construction equipment in the working area. • Disposed of excess soil at site with no objection from local authority. • Conducted regular toolbox talk before starting the work • Informed the community before the start of work • Provided PPE to the workers during conduct of work • Erected the wire up to enough height before starting and ending of the work • Checked the physical condition of excavator regularly • Checked the physical condition of compaction vehicle regularly • Checked the physical condition of truck regularly • Conducted training on driving safety at regular interval • Borrow area of earth was fixed on agreement with owner of land • Documented all borrow agreements • Complied barrow area excavation with safe	

Sl. no.	Polder/site	Specific individual area	EHS Risk issues	Measures taken to mitigate the risk issues	Remarks
				distance from embankment as per technical specification.	
2	Polder 32, 35/1 & 35/3	Automatic CC manufacturing plants	Lockout-tagout (LOTO) of automatic plant	• Automated CC plant checked regularly • Checked electric, switch, fuel and all types of connection lines • Preserved the key with designated person	No work during the reporting reriod, in the automated CC manufacturing plants of these polders
3	All polders under Package-1	Covid-19 crisis	Spreading of the novel Corona virus	• Strengthening the body resistance through providing enough potable and required medicine • Checking the body temperature before entrance in the work sites • Reduce the work load and arrangement of shifting duties. • Make arrangement for hand washing/hand sanitizer • Maintaining the required distance of workers • Provided additional PPE with regard to Covid-19 situation	

Measures taken on EHS Risk Management and C-ESMP for Package-02

Sl. no.	Polder/site	Specific individual area	EHS Risk issues	Measures taken to mitigate the risk issues	Remarks
	39/2C Automatic CC Block Manufacturing yard	Automatic Machine plant	Lockout-tagout (LOTO) of automatic CC plant	• The CC plants were closed and kept encircled by security enclosure	No work during the reporting period in the Automated CC block Manufacturing plants oh this polder
			Mixing area	• Provided protective barrier around the hopper area	
			Stockpile area	• Sprayed water at regular intervals • Maintained safe height of the stockpile Provided coverage of stockpiled materials	
2	40/2,41/1, 43/2C, 47/2 and 48 CC block manufacturing by mixture machine	CC block manufacturing site by mixture machine			No work done by mixture machine in these polders
3.	Polder 40/2 and	Starting and	May occur	• Demarcated all work sites	

Sl. no.	Polder/site	Specific individual area	EHS Risk issues	Measures taken to mitigate the risk issues	Remarks
	48 Resectioning of Embankment	ending of working length	accident, top soil disruption	clearly • Installed cautionary/informative signals to indicate the entry and exits of vehicles and movement of construction equipment in the working area. • Disposed of excess soil at site with no objection from local authority. • Conducted regular toolbox talk before starting the work • Informed the community before the start of work • Provided PPE to the workers during conduct of work • Erected the wire up to enough height before starting and ending of the work • Checked the physical condition of excavator regularly • Checked the physical condition of compaction vehicle regularly • Checked the physical condition of truck regularly • Conducted training on driving safety at regular interval • Borrow area of earth was fixed on agreement with owner of land • Documented all borrow agreements Complied barrow area excavation with safe distance from embankment as per technical specification.	
4	All polders under Package-2	Covid-19 crisis	Spreading of the novel Corona virus	• Strengthening the body resistance through providing enough potable and required medicine • Checking the body temperature before entrance in the work sites • Reduce the work load and arrangement of shifting duties. • Make arrangement for hand washing/hand sanitizer • Maintaining the required distance of workers • Provided additional PPE with regard to Covid-19 situation	

Afforestation: Afforestation in the project area is being implemented by Bangladesh Forest Department (BFD) after signing 6 nos. of MoU between BWDB and BFD. Pilot planting of selected mangrove and other salt tolerant species are planned on BWDB owned land to demonstrate the

critical role of a protective belt on the tidal inundation zone on the riverside of the embankment (Foreshore) as well as in the embankment slopes. The afforestation plan during the year 2020-2021 is in progress. The progress of plantation till June 2020 is shown in the following table.

Afforestaion Status till June 2020

Sl No.	Polder No	Seedlings planted (Nos.)				Total seedlings planted (Nos.)	Total area in ha
		Embankment	Area in ha	Mangrove	Area in ha		
1	47/2	83500	33.4	74000	29.6	157500	63
2	40/2	50000	20	0	0	50000	20
3	41/1	20000	8	21000	8.4	41000	16.4
4	43/2C	28000	11.2	0	0	28000	11.2
5	48	9000	3.6	0	0	9000	3.6
Total		190500	76.2	95000	38	285500	114.2
1	32	140500	56.2	0	0	140500	56.2
2	33	150000	60	0	0	150000	60
3	35/1	128500	51.4	0	0	128500	51.4
4	35/3	126000	50.4	0	0	126000	50.4
Total		545000	218	0	0	545000	218
Grand Total		**735500**	**294.2**	**95000**	**38**	**830500**	**332.2**

Testing of Environmental Parameter: Testing of various parameters like Water quality (Surface and drinking), soil quality and air quality are measured once a year (done during April, 2019) and as such no such testing was carried out during the reporting period as no sample was possible to collect by the CRTS of KUET due to spreading of Covid all over the country. Noise level testing is carried out on monthly basis, which are included in monthly progress report regularly. The noise recording corresponds to the sensitive locations of Package-2 have been conducted and the same was not taken since the noise sensitive locations of Package-1 have stopped functioning during reporting period.

Grievance Regress Mechanism: In Package-01, there are 15 Grievance Redress Committees (GRC) at local level since this package coves 15 unions. All cases have been tried to reach resolution within the four-week time from the dates of receiving the complaints and trying to resolve locally. A total number of 175 complaints/grievances have been received up to June 2020 by GRC in package-1. Among those, 42 cases have been resolved at the entry level and 114 cases have been resolved through investigation and formal hearing by GRC. Similarly, there are 21 Grievance Redress Committees (GRC) at local level for Package-2 since this package coves 21 unions. A total number of 51 complaints/grievances have been received up to June 2020 by GRC. Among those, 34 cases have been resolved at the entry level. The remaining 17 cases have been placed for further field investigation by GRC. No grievance has been registered specific to environmental issues till now. The environmental hazards caused during construction are being minimized and are localized which local people generally tolerate as they consider that the project will provide many benefits to them. Consultant has instructed the Contractor to avoid and/or mitigate even the minor and localized pollution.

Training: CEIP-1 always ensured the protection of the environment and the health of staff at worksites, where the contribution of EHS training is of great importance.The Contractor for both the packages have conducted a number of program of monthly environmental training during the January-June, 2020, period. In Package-1, about 3215 participants (staff and workers) were trained, allowing for double-counting wherein one person may have been trained more than

once as would be the case for refresher training or training in additional topics. In Package-2 about 1260 participants (staff and workers) were trained. Training includes safety measures against Covid-19, use of PPE, procedure of equipment operation, electrical safety and traffic safety and working in high work places, driver's safety, use of first aid facilities and fire extinguishers, accident management. The above training are related to safety of working in automated CC plant, sluice construction/rehabilitation, embankment se-sectioning, re-excavation work and CC block dumping works. Trainers include the Contractors' Environmental officer in Charge, Chinese, and local EHS Officers of the concerned Polder. The Environmental Specialists of PMU, DDCS&PMSC and Third party M&E also provide training during their combined/together visits at work sites.

Programme for the next term: Major environment-related activities will be carried out during the period from July to December, 2020. The major environmental activities planned are i) Conduct regular monthly EHS committee meeting and sharing the meeing announcement & minutes wih the World Bank; ii) National Consultative Workshop and Disclosure for seven EIA reports for Package W-03; iii)Finalization of the seven EIA reports for Package W-03 and obtained Approval from DoE & The World Bank; iv) Finalize Submit and the 10th Bi-annual Environmental Monitoring Report; v)Finalize 4th Annual Environmental audit report; vi)Conduct hearing test for automatic CC block manufacturing machine operators for package W-01 and W-02; vii) Ensure sufficient arrangements to combat Covid-19 pandemic viii) Prepare Emergency Preparedness Plan (EPP) following the guidelines of COVID-19 Protocols viii)Conduct yearly Environmental monitoring (Air, Soil & Water);xi)Conduct Bi-monthly noise level measurement for Package W-01 and W-02; x)Establishment of fish sanctuary for conserving threatened fish species in Package W-01; xi) Reporting on accident accordingly ESIRT and immediate reporting to the PMU and also to the Bank; xii) Proper placement of grievance collection box in Polder 32, Polder 41/1 and Polder 43/2C; xiii) Implementation of IPM/IPSNM practices at farmer's field; xiv) Arrange useful training program for WMGs.

Conclusion and Recommendations: A good improvement of the EHS practices of both the contractors for Package-1 and Package-2 have been noticed during the reporting period. But there is scope to improve the practice level further. The following recommendations are made to address by the both Contractors to improve the EHS quality.i)To conduct the environmental monitoring testing of the required parameters following the schedule that is stipulated in the EAP and C-ESMP strictly ii) Assure the use of required PPE by the workers iii)Monitor the incidents as per ESIRT of the World Bank iv)Both Contractors to implement the action plan prepared on the basis of 3rd Environmental Audit report and routinely report on its implementation v)Both the contractor should conduct regular Environmental test from recognaised laboratory with the frequencies as stipulated in EAP and C-ESMP vi)Proper drainage facilities shoud be established at all the camp sites and CC block manufacturing yard vii) Adequate toilet facilities should be provided in all working sites. Special care should be taken for cleaness of toilets viii)Both the contractors should follow the test result of drinking water, surface water, soil quality, air quality and noise quality and take necessary action accordingly ix)Continue for carry out the practice of hearing test of the worker already adopted in both packages x)Ensure regular toolbox talk at all sites xi)Follow the safety procedure of the equipment at all sites xii)Aware the workers about the existence of grievance box and register their demand/complain xiii) Construct separate road way for vehicle and pedestrians xiv)Regular exchange visit of EHS team of Package-1 and 2 to be ensured for adopting good practices.

1. Introduction

The Government of Bangladesh (GOB) has undertaken the implementation of the Coastal Embankment Improvement Project, Phase-1 (CEIP-1) with the loan assistance of World Bank (WB) and grant assistance of the Climate Investment Fund's Pilot Program for Climate Resilience (PPCR). The 1st phase of this Project (CEIP-1) includes rehabilitation and improvement of ten (10) polders, to be implemented in two packages.The present Phase-1 activities belong to part of the total of 139 polders of Bangladesh Water Development Board (BWDB) having nearly 5,700 km embankment along with various water management structures.

Polderization started in Bangladesh by BWDB in the early sixties for protection of land and other human resources from diurnal tidal flooding. It also provided control of salinity intrusion and sedimentation. Lack of proper maintenance, damage by the devastating cyclones/storm surges (Sidr and Aila which took place in 2007 and 2009, respectively) and siltation of the peripheral rivers have necessitated the adoption of CEIP, which will not only rehabilitate the embankment, but also raise the embankment height to combat high tides and storm surges which have been intensified by global warming and sea level rise. Cyclone Amphan (2020) has also confirmed the need for CEIP-1 implementation in the coastal areas of Bangladesh.

CEIP has also emphasized improvement of the environment and that environmental, social and economic issues be addressed during its pre-construction, construction. Due to outbrake of COVID-19 since December 2020 the Project is implementing emergency management to minimize spread of Corona infection following the COVID-19 OHS Protocols for Construction Sites as a guidlines and incorporated to the project Emergency Preparedness Plan (EPP) to ensure the health and safety of the project workers.

1.1 Project Development Objective

The project development objective as approved and agreed upon by the World Bank and the Government of Bangladesh 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.

1.2 Project Components

The Project has **five components**; four components are related to polder improvement and a fifth component (with a provisional zero amount) has been included to allow for rapid reallocation of loan proceeds during an emergency, under streamlined procurement and disbursement procedures:

Component A – Rehabilitation and Improvement of Polders.

A1: Rehabilitation and Improvement of Polders.

A2: Afforestation.

Component B– Implementation of Social Action and Environment Management Plans.

B1: Implementation of Social Action Plan.

B2: Implementation of Social Management and Resettlement Policy Framework (SMRPF) and Resettlement Action Plans (RAPs).

B3: Implementation of Environmental Management Framework (EMF) and Environmental Management Plans (EMPs).

Component C– Construction Supervision, Monitoring & Evaluation of Project Impact, Supervision of Social and Environment Plans, and Delta Monitoring

C1: Detailed Design and Construction Supervision

C2: Third Party Monitoring and Evaluation of Project.

C3: Long Term Monitoring, Research and Analysis of Bangladesh Coastal Zone.

Component D – Project Management, Technical Assistance, Training and Strategic Studies.

Component E – Contingent Emergency Response Component

The scope and scale of the project can be understood from the targets that have been agreed for the key performance indicators as shown in Table 1 below:

Table 1: Targets for Key Performance Indicators per PAD/DPP and their Status

Sl. No.	PDO Indicators per PAD/DPP	Indicator Type	Total Project Target	Cumulative Value as of 31 Dec 2019	Cumulative Value as of 30 June 2020
1	Gross area protected	outcome	66,012 ha	28,689	31,790 ha
2	Direct beneficiaries from increased resilience to climate change (number) and % women (PPCR core indic. A1.3)	outcome - core	724,000 (50% women)	248,894	348,750
3	Cropping intensity	outcome	180%	Awaiting baseline	144% in PKG 01 130% in PKG 02
4	Contingent Emergency Appropriation	input	No target	No target	No target
5	Length of embankment construction/resectioning	output	408.643 km	165.528 kms done; 47.166 in progress	197.114 kms done; 40.641 in progress
6	Drainage structures replaced and upgraded	output	96 no	39 nos. completed; 33 in progress	40 nos. completed; 37 in progress
7	Regulators upgraded	output	134 no	0	0

Sl. No.	PDO Indicators per PAD/DPP	Indicator Type	Total Project Target	Cumulative Value as of 31 Dec 2019	Cumulative Value as of 30 June 2020
8	Flushing inlets replaced and upgraded	output	126 no	41 nos. completed; 28 nos. in progress	43 nos. completed; 31 nos. in progress
9	Length of drainage channels excavation	output	304.857 km	133.85 kms completed	157.802 kms completed
10	Area Afforested (PPCR core indic. B3)	output - core	600 ha	208 ha (519,200 seedlings planted)	208 ha (519,200 seedlings planted)
11	Water Management Organizations functioning (meeting regularly, operations, no. of disputes)	outcome	10 no	0 nos.	6 nos.
12	Water Management Organization (WMO) formed	output	10 no	0 nos.	6 nos.
13	Improved coastal monitoring - studies undertaken (as related to PPCR core indicator on the use of climate information in decision-making)	output	2 no	Ongoing	Ongoing
14	BWDB days of training provided (total person-days) (women person-days)	output - core	160 days	48 (494 p-days) (68 woman-days)	48 (494 p-days) (68 woman-days)
15	Grievance Redress Committees (GRC) established	output	17 no of polders	10 polders (Pkg-01: 15 GRC, formed; Pkg-02: 21 GRC formed)	10 polders (Pkg-01: 15 GRC, formed; Pkg-02: 21 GRC formed)

The main information of the Project's Works Package 01 including project executing agency, funding agency, consultant, contractor, project location, project components, project cost, etc. are furnished below:

Table 2: Salient Features of the Project under Package-1

Sl. No.	Name of the Project	:	Coastal Embankment Improvement Project, Phase-1 (CEIP-I)
1.	Project Executor	:	Bangladesh Water Development Board under Ministry of Water Resources
2.	Funding Agency		World Bank IDA Credit 52800 & TF 14713 and PPCR of Climate Investment Fund Grant
3.	Name of the DSC Consultant	:	Royal HaskoningDHV (the Netherlands) in association with DevConsultants Ltd., Develops Project Management, CEGIS, Institute of Water Modeling and DHI
4.	Name of Contractor for Works	:	First Engineering Bureau of Henan Water

Sl. No.	Name of the Project	:	Coastal Embankment Improvement Project, Phase-1 (CEIP-I)
	Package 01		Conservancy (China)
5.	Project Location	:	Coastal Polders of Khulna and Bagerhat, Bangladesh
6.	Total re-sectioning of embankment;	:	159.174 kms
7.	Construction of retired embankment		41.443 kms
8.	Construction of forward embankment	:	0.00 kms
9.	Construction of total drainage sluices	:	38 drainage sluices
10.	Construction of drainage sluices under AILA	:	7 sluices
11.	Repairing of drainage sluices	:	2 sluices
12.	Construction of total flushing inlets	:	29 flushing inlets
13.	Re-excavation of drainage channels	:	150.299 km
14.	Total bank protection works	:	4.25 km
15.	Total slope protection of embankment	:	19.766 km
16.	Construction of cross dam	:	1
17.	Contract Duration (month)	:	36 Months (if no time extension) extended up to 30.06.2021
18.	Project Cost	:	Original contract amount: BDT 6,969,113,205 Revised Contract Amount: BDT 7,243,662,887.49
19.	Date of Contract Signing	:	01 November 2015
20.	Commencement Date	:	26 January 2016
21.	Physical Construction Period	:	26 January 2016 – 30 June 2021
22.	Land Acquisition	:	132.34 ha (*Source: Land Acquision Plan of CEIP-I)*
23	Land Requisition	:	Nil

The main information of the Project's Works Package 02 including project executor, funding agency, consultant, contractor, project location, project components, project cost, etc. are furnished below:

Table 3: Salient Features of the Project under Package-2

Sl no.	Name of the Project	:	Coastal Embankment Improvement Project, Phase-1 (CEIP-I)
1.	Project Executor	:	Bangladesh Water Development Board under Ministry of Water Resources
2.	Funding Agency		World Bank IDA Credit 52800 & TF 14713 and PPCR of Climate Investment Fund Grant
3.	Name of the DSC Consultant	:	Royal HaskoningDHV (the Netherlands) in association with DevConsultants Ltd., Develops Project Management, CEGIS, Institutes of Water Modeling and DHI.
4.	Name of Contractor for Works Package 01	:	Chongqing International Construction Corporation (China)
5.	Project Location	:	Coastal Polders of Pirojpur, Jhalakhati, Patuakhali and Borguna Districts of Bangladesh
6.	Total Re-sectioning of embankment;	:	144.463 kms
7.	Total Construction of retired embankment		3.96 kms
8.	New Embankment	:	59.250 Kms

Sl no.	Name of the Project	:	Coastal Embankment Improvement Project, Phase-1 (CEIP-I)
9.	Construction of total drainage sluices	:	50 drainage sluices
10.	Repairing of drainage sluices	:	6 sluices
11.	Construction of flushing inlets	:	51 nos.
12.	Repairing of flushing inlets	:	32 nos.
13.	Re-excavation of drainage channels	:	154.558 km
14.	Total bank protection works	:	5.120 km
15.	Total slope protection of embankment	:	9.476 km
16.	Construction of Clossure		8 nos.
17.	Dismantling of drainage sluice	:	37 nos.
18.	Dismantling of flushing inlets	:	56 nos.
19.	Dismantling of HBB road		46.40 kms
20.	Paved road		50.29 kms
21.	Construction of flood wall	:	17.40 kms
22.	Contract Duration (month)	:	42 Months
23.	Project Cost	:	Original Contract Amount: BDT 10,899,564,634.65 Revised Contract Amount: BDT 11,487,869,276.99
24.	Date of Contract Signing (NTP)	:	08 March 2017
25.	Commencement Date	:	12 July 2017
26.	Physical Construction	:	12 July 2017 – 11 January 2021
27.	Land Acquisition	:	163.79 ha (*Source: Land Acquision Plan of CEIP-I)*
28.	Land Requisition	:	Nil

In Package-2 progress is less with Construction of Embankment of 36.106 kms done and another 21.124 km in progress, Construction work of 35 Drainage Sluices and 21 Flushing Sluices is in progress and nearing completion and Embankment Slope Protection of 0.750 km is in progress by end of June, 2020.

1.3 Project Location

Out of total 139 Polders in the country, CEIP-1 includes 17 Polders in 3 Packages. Their locations with area are given in Table 4 along with the area of each Polder that will be protected by the embankment works.

Table 4: Location and Gross Protected Area (ha) of CEIP-1 polders

Sl. No.	Polder No.	Location		Gross protected Area (ha)
		Upazila	District	
Package-1				
1	32	Dacope	Khulna	8,097
2	33	Dacope	Khuna	8,600
3	35/1	Sharankhola and Morelganj	Bagerhat	13,058
4	35/3	Bagerhat	Bagerhat	6,790
				36,545
Package-2				
5	39/2C	Bhandaria and Motbaria	Pirojpur	10,748

Sl. No.	Polder No.	Location		Gross protected Area (ha)
		Upazila	District	
6	40/2	Patharghata	Barguna	4,453
7	41/1	BargunaSadar	Barguna	4,048
8	43/2C	Golachipa	Patuakhali	2,753
9	47/2	Kolapara	Patuakhali	2,065
10	48	Kolapara	Patuakhali	5,400
				29,467
Package-3				
11	14/1	Koyra	Khulna	2,933
12	15	Shymnagar	Satkhira	3,441
13	16	Paikgachha, Tala	Khulna and Satkhira	10,445
14	17/1	Dumuria	Khulna	5,020
15	17/2	Dumuria	Khulna	3,400
16	23	Paikgacha, Dumuria and Tala	Khulna and Satkhira	5,910
17	34/3	Bagerhat	Bagerhat	3,656
				34,805
CEIP-1 Overall				**100,817[1]**

[1]The sum from this detailed breakdown is slightly higher than the figure in the DPP which was rounded to 100,800 ha.

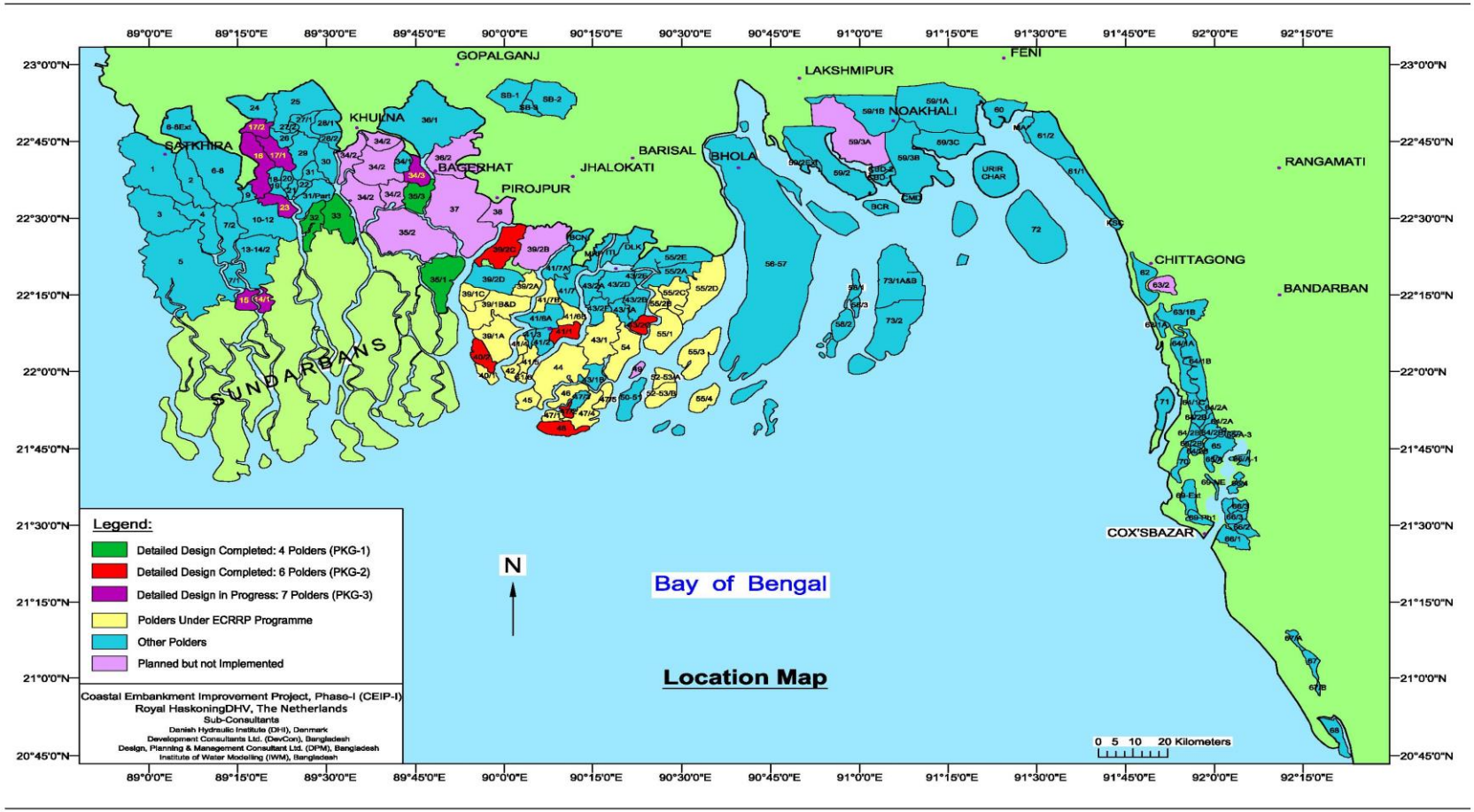

Figure 1: Location Map of CEIP-1 Polders

2. The Background of this Report

Implementation of the Environmental Management Plan (EMP) during the construction and post-construction stages is necessary for sustainable development as well as to ensure protection of the environment as the embankment construction project is implemented. Moreover Covid-19 outbreaks over the world has ensured the emergency of implementation the Covid-19 OHS manual in cap as well as construction sites.

From 12-16 June 2016, the World Bank undertook an Implementation Support Mission (ISM) to assess CEIP-1's progress, issues, safeguards compliance, etc. On 12 June 2016, a joint meeting was held with participation of WB, PMU of BWDB, Safeguards Consultants of BWDB and M&E Consultants. In the meeting, it was decided that the implementing agency with the support of the DDCS&PMS Consultants and M&E Consultants will prepare a separate Bi-annual Environmental Monitoring Report covering the implementation of EMPs, EAPs and compliance with Environmental Safeguards and identifying any pertinent issues. It is from that perspective, this Environmental Monitoring Report has been prepared. This ninth Bi-annual Environmental Monitoring Report focuses on the period 01 January to 30 June 2020.

This report has been prepared through a collaboration between PMU, the M&E Consultants and the DDCS&PMS Consultants. It is important to note that the team has attempted to address the comments in this report that were made by the World Bank on the seventh Bi-annual Environmental Monitoring Report.

3. Environmental Safeguards and EMF

According to the classification of Environment Conservation Rules (1997) of Department of Environment, GOB, the construction, reconstruction, expansion of polders and flood control embankment is categorized as "Red". For the Red category project/industries, Environmental Impact Assessment (EIA) report along with Environmental Management Plan (EMP) and Resettlement Action Plan (RAP) have to be prepared for submission to the Department of Environment (DoE) in order to obtain environmental clearance of the GoB. Moreover, according to World Bank environmental operational directives, the project is classified as a Category "A" type project because the project is likely to involve significant adverse environmental impacts that are sensitive, diverse, or unprecedented, which may affect an area broader than the facilities subject to physical works.

All required safeguard measures are to be adopted to avoid/reduce/mitigate the environmental and social impacts for environmental sustainability of CEIP-1. The major issues of consideration include protection of (a) physical and ecological resources (b) protection of socio-cultural resources (c) protection of economic development (d) protection of occupational health and safety (OHS). A participatory approach will be followed to enhance sustainability of the CEIP-1 investment.

CEIP-1 implementers will follow the guidelines of EMF during pre-construction, construction and operation and maintenance of all polders to ensure satisfactory environmental management. The EMF has spelled out a set of steps, procedures and mechanisms to ensure an adequate level of attention is given to environmental considerations at every stage of the project cycle along with the related GoB regulatory and WB safeguard requirements.

4. Staffing and Organization

4.1 Environmental Management Team Organization

An environmental management team exists in CEIP-1 which involves the Contractors, the Construction Supervision and Project Management Support Consultants and other GoB agencies as implementers and the CEIP-1 PMU headed by the Project Director provides coordination and oversight. Third Party M&E Consultants spot check compliance evaluate impacts and report to the Project Steering Committee.

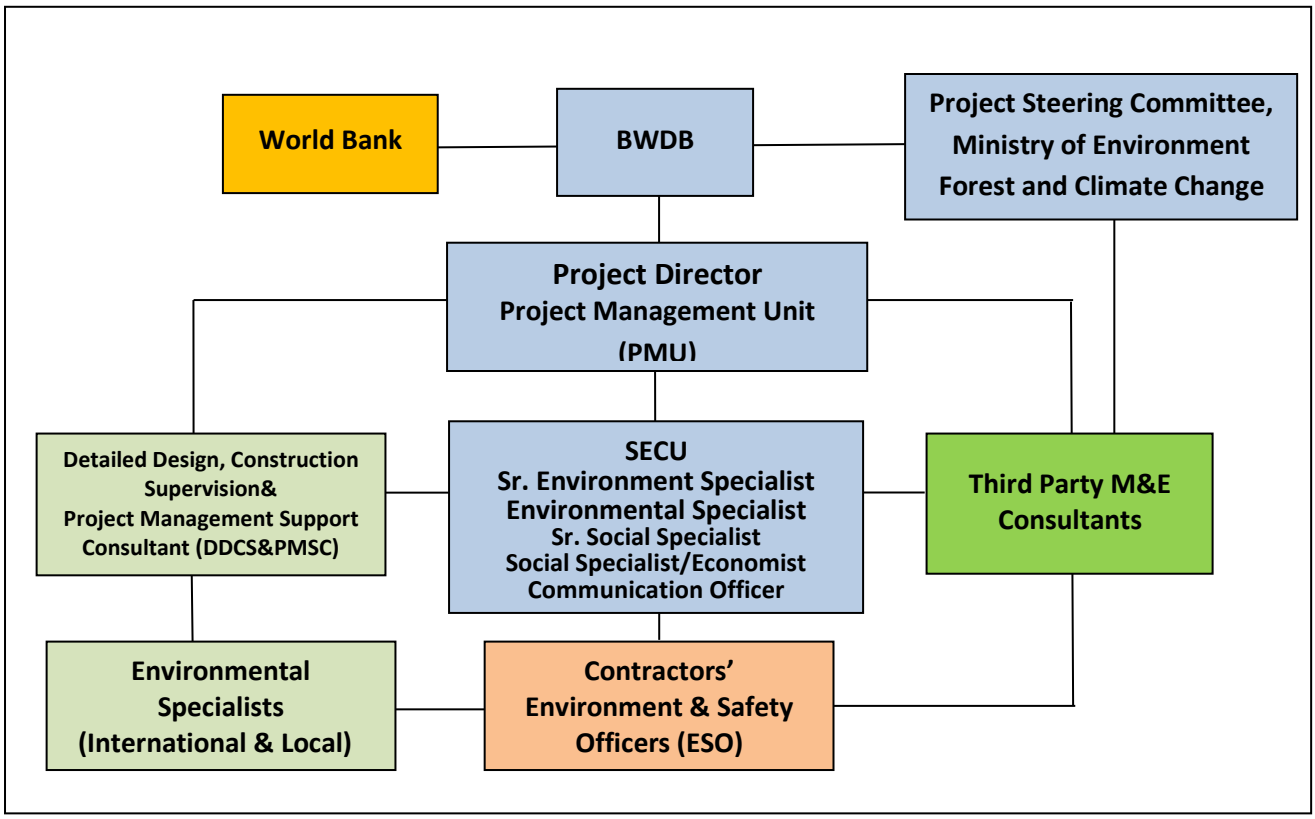

Figure 2: Organizational Chart for Environmental Management and Monitoring

A directory of PMU, DDCS&PMS Consultant, M&E Consultant and Contractor staff that are concerned with environment is presented in Table-5 below.

Table 5: Concerned Environmental, Health and Safety Personnel in CEIP-1

Sl.	Name	Designation	Place of posting	Mobile No.	E-mail Address
01	Dr. Md. Mizanur Rahman	Project Director	Dhaka	+8802989937 3	pdpmuceip@gmail.com
02	Jean Henry (Harrie) Laboyrie	Team Leader, CEIP-1	Dhaka	01935146720	harrie.laboyrie@rhdhv.com
03	Md. Habibur Rahman	Deputy Team Leader, CEIP-1	Dhaka	01755627386	habibceip@yahoo.com
04	Jan T. Twarowski	Team Leader, Third Party M&E Consultant	Dhaka	01745573470	tl.me.ceip1gmail.com
05	Md. Asraful Alam	Executive Engineer, CEIP-1, BWDB, Khulna	Khulna	01318235115	xen.ceip1.khulna@gmail.com
06	Mr. Mahidur Rahman	Deputy Team Leader, Third Party M&E Consultant	Dhaka	01711173629	dtl.me.ceip1@gmail.com
07	Dr. Abu H. Murshid	International Environ. Specialist, Third Party M&E Consultant	Dhaka	01785073802	amurshid@aol.com
08	A.K.M.Rezaul Haque Khan	Environmental Specialist, Third Party M&E Consultant	Dhaka	01712142502	env.me.ceip1.sheladia@gmail.com
09	Md. Amir Faisal	PMU Sr. Environment Specialist	Dhaka	01715315227	faisal.mdamir@gmail.com
10	Dr. Md. Towhidul Islam	PMU Field level Environmental Specialist	Khulna	01911493918	towhidenvs@gmail.com
11	Mustafizur Rahman	Senior Social Specialist, PMU	Dhaka	01714040544	mustafizurr@gmail.com
12	Mr. Akbar Hossain	Senior Forestry Officer, PMU	Dhaka	01711543475	ahossain56.bd@gmail.com
13	Kamal Najmus Salehin,	Communication Officer, PMU	Dhaka	01716408919	s.kamal17@gmail.com
14	Zahiruddin Md. Babar	Social Specialist/ Economist, PMU	Khulna	01711005885	zahir_babar@yahoo.com
15	GM. Akram Hossain	Resident Engineer-2	Patuakhali	01713040037	gmakram68@gmail.com
16	A.K.M. Sayeed Uddin	Deputy Resident Engineer-1	Khulna	01919432163	akmsayeed1951@gmail.com
17	Mohammad Ali	Deputy Resident Engineer-2, CEIP-1	Patuakhali	01711320432	ceip1patuakhali@gmail.com
18	Abu Bakr Siddique	Environment Specialist, CEIP-1	Dhaka	01795095607	abs_1949@yahoo.com
19	Md. Delwar Hossain	Quality Control Specialist	Khulna	01712614024	delwarhossain03@yahoo.com
20	Md. Saiful Islam	Construction Supervision	Khulna	01727332986	saifulkhulna@gmail.com

Sl.	Name	Designation	Place of posting	Mobile No.	E-mail Address
		Engineer-1			
21	Md. Harunur Rashid	Quality Control Specialist	Patuakhali	01720043618	engrharun7@gmail.com
22	A.K.M.Mazibur Rahman	Construction Supervision Engineer	Patuakhali	01712540050	akmmr1955@gmail.com
23	Sadequl Islam	Construction Supervision Engineer	Patuakhali	01822213320	Sadequl477@gmail.com
24	Md. Ghiasuddin Ahmed	Construction Supervision Engineer	Patuakhali	01711171011	ghiasbd@gmail.com
25	Mr. Sun Huaxin	Project Manager (Contractor), CHWE	Khulna	01991996805	chwe_ceip1_bd@hotmail.com
26	Mr.Ren Gaofei	Environment, Health and Safety in-charge, CHWE, Package-1	Khulna	01761931689	18738153286@163.com
27	Mr. Faysal Ahmed Taj,	EHS Officer, Khulna, Pakcage-1	Khulna	01937231284	fayahmedtaj20110@gmail.com
28	Song Kunpeng	Chinese EHS Manager	Polder 32	-	-
29	Md. Afrid	Local EHS officer		01766073473	-
30	Li Bo	Chinese EHS Manager	Polder 35/1	-	
31	Masud Rana	Local EHS officer		01792094033	-
32	Mr. Li Guofang	Acting Project Manager, (Contractor), CICO, Package-2	Dhaka	01927409142	lclv2005@163.com
33	Ma Dian Yong	Environment, Health and Safety in-Charge, Package	Patuakhali	01617776707	madianyong1218@gmail.com
34	Chen De Yu	Chinese EHS Manager	Polder 39/2C	01888321775	-
35	Mr. Taher	Local EHS Officer		01712003561	-
36	Bu Shidong	Chinese EHS Manager	Polder 40/2	01739824919	-
37	Mr. Nazmul	Local EHS Officer		01724124990	-
38	Tan Qingsong	Chinese EHS Manager	Polder 41/1	01647239885	-
39	Md. Azahar	Local EHS Officer		01797181079	-
40	Xiao Yao	Chinese EHS Manager	Polder 43/2C	01646619937	-
41	Hemayet Uddin	Local EHS Officer		01719459671	-
42	Yang Sen	Chinese EHS Manager	Polder 48	01646571109	-
43	Mr. Emon	Local EHS Officer		01939648808	-

4.2 PMU Staffing

The Social, Environmental and Communication Unit (SECU), planned to be comprised of five specialists, has been established under the Project Management Unit (PMU). This unit closely monitors the compliance with all safeguards requirements during the implementation of the CEIP-I. Now all five SECU Specialists are in place – the Senior Environmental Specialist, the field-based Environmental Specialist, the Senior Social Specialist, field-based Social/Economist and Communications Officer are working continuously with support.

Specifically, SECU's environmental team is responsible to:

- Implementation of Covid-19 OHS mannual
- Obtaining approval on working site and EIA from the Department of Environment (DoE) of Bangladesh;
- Obtaining Environmental Clearance Certificate (ECC) and its annual basis renewal from the Department of Environment (DoE) of Bangladesh;
- Implementation of the key actions of aide memoire related to environmental safeguard issues;
- Participate in working meetings related to projects;
- Ensure project's compliance with the Environmental Legislation of Bangladesh as well as with the rules and requirements of donor, the World Bank and others;
- Ensure coordinating among involved parties during project implementation period;
- Participate in environmental component monitoring in respect of approved EAP and C-ESMP;
- Review and analysis of existing documentation;
- Monitor environmental risk and protection issues;
- Review reports in compliance with the requirements of the donors as well as in accordance with the Bangladesh Environmental Legislation;
- Review comments and complaints; elaborate recommendations;
- Prepare official letters to projects Implementation Agency and/or consultant ;
- Review documents submitted by consultants; and
- Establish and maintain working relations with other organizations of Bangladesh, International organizations for the purpose of implementation of the objectives, tasks and functions specified under this Bi-Annual report.

4.3 Consulting Services for Engineering Design, Construction Supervision and Project Management Support

The Contract for these Consulting Services was signed between BWDB and the Royal Haskoning DHV (Netherlands)/Devcon/DPM/IWM/DHI on 30 December, 2014 and became effective on 21 January 2015. Consultants hold office in Dhaka, Khulna and Patuakahli. The TOR for supervision consultant requires (The Engineer) to ensure EMP implementation. The consultant's site staff is supported by a full-time national environmental specialist and intermittent international specialists who, as a team, are to ensure environmental compliance of the project as it progresses.

The DDCS&PMS Consultants has deployed national environmental specialists, and an intermittent international environmental specialists who are responsible to:

- Review and approve environmental documentation submitted by the Contractor;

- Review and approve the Contractor's Environmental Action Plan (EAP)/C-ESMP in line with requirement of the EMP;
- Supervise construction works and monitor the implementation of mitigation measures under the EMP and EAP/C-ESMP;
- Preparation and review of EIA reports of Package-3
- Maintain working relationship with the Contractor and the Employer (PMU BWDB);
- Provide support to PMU in obtaining environmental clearance certificates;
- Undertake correspondence with the Employer, the Contractor as prescribed by the Contract for execution of the civil works on site.

4.4 Civil Works Construction Contractors

The Contract for civil works construction under Package W-01 was signed between the BWDB (The Employer) and the First Engineering Bureau of Henan Water Conservancy (The Contractor) on 01 November 2015. On the other hand, the Contract for civil works construction under Package W-02 was signed between the BWDB (The Employer) and the Chongqing International Construction Corporation (The Contractor) on 08 March 2017. The Contractor of Package W-01 is assigned for rehabilitation/reconstruction and upgrading of four Polders, namely Polder 32, Polder 33, Polder 35/1 & Polder 35/3 ; whereas the Contractor of Package W-02 for six Polders, namely Polder 39/2C, Polder 40/2, Polder 41/1, Polder 43/2C, Polder 47/2 & Polder 48, respectively under CEIP-I. The above Polders are wide-spread in their geographical locations. The Contractor holds site office in each Polder and has appointed Environment, Health & Safety (EHS) Managers (Chinese) & Officers (Local) as presented in the table 5 above.

The CRTS (CIVIL) of KUET, Khulna has also undertaken the laboratory analysis of Water, Soil, and measure Air and Noise qualities of the Polders that compose important part of EAP/EMP of the Polders under CEIP-1.

The expatriate EHS Manager as well as Local EHS Officer of the Contractors are responsible for implementation of the EMP as follows:

- To prepare environmental documentation, mentioned in Contract, EAP, EIA and EMP;
- To ensure that physical monitoring is undertaken properly;
- To review works schedules;
- To participate in progress meetings;
- Help identify practical solutions to actual and potential problems;
- Use trends in monitoring data to predict/identify possible future problems;
- To provide frequent environmental field supervision;
- To notify noncompliance and take relevant actions;
- To keep records: maintain site diary and checklists, complete files; and
- Communicate with local community regarding works progress.

4.5 Third Party M&E Consultants

The contract for the Third Party M&E Consultancy was signed between BWDB and Sheladia Associates, Inc. (USA) in association with BETS Consulting Services, Ltd. (Bangladesh) on 01 October 2015. The contract became effective on 23 October and Sheladia mobilized its team on 01 November, 2015.

The M&E Consultants are responsible for monitoring and evaluation of implementation progress of all project works and activities and its impacts as well the implementation of the EMP and the

SAP/RAP. The M&E reports are to evaluate the success in project implementation in terms of meeting the project's objectives, and assess its physical, hydrological, environmental, social, and economic impacts. The M&E team is to provide continuous feedback to the GoB, the PSC and development partners on the project's performance, and on mitigation of negative impact under various components, so that corrective actions can be undertaken in a timely manner if necessary. In the area of environment, the M&E Consultants have one intermittent international environmental expert and one intermittent national environmental expert over the contract period.

5. EMP Budget

An amount of BDT 6 core (approximately) have been earmarked for the implementation of EMP against each package W-01 and W-02 of CEIP-1. This provisions have been kept in the contractor's contract agreement under BoQ item as specified provisional sum. Under the provision of EMP budget the contractors for Packages 1 & 2 of CEIP-1 shall take all precautions for safeguarding environment during the course of the construction of the works. The contractors shall fully comply with the environmental protection mitigation measures specified in the related EIA guidelines and agreed in EAP/C-ESMP & EHS risk Assessment Reports. A provisional has been kept in the BOQ for Packages 1 & 2 for implementation of the of the mitigation works as illustrated herewith:

- Crop compensation to the direct loser, land owner/share croppers of construction site/ damaged due to dredge spoils;
- Monitoring of Environmental & Mitigation works;
- Surface & ground Water quality monitoring;
- Air and Noise quality monitoring analysis;
- Water quality monitoring cost;
- Waste disposal arrangement;
- Soil & water salinity monitoring cost;
- Waste disposal arrangement at construction site;
- Updating of EMP (EAP/C-ESMP and EHS risk Assessment Reports);
- Management of soil health by replacing back in agricultural land;
- Reducing erosion through proper compaction, turning;
- Afforestation along the dyke side to reduce erosion and threat of climatic events.
- Awareness campaigning on plant and wild life conservation;
- Habitat observation (biotic information) in wet & dry season;
- Conservation and stocking of threatened fish species;
- Movement of Aquatic mammal;
- Catch assessment survey in wet & dry season;
- Farm survey in wet & dry season;
- Training to the farmers on Eco-friend pest management practices;
- Awareness building among locality for conservation of threatened/red listed species,
- WMOs (Water Management Organizations) monitoring cost in respect of safeguard policies;
- Training on improved technology and
- Emergency works for closing breach points of embankment and repairing the damaged structures;

For Package 01, a maximum budget of Tk. 60,200,000 have been provisioned for EMP under the specified provisional sum of BoQ item. No payment was made during the reporing period. The total expenditure for EMP cost so far paid remains Tk. 5,41,00,000. This included cost of works consists of emergency breach closing, minor earthworks, compaction and positioning of geo-bags (175 kg) and other items of EMP components in various stages of utilization.

For Package 02 an amount of Tk. 6,43,64,491 have been allocated under the specified provisional sum of BoQ item for Environmental Mitigation works. An amount of Tk. 1,04,044 has been paid to the contractor from EMP budget. So, the total expenditure for EMP cost so far paid up to June, 2020 is Tk. 22,19,772

6. Status of Works as of June 2020

In order to provide context for understanding the status of the project activities as of end of June, 2020 and the intensity of activity during the reporting period, a brief description of the works undertaken is presented in this section. During the period Outbreak of Corona pandemic has affected the progress of the works in many related issues, although the contractors have adopted various steps in order to avoid the possibility of spreading corona among themselves and the workers as a whole.

The key activities and accomplishments of works, contract Package 01 during January -June, 2020 were embankment construction/ re-sectioning, construction of drainage sluice, embankment slope protection and River bank protection works

Specifically, the status of works of the Contractor for Package 01 as of end of June, 2020 are:

River bank protection work has progressed to 4.150 kms (97.65%) by June, 2020, out of total length of 4.250 km.

Construction works of all the required 38 Drainage sluices have been completed (100%) by June, 2020 as compared to completion of 37 nos. Drainage sluices by December, 2019.

Construction of all the required 29 nos. of flushing inlets have been completed (100%) by June, 2020 as against completion of 28 nos. by December, 2019.

Excavation/ re-excavation of 131.82 km (87.98%) of Drainage Channels have been achieved by end of June, 2020 out of total 150.30 km.

Construction/re-sectioning of embankment has been completed in 161.008 km (80.27%) and it is in progress in 20.930 km (10.44%) by June, 2020 (out of total of 200.572 km).

Repair works of 13 flushing inlets have been completed by end of June, 2020, when 1 no. is under progress out of total 14 numbers.

Embankment slope protection work of 14.170 km (71.61%) completed by end of June, 2020, out of total 19.770km as compared to 10.216 km (51.17%) completed by end of December, 2019,.

The Contractor has successfully completed the closing of Nalian Closure dam on 17th February, 2020 and the raising of crest level and improvement of C/S & R/S Slopes as per design of the closure are going on and by June 2020 the Progress is 94.50%.

The item-wise/Polder-wise progress status of Package-1 upto June, 2020 have been furnished in the following Tables:

Table 6: Length (km) of Emergency work in Package-1

Locations/ Polders	Length (km) of emergency work upto December, 2019	Length (km) of emergency work upto June, 2020	Length (km) of emergency work during Jan-June, 2020
32	9.043	9.805	0.762
33	3.125	3.125	0
35/1	4.157	4.157	0
35/3	3.919	3.919	0
Total	**20.244**	**21.006**	**0.762**

Source: MPRs, DDCS&PMS Consultants, December, 2019 and June, 2020

Table 7: Progress of construction of Retired Embankments and Re-sectioning of Embankment (Permanent Sites) in Package-1

S. No.	Location	Total Number of work sites	Total length (km)	Type of Works	Progress as on June, 2020
1	Polder 32	42	49.666	Embankment re-sectioning and retired embankment; some turfing of slopes	35.595 kms completed and additional 13.442 kms in progress
2	Polder 33	28	49.154	Embankment re-sectioning and retired embankment; some turfing of slopes	43.461 kms completed and additional 0.23 km in progress
3	Polder 35/1	37	61.972	Embankment re-sectioning and retired embankment; some turfing of slopes	46.222 kms in progress and additional 3.700 kms is in progress
4	Polder 35/3	30	39.825	Embankment re-sectioning and retired embankment; some turfing of slopes	35.73 kms completed and additional 2.145 kms is in progress
	Total	**137**	**200.617**		**161.008 kms completed and 19.517 kms is in progress**

Source : MPR DDCS&PMS Consultants, June, 2019 and June, 2020

Table 8: Progress of production of CC block manufacturing in Package-1

Sl. No.	Polder No.	No. of total CC block manufactured by end - December, 2019	No. of total CC block manufactured by end June, 2020	Comments
1.	32	1,886,840	1,886,840	296,959 nos. of CC blocks manufactured during the period January-June, 2020
2.	33	1,155,600	1,285,083	
3.	35/1	2,760,128	2,919,991	
4.	35/3	212,954	220,567	
Total		**6,015,522**	**6,312,481**	

Source: MPR, DDCS&PMS Consultants, December, 2019 and June, 2020

Table 9: Polder-wise Progress of various work components of Package No.01 up to June, 2020

Polder 32	Unit	Target	Completed	Ongoing	Progress
Construction/ Re-sectioning of Embankment	Km	49.666	35.595	13.442	84.60%
Excavation/ Re-excavation of Drainage Channel	Km	17.003	17.003	0.000	100.00%
Construction of Drainage Sluices	No	8	8	0	100.00%
Repairing of Drainage Sluices	No	0	0	0	NA
Construction of flushing Inlets	No	1	1	0	100.00%
Repairing of Flushing Inlets	No	6	6	0	100.00%
Embankment Slope Protection Work	Km	3.300	3.100	0.000	93.94%
River Bank Protection Work	Km	2.000	2.000	0.000	100.00%

Source: MPR, DDCS&PMS Consultants, June, 2020

Polder 33	Unit	Target	Completed	Ongoing	Progress
Construction/ Re-sectioning of Embankment	Km	49.154	43.461	0.230	88.41%
Excavation/ Re-excavation of Drainage Channel	Km	62.830	62.830	0.000	100.00%
Construction of Drainage Sluices	No	12	12	0	100.00%
Repairing of Drainage Sluices	No	0	0	0	NA
Construction of flushing Inlets	No	6	6	0	100.00%
Repairing of Flushing Inlets	No	3	3	0	100.00%
Embankment Slope Protection Work	Km	4.016	4.016	0.000	100.00%
River Bank Protection Work	Km	1.300	1.300	0.000	100.00%

Source: MPR, DDCS&PMS Consultants, June, 2020

Polder 35/1	Unit	Target	Completed	Ongoing	Progress
Construction/ Re-sectioning of Embankment	Km	61.972	46.222	3.700	76.56%
Excavation/ Re-excavation of Drainage Channel	Km	70.466	51.988	0.000	73.78%
Construction of Drainage Sluices	No	14	14	0	100.00%
Repairing of Drainage Sluices	No	2	2	0	95.90%
Construction of flushing Inlets	No	12	12	0	100.00%
Repairing of Flushing Inlets	No	3	2	1	88.33%
Embankment Slope Protection Work	Km	11.750	6.350	0.000	54.04%
River Bank Protection Work	Km	0.800	0.700	0.000	87.50%

Source: MPR, DDCS&PMS Consultants, June, 2020

Polder 35/3	Unit	Target	Completed	Ongoing	Progress
Construction/ Re-sectioning of Embankment	Km	39.825	35.730	2.145	89.32%
Excavation/ Re-excavation of Drainage Channel	Km	0.000	0.000	0.000	NA
Construction of Drainage Sluices	No	4	4	0	100.00%
Repairing of Drainage Sluices	No	0	0	0	NA
Construction of flushing Inlets	No	10	10	0	100.00%
Repairing of Flushing Inlets	No	2	2	0	100.00%
Embankment Slope Protection Work	Km	0.700	0.700	0.000	100.00%
River Bank Protection Work	Km	0.150	0.150	0.000	100.00%

Source: MPR, DDCS&PMS Consultants, June, 2020

Package-2

Work of Package-2 is also in progress since the contract that was awarded on 15 December 2016, signed on 08 March 2017 and notice to commence issued on 12 July 2017. Mobilization and ancillary works along with inception and progress of physical works in 6 Polders under Package 02 have commenced, although progress in Polder 43/2C has been delayed due to land acquisition issues mainly (where physical work started from January 1, 2019).

The key activities and accomplishments of works contract Package 02 during January -June, 2020 were embankment construction/ re-sectioning, construction of drainage sluice, embankment slope protection and River bank protection works

Work progress achieved during/ up to the reporting period has been mentioned below.

Construction/re-sectioning of embankment completed in 36.106 kms and it is ongoing in 21.124 kms with an overall progress of 23.16% of total length of 208.026 kms

Excavation of drainage channel has been completed in 25.981 kms also has some ongoing length with overall progress of 29.25% of total length of 154.558 kms.

Construction of drainage sluice is ongoing in 35 nos.as against total numbers of 50 with an overall progress of 59.26%

Construction number of flushing inlets is ongoing in 21 nos. as against total numbers of 51with an overall progress of 38.09%

River bank protection works have been carried out in 4.030 kms out of total 5.120 kms with an overall progress of 78.71%

Total of 5,56673,400 nos. of CC blocks have been manufactured out of total requirement of 8,450,654 nos. which has progress of 65.89%

Work progress achieved during/ upto the reporting period has been mentioned below.

The item-wise and polder-wise progress status of Package-2 upto June, 2020 has been furnished in the following Tables:

Table 10: Length of Emergency work in Package-2

Locations	Length (km) of emergency work upto December, 2019	Length (km) of emergency work upto June, 2020	Length (km) of emergency work during Jan-June, 2020
39/2C	0.500	0.500	0
40/2	0.350	0.350	0
41/1	0.051	0.051	0
43/2C	0.000	0.185	0.185
47/2	0.156	0.636	0.552
48	0.508	0.508	0
Total	**1.465**	**0.158**	**0.737**

Source: MPR, DDCS&PMS Consultants, January, 2020 and June, 2020

Table 11: Progress in production of CC block manufacturing in Package-2 Polders

Sl. No.	Polder No.	No. of total CC block manufactured by end December, 2019	No. of total CC block manufactured by end June, 2020	Number of CC block manufactured during January to June, 2020
1.	39/2C	4,111,287	4,476,368	365,081
2.	40/2	174,694	183, 374	8,680
3.	41/1	267,933	280,524	12,591
4.	43/2C	26,128	59,538	33,410
5.	47/2	258,997	327,689	68,692
6.	48	211,661	239,241	27,580
Total		5,050,700	5,566,734	516,034

Source: MPR, DDCS&PMS Consultants, January, 2020 and June, 2020

Table 12: Polder-wise Progress of various work components of Package 02 up to June, 2020

Polder 39/2C	Unit	Target	Completed	Ongoing	Progress
Construction/ Re-sectioning of Embankment	Km	59.250	2.000	0.000	0.00%
Excavation/ Re-excavation of Drainage Channel	Km	57.230	0.000	0.000	0.00%
Construction of Drainage Sluices	No	13	0	5	33.30%
Repairing of Drainage Sluices	No	0	0	0	NA
Construction of flushing Inlets	No	21	0	0	0.00%
Repairing of Flushing Inlets	No	0	0	0	NA
Embankment Slope Protection Work	Km	4.000	0.000	0.000	0.00%
River Bank Protection Work	Km	3.600	3.380	0.000	93.89%

Polder 41/1	Unit	Target	Completed	Ongoing	Progress
Construction/ Re-sectioning of Embankment	Km	33.571	2.150	9.350	24.05%
Excavation/ Re-excavation of Drainage Channel	Km	23.133	2.823	0.000	12.20%
Construction of Drainage Sluices	No	10	0	9	76.20%
Repairing of Drainage Sluices	No	0	0	0	NA
Construction of flushing Inlets	No	11	0	8	63.25%
Repairing of Flushing Inlets	No	12	1	3	22.50%
Embankment Slope Protection Work	Km	0.000	0.000	0.000	NA
River Bank Protection Work	Km	0.400	0.300	0.000	75.00%

Polder 43/2C	Unit	Target	Completed	Ongoing	Progress
Construction/ Re-sectioning of Embankment	Km	25.505	6.855	0.200	23.00%
Excavation/ Re-excavation of Drainage Channel	Km	28.081	2.940	0.000	10.47%
Construction of Drainage Sluices	No	8	0	6	58.49%
Repairing of Drainage Sluices	No	0	0	0	NA
Construction of flushing Inlets	No	7	0	4	37.64%
Repairing of Flushing Inlets	No	7	0	1	9.00%
Embankment Slope Protection Work	Km	0.261	0.000	0.000	0.00%
River Bank Protection Work	Km	0.500	0.000	0.000	0.00%

Polder 47/2	Unit	Target	Completed	Ongoing	Progress
Construction/ Re-sectioning of Embankment	Km	17.500	16.200	0.336	92.42%
Excavation/ Re-excavation of Drainage Channel	Km	9.167	9.167	0.000	100.00%
Construction of Drainage Sluices	No	4	0	4	99.25%
Repairing of Drainage Sluices	No	0	0	0	NA
Construction of flushing Inlets	No	3	0	3	98.75%
Repairing of Flushing Inlets	No	2	0	2	85.00%
Embankment Slope Protection Work	Km	0.000	0.000	0.000	NA
River Bank Protection Work	Km	0.620	0.350	0.000	56.45%

Polder 48	Unit	Target	Completed	Ongoing	Progress
Construction/ Re-sectioning of Embankment	Km	38.000	2.001	3.628	11.09%
Excavation/ Re-excavation of Drainage Channel	Km	32.718	9.222	0.000	28.19%
Construction of Drainage Sluices	No	6	0	6	85.90%
Repairing of Drainage Sluices	No	3	0	1	14.58%
Construction of flushing Inlets	No	3	0	3	87.00%
Repairing of Flushing Inlets	No	0	0	0	NA
Embankment Slope Protection Work	Km	4.078	0.750	0.000	18.39%
River Bank Protection Work	Km	0.000	0.000	0.000	NA

Source: MPR, DDCS&PMS Consultants, June, 2020

Package-3

As for work progress of Pakcage-3, the tender has not yet been floated, although completion of EIA of 7 Polders of Package-3 along with EMP and preparation of Design are in progress.

Improvement in management of Environment, Health and Safety (EHS)

The major improvement of EHS management In Packages W-01 and W-02 of CEIP-1 till June, 2020 are as follows:

- There is improved supply and use of Personal Protective Equipment (PPE)
- Recording of noise level at CC block plant sites and other susceptible sites along with keeping records and submission on monthly basis
- Establishing noise barriers to reduce the high noisy work sites and rotational facility for workers of high noise areas is in practice
- Signboard erected at high noise work site to adopt measure against health hazard issue

- Proper code of waste management followed and records of waste disposal are maintained along with proper management of organic waste
- Covering of conveyer belts to protect dust emission and improved mask use of workers are done
- Frequent spraying of water for dust management at work sites
- Tool box talks are held regularly before the start of works
- Proper materials storage at camp site after completion of work
- Maintain height of the construction materials stacks reduced to avoid potential falling causing accident
- Erection of 'No entry' signboards for improved safety of the CC plant sites and other required locations
- Established increased numbers of grievance collection boxes for workers at suitable site for submission of workers' grievance
- Establishment of separate lane for forklift movement and for the pedestrians in CC block manufacturing plant site
- Maintaining register for workers' personal information along with history of workers' health problems and name and address of next of kin in case of emergency uses
- Fencing of materials mixing hopper site for controlled entry for maintaining safety
- Continued erection of signboards and signage with procedures for turning off the switch of electricity and the CC block casting machine along with alerting against potential mistakes
- Established increased numbers of improve/hygienic toilet facilities for workers' use along with improved management practices
- Provision of adequate fire extinguishers at camp sites and work sites along with the provision of their protection facilities from rain and sunshine
- Continued training of workers on operation of fire extinguishers and demonstration of firefighting practices by them (workers)
- Paving of the base of secondary fuel containers to check soil and ground water pollution through fuel spillage
- Proper management of residual cement sludge pool at susceptible locations
- Construction of waste collection and disposal facilities of CC block manufacturing plants and other working locations
- Provision of life jacket to Barge workers and cautionary marking near edge for workers' safety measure
- Appointment of suitable EHS Managers (local and expatriate) at Polder level
- Appointing flagman at required location for traffic management
- Erection of electrical cable on overhead instead of placing on the ground to avoid potential accidents
- Continuation of provision of safe drinking water to workers (laboratory tests of water done periodically)

- Fuel delivery site has impervious surface with collection ditch and absorbent facility to check pollution of soil and ground water through seepage
- The welding work sites have been installed on impervious surface with proper shed on them
- Periodic training of the Contractor's Environment Officers along with regular training of workers continued for improved EHS
- Established temporary storage facility for industrial wastes in all automated CC block manufacturing plant sites and erected ' No entry' signboards to avoid potential accident
- Established alternative road for community transportation (at sluices sites) with suitable bamboo/fencing of work site along with erection of required signboard
- Erection of Material Safety Data Sheet (MSDS) at hazardous (fuel and chemical) location along with Bangla translation
- Improvement of traffic facility at work site to avoid accident
- Preservation of top soil and planning for restoration
- Provision of proper drainage systems in worksites to avoid pollution to surrounded water bodies and land by direct disposal
- Erection of safety signboards and implementation of safety procedure at work sites
- Introduced incident reporting in Accident register following the World Bank's Environment & Social Incident Response Tool-kit (ESIRT)
- Marinating register at worksites for documentation of EHS compliance/non-compliance by the visitors, specially by the project Environmental Specialists.

In addition, the Contractors have adopted various safety measures for checking of infection of COVID-19 pandemic among the staffs and workers as mentioned below:

Novel Coronavirus response

The Contractors, Package-1 and Package-2 of CEIP-1 carried out the following drives for infection and non-proliferation of COVID-19 pandemic

i) Temperature of all personnel has been checked every day by experienced personnel including personnel working at office, camp, local construction areas, sluice and slope protection areas

ii) It was mandatory that all personnel wear surgical masks during working and has been provided masks before going to work every day

iii) Arrangement made to keep workers' hands clean with hand sanitizer and disinfectant to avoid spreading of the virus, which is followed strictly

iv) Thorough disinfection drive was conducted every Friday, including office areas, camps, pre-fabrication plants, construction vehicles and motor vehicles

v) Supplied PPE like surgical masks, medical gloves, eye mask to supporting staff (such as gate guard, police)

vi) Conducted training of workers for awareness on prevention and safety issues related to Corona virus infection during tool box talking

vii) Staffs and workers were not allowed any leave during work and leaving work site is restricted

viii) Local access to work sites and camp was restricted.

7. EIA/EMP Preparation and Reporting

7.1 Overview

The major environment-related activities undertaken during the period January-June, 2020 are:

- The Package-1 Contractor has conducted a robust program of monthly environmental training giving emphasis on combating Covid-19 pandemic during the period of January-June, 2020, where enough participants (staff and workers) were trained on different topics.
- The Package-2 Contractor has also conducted a robust program of monthly environmental training exclusively including combating Covid-19 pandemic during the period of January-June, 2020, where enough participants (staff and workers) were trained on different topics.
- On jobs trainings were provided to the Management and EHS Managers of Package-1 and Package-2 areas by Sr. Environmental Specialist of PMU (Md. Amir Faisal),Environmental Specialists of PMU (Dr. Md. Towhidul Islam), Environmental Specilaist of DDCS&PMS Consultant (Mr. Abu Bakr Siddique) and Environmental Specialist of 3rd Party M&E Consultants (Mr. Rezaul Haque Khan).
- Conducted Consultation Meeting with project affected persons/beneficiaries on Environmental & Social Safeguard Management in Package-1 and Package-2 areas.
- Updated the Bi- Annual Environmental Monitoring Report (July-December, 2019) of CEIP-1 and shared with The World Bank.
- Shared the Current Status of Environmental Safeguard High Priority Actions with The World Bank as agreed during WB Environmental Safeguard Mission of May 02 to May 05, 2019.
- Reporting systems are improved as per guide line of safeguard mission of the World Bank during October 15-27, 2019
- Grievance redress system (GRS): The contractors provided enough Grievance collection box in different places of the work sites
- Worker histories are maintaining in respect of age, gender, medical history, contact details and next of kin to notify in case of accidents/emergency
- Toilet facilities are improved in Nalian closure at Polder 32 under Package 1
- Implementation of IPM at farmers field

7.2 Status of EIA/EMP Preparation

According to Environmental Conservation Rules (ECR) 1997 of DoE, the project is categorized as "Red", requiring that EIA and RAP have to be submitted for obtaining and Environmental Clearance Certificate (ECC). The ECC was obtained and thus the Project has complied with the regulatory requirement. According to The World Bank (WB) safeguard policy, the Project is classified as Category "A" involving significant environmental adverse impact. To satisfy compliance of GoB and WB, CEIP-1 has already prepared EIAs for each of the four polders of Package 01 and six polders of Package 02 and these contain polder-specific EMPs. These EIAs have been approved by WB and DoE. The EIAs for the 7 Polders of Package 03(for polders 14/1, 15, 16, 17/1, 17/2, 23 and 34/3) is almost ready to share with the World Bank's. PMU also received the final clearance from IPoE on all EIA reports of Package 3.

7.3 Afforestation (January-June, 2020)

Afforestation is important to the security of embankments and the lives and livelihoods of communities by providing green belts of protection from tidal flooding and storm surge. Pilot planting of selected mangrove and other salt tolerant species are planned on BWDB owned land to demonstrate the critical role of a protective belt on the tidal inundation zone on the riverside of the embankment as well as in the embankment slopes. The afforestation component will engage community participation in pro-poor approaches to encourage ownership and benefit sharing in an attempt to achieve social, environmental and economic sustainability.

It was originally planned that NGOs will implement the afforestation work under CEIP-1 along with WMO formation, but considering the sustainability of the afforestation the authority decided that afforestation part will be cut from the NGOs scope and will be implemented by Bangladesh Forest Department (BFD). Accordingly a proposal was sent to World Bank with the concurrence of BFD and World Bank agreed the proposal. After observing other formalities a MOU has been signed between BFD and BWDB.

In accordance with the MOU, all contract agreements have been signed between the respective Executive Engineer, BWDB and Divisional Forest Officer, BFD as follows:

- Polder 47/2 & 48 under Package-2 signed on August 12, 2018
- Polder 35/1 & 35/3 under Package-1 signed on October 8, 2018
- Polder 32 & 33, under Package-1 signed on 10 October 2018
- Polder 39/2C under package-2 signed on 04 February 2019
- Polder 40/2 & 41/1 under package-2 signed on 25 February 2019
- Polder 43/2C under package-2 signed on 18 April 2019

The afforestation so far achieved till June 2020 is shown in Table 13.

Table 13: Afforestaion Status till June 2020

Sl No.	Polder No	Seedlings planted (Nos.)				Total seedlings planted (Nos.)	Total area in ha
		Embankment	Area in ha	Mangrove	Area in ha		
1	47/2	83500	33.4	74000	29.6	157500	63
2	40/2	50000	20	0	0	50000	20
3	41/1	20000	8	21000	8.4	41000	16.4
4	43/2C	28000	11.2	0	0	28000	11.2
5	48	9000	3.6	0	0	9000	3.6
Total		190500	76.2	95000	38	285500	114.2
1	32	140500	56.2	0	0	140500	56.2
2	33	150000	60	0	0	150000	60
3	35/1	128500	51.4	0	0	128500	51.4
4	35/3	126000	50.4	0	0	126000	50.4
Total		545000	218	0	0	545000	218
Grand Total		**735500**	**294.2**	**95000**	**38**	**830500**	**332.2**

Plan of Afforestation for 2020-21

PMU has prepared the afforestation program in the embankments for 2020-21 discussing with DDCS and PMS consultants that the area will be available for afforestation during month of May-June 2020. However, the afforestation program in the foreshore areas will be determined later on. The tentative afforestation program as follows:

Tentative afforestation program in the embankments during 2020-21 under CEIP-1

District	Polder no.	Length of polder	Length planted 2018-19	Length planted 2019-20	Length left in the polder	Actual length available for afforestation during 2020-21	Tentative seedlings planted during 2020-21 in thousand	Area in ha during 2021
Khulna	32	49.5	23	7	19.5	10	45	18
Khulna	33	49.5	20	14	15.5	5	20	8
Bagerhat	35/1	62.5	23	4	35.5	15	70	28
Bagerhat	35/3	40	20	9	11	6	25	10
Pirojpur	39/2C	59.25	0	0	59.25	6	30	12
Total		260.75	86	34	140.75	42	190	76
Barguna	40/2	33.75	2.5	4.5	26.75	8	35	14
Barguna	41/1	33.64	0	2	31.64	3	20	8
Patuakhali	43/2C	37.36	0	7	30.36	4	20	8
Patuakhali	47/2	17	14	1.5	1.5	1.5	6	2.4
Patuakhali	48	37.36	0	2	35.36	4	25	10
		159.11	16.5	17	125.61	20.5	106	42.4
		419.86	102.5	51	266.36	62.5	296	118.4

Total slope plantation in ha	118.4
Total foreshore plantation in ha	0
Total plantation in ha	118.4
Total seedlings to be planted in thousand	296.0

The Divisional Forest officers will follow the time schedule for maintenance of 2018-19 & 2019-20 plantation as well as raising of nurseries and plantation of 2020-21 as given below:

Item of works/activities	**Time Schedule for the given task**			
	Nypa plantation	**Kewra/Baen plantation in seed bed**	**Gewa/Passur/Sundri/Kankra in polybags**	**Embankment slope plantation-non-mangrove in polybags**
a) Nursery raising				
Selection of plant species				
Site selection	February	June-July	June	November
Site preparation including bed	Mid February	Mid June-July	Mid June-mid July	November

Item of works/activities	Time Schedule for the given task			
	Nypa plantation	**Kewra/Baen plantation in seed bed**	**Gewa/Passur/Sundri/Kankra in polybags**	**Embankment slope plantation-non-mangrove in polybags**
preparation and enclosure of nursery/earthen embankment				
Seed collection	Mid February-April	August-September	August	November-February
Polybag collection	Not applicable	Not applicable	Before June	Before December
Soil collection	Not applicable	Not applicable	Before April	November-mid December
Cowdung/compost and Fertilizer collection	Not applicable	Not applicable	Before April	November-mid December
Mixing of cowdung and fertilizer with soil and filling of bags	Not applicable	Not applicable	Before April. Atleast 15 days before filling the bags	Till mid January
Seed sowing	Mid February -April	Mid August-September	Mid June- July	December-February
Seedling maintenance	Mid February-May	Mid August-next June	Up to May-June next year	February-May
b) Planting				
Selection of site, survey the site and prepare plantation site map.	March	November-February	May – June	January-February
Preparation of mounds/dykes	Not applicable	Not applicable	Not applicable	Not applicable
Cleaning of unwanted growths by cutting them off.	Within May	7-10 days before the plantation	Mid May. 7-10 days before the plantation	End of April. 7-10 days before the plantation
Pit making	Not applicable	Not applicable	May	2nd-3rd week of April.
Application of cowdung/composts	Not applicable	Not applicable	7-10 days before planting of seedlings	7-10 days before planting of seedlings (May-June)
Staking	2-3 days before the planting	Not applicable	2-3 days before the planting	2-3 days before the planting
Transportation of seedlings to the planting sites	May-June	Next mid November-February	4th week April-June	May-June
Planting of seedlings with subsequent vacancy fillings	Just immediate after transportation of seedlings to the sites	Just immediate after transportation to the sites	Just immediate after transportation to the sites	Just immediate after transportation to the sites (May-June)
Fixing of red flags indicating planting sites to avoid fishing.	One week before the plantation	Not applicable	Not applicable	Not applicable

Item of works/activities	Time Schedule for the given task			
	Nypa plantation	**Kewra/Baen plantation in seed bed**	**Gewa/Passur/Sundri/Kankra in polybags**	**Embankment slope plantation-non-mangrove in polybags**
Application of fertilizer	Not applicable	Not applicable	Minimum 2 weeks after planting	Minimum 2 weeks after planting (mid May-June)
Weeding 1st year means planting of the following year	3 weedings in 1st year, 2 weedings in 2nd year	3 weedings in 1st year, 2 weedings in 2nd year	3 weedings in 1st year, 2 weedings in 2nd year	3 weedings in 1st year, 2 weedings in 2nd year
Vacancy fillings with staking	1st year 20%	1st year 30% and 2nd year required number	1st year 20% and 2nd year required number	1st year 20% and 2nd year required number
Pruning and climber cutting	Not applicable	Not applicable	Not applicable	By Watchers
Watching	2.0 years i.e., 24 months after planting the seedlings.	2.0 years i.e., 24 months after planting the seedlings by the same watcher of embankment slope plantation.	2.0 years i.e., 24 months after planting the seedlings.	2.0 years i.e., 24 months after planting the seedlings.

7.4 Afforts for Conservation and Stocking of Threatened Fish Species in Polders under Package-1

According to the Contract agreement a financial provision (Tk. 3,500000) has been allotted in BoQ as cost of EMP for conservation and stocking of threatened fish species in Polders of Package-1. Accordingly the Contractor, Package-1 has been involved to start various efforts in this regards.

For the purpose, the Contractor employed an experienced Fishery Specialist (Md. Moniruzzaman) since June, 2019. He has started working in Polders 32 and 35/1 and followings are the progress for his activities for conservation and stocking of threatened fish species. According to Fishery expert, fisheries resources of the Polder areas are diversified with different fresh and brackish water fish habitats. Open water/ capture fish habitats of Polder 32 include various rivers and khals such as Nalian River, Kamargola khal, Golbunia khal, Jalia khal, Pacherdoani khal, Katakhali khal, Uluruar khal, Nadaken khal, Goler khal, Thakurbari khal, Kahsiar khal, Parar khal, Chotkatola khal, Hatkhola khal etc. which also act as major arteries for open water fishery migration; whereas for Polder 35/1 such Rivers and khals include Bhola and Baleshwar Rivers, Kumarkhali Khal, madda Barishal khal, Rajor khal, Khontakata khal, Koyer khal, Rayenda khal, Tafalbari khal, Gabtola khal, Bogi khal, Chalitagonia khal, Rasulpur khal, Uttar Rajapur khal, Bandakata khal etc.

The aqua culture fishery resources are mainly developing in suitable ponds located in highland areas within the Polder, which have classified in 4 categories, e.g. prawn ponds (Galda gher), shrimp pond (Bagda gher), homestead ponds and commercial ponds.

Fish biodiversity has a decreasing trend because of:

- Morphological change of fish habitats
- Obstruction to spawning migration
- Natural and anthropogenic drying up of wild fish habitats
- Indiscriminate fishing

- Loss of river-khal connectivity
- Construction of water regulatory structures on khals/rivers (improper management of regulator).

In addition, release of some pollutants from crop fields are also causing damage of capture fisheries mainly.

In CEIP-1 Polders, formation of Water Management Organization (WMO) is in progress among the project stakeholders for participatory sustainable water management, who will be made aware of conservation of threatened fish species through training and motivation.

For this purpose, the Fishery expert has conducted several meetings with the WMGs and NGOs (who responsible for formation of WMGs) and village elites for collection of primary information/data on threatened fish species along with means of their development. The findings are as follows:According to the discussions, the threatened fish species include, Mola (mola carplet), Shol (snakehead murrel), Koi (climbing perch), Shing (stinging catfish), Magur (Walking catfish), Royna mainly.

According to the WMO/NGO personnel the reasons of threatening of capture fishery are (in addition to causes cited above):

- Intrusion of saline water
- Occurrence of cyclone and flooding
- Siltation of water bodies
- Application of poison for catching fish
- Lack of knowledge/awareness of the community for fish production.

They also put some suggestions for Conservation and stocking of threatened fish species as cited below:

- Enhance people's awareness to stop damage/destruction of captive fishery and adoption of measures for increased production
- Development/dissemination of technical knowledge for improvement of productivity of threatened fish species
- Establishing sanctuary in suitable canal bil/site
- Government's step to restrict use of narrow meshed net during catching fish in bil/khal areas
- WMG members to make aware of the threatened fish species and empower them to stop damage of threatened fish species.

According to the Contractor, Package-1, steps for conservation and stocking of threatened fish species in Polders 33 and 35/3 will also be undertaken subsequently following the experiences of the above 2 Polders.

8. EMP Implementation Status

The basic objectives of the EMP implementation in CEIP-1 are the management, prevention and mitigation of possible adverse risks of project interventions in the polder areas according to approved/proposed EHS risk assessment, EAP and C-ESMP documents for CEIP-1. The environmental and social team of PMU, DDCS & PMS consultants, third party M&E consultants and contractors are responsible for the sound implementation of EMP in CC yards and other work locations under contract packages W-01 & W-02 of CEIP-1.

In CEIP-1 the EMP implementation level is being monitored under the following line items, illustrated in the below table No. 14.

Table 13: Elements for monitoring the level of EMP implementation in CEIP-1

Sl No.	Elements	Sub-elements
1	**Construction Camps**	Obtaining approval
		Erection of signboard in Bangla and English with project details
		Install accommodation facilities for workers
		Drainage channels installation
		Supply of safe drinking water
		Supply of adequate sanitation
		Fire-fighting arrangement
		Solid and visible fencing
2	**Precast CC block yard**	Implementaion of Covid-19 OHS mannual
		Safe pedestrian
		Solid and visible fencing
		Establish and practice the safe operation procedure
		Established separate storage
		Established Industrial Waste storage area
		Confined chemical storage area
		Installation of proper drainage system
		Confined the CC block production area
		Regular checking of automatic/mixture machine
		Pleasant environment for operator
		Regular checking of noise level
		Provided noise control devices and barrier
		Provide cautionary signboard
		Regular check the switch board and weir system
		Workers retiring room
		All stacks will be covered or wetted
		Dust suppression

Sl No.	Elements	Sub-elements
		Deployed signal man to control vehicle movement
		Fire-fighting arrangement
		Manufacturing will not take place at night
3	**Access road construction**	Obtaining approval
		Construction of culverts if needed
		Construction of temporary road/by pass road
		Install speed limit signs
		Entry & Exit signs
4	**Temporary Facilities Decommissioning**	Agreeing with local authorities on demolition
		Review of Environmental liabilities
		Waste removal
5	**Fuel storage area**	Install hardstand and secondary containment
		Firefighting equipment installation
		Sand and shovel close-by
		Keep Spill kit/absorbent mat to catch any spilled fuels at the location where potential spillage may occur
		Sufficient hydrants to address potential fire
		Fire fighting arrangement
		The Material Safety Data Sheet (MSDS) from supplier to be placed besides containers/storage
		Regular checks on physical condition
6	**Welding area**	Paved welding area,
		Enough safety procedure for different type of works,
		Fire fighting arrangement
		Provide the gas mask properly during welding
		Provide special cloth for welding
		Provide the eye protective welding glass
		Maintain a minimum distance (6.1 m) from the fuel gas cylinder
		Check the hose pipe system regularly
7	**Construction/repairing of drainage sluices (DS) and flushing sluices (FS)**	
		Demolishing debris will be disposed of at a site approved by the Engineer.
		Drainage sluices ring bundh and diversion channel will be installed in order to work in dry conditions.
		No waste water from concrete mixing will be disposed of directly to the surface water.
		Steel sheet pile driving will not be done at night.
		The work area will be demarcated clearly.

Sl No.	Elements	Sub-elements
		Periodic cleaning the water pathway
8	**Embankment construction and re-sectioning**	Pavement(if present)will be removed and disposed of at the premises of BWDB
		All works will be demarcated clearly.
		Signals will be installed to indicate the entry and exits of vehicles and movement of construction
		The contractor shall manage the top soil(15)cm during earth work activities
9	**Borrow Material**	Agreeing on borrow area
		Document borrow area
		Perform soil analyses on borrow materials when contamination is expected
		Prevention of erosion/dust forming
		Borrow area excavation complying with distance from the embankment as per the technical specification
		No-Tress pass line fixed with bamboo poles
10	**Khal excavation**	Spoil plan will be developed for approval by Engineer.
		Unnecessary re-suspension will be avoided
		Temporarily deposition of excavated material will be away from the channel edge
		Return water will be conveyed through siltation chambers to avoid high loads of water.
		Geo textile may be used to help stabilize the material.
		Smothering of important flora and habitats will be avoided.
11	**The bank and slope protection works**	Implementaion of Covid-19 OHS mannual
		Spilling of earth material in surface water will be avoided.
		Turfing will be applied to prevent erosion
		Proper drainage provision will be kept to avoid formation of rain cuts due to surface run off.
12	**River closure work**	
		The area will be separated by demarcation.
		Erection of proper cautionary signboard & signage.
		Provide and uses of required PPE,
		Especially use of life-jacket on barge.
		Provide safe drinking water for staff & workers
		Assure FAF in site
		Installed hygienic toilet facilities in site.
		Make available the required Fire extinguisher

Sl No.	Elements	Sub-elements
		Assure proper signal to control community access
		Development of smart waste management system
		EHS training & Tool-box talk before work start
13	**Safety on barge**	Proper anchorage
		Balanced loading
		Use of PPE especially life jacket
		Maintain speed limit of forklift
		Regular toolbox talk
		Separate lane for pedestrian and forklift
		Make a forklift safety procedure
		Regular check and maintenance of the scraper
		Developed waste management system
		Provided the facilities for potable water & FAB
14	**Occupational Health and Safety**	Implementaion of Covid-19 OHS measures in all sites and type of work
		Development of Health and Safety plan including emergency procedures
		Train all staff in health and safety
		Provision of PPE and ensuring their use
		Provision and use of life jacket during visiting campsite/worksite by boat
		Installation of first aid facilities at work site and camps with adequate stock
		Provide sanitation facilities where needed
		Provision of safe drinking water to work force (tube-well water, bottled water or pond water)
		Proper signaling of work areas
15	**Public Health and Safety**	Notification of the public adjacent at construction areas
		Installation of secured pathways for pedestrians
		Proper signaling of work areas
		Limitation of construction vehicles at public roads during peak hours.
		The temporary traffic detours in settlement areas will be kept free of dust by frequent application of water
16	**Water Supply**	Providing potable water or supplying safe bottled water.
		Maintaining the distance of a tube well / surface water resource from a soak pit at minimum 15m.
		Providing separate tube wells for the use of women.
17	**FAB facilities**	The contractor will ensure the periodic health check-up and provided required medicine facilities

Sl No.	Elements	Sub-elements
		Hearing test for workers engaged in high noise area
		Assuring the life insurance for staff and workers
18	**Sanitation**	Providing suitable sanitation facilities for the workforce
		Ensuring the location plan of the latrine at least 50 m away from the accommodation facility
		Providing separate latrines for the use of women
		Installing treatment for the sewerage
		Arranging disposal of wastewater from washrooms, kitchens, s, etc. via the camp area's drainage system
19	**Solid Waste Management**	Ensuring collection and disposal of solid wastes within the construction camps and work areas
		Taking measure to collect and store inorganic wastes in a safe place
		Establish measures for Waste collection, transportation and disposal systems at approved disposal sites.
		Disposal of construction and demolition waste.
20	**Industrial Waste Management**	Make temporary Industrial Waste storage area
		The area should be paved, defined with shade
		Categorized the waste
		Proper disposal
		Record keeping
21	**Chemical storage area management**	Make temporary Chemical storage area
		The area should be paved, defined with shade
		Install the required Sign-board
		Kept in closed condition
		Provide floor to protect from rain
		Tray as well as spill kit/absorbent mat should be provided in chemical storage area.
		Material Safety data sheet (MSDS) should be provided
		Necessary numbers of fire extinguisher
22	**Waste water**	Installation of decanter boxes for cement mixers
		Installation of proper filtering elements.
		Periodic checks and clean-ups for the decanter box.
		Prioritize reuse of aggregates and water
		Ensure safe disposal of liquid wastes generated
23	**Environmental monitoring**	
	Monitoring of Air Quality	Performance of air quality tests (SPM 2.5/10, SOx, NOx and CO during working hours)
	Monitoring of Noise	Monitoring of noise level (dB) at selected sensitive sites

Sl No.	Elements	Sub-elements
	Quality	during working hours
	Monitoring of Soil Quality	Performance of soil quality tests (organic matter, N, P, K, pH, Salinity, S and Zn).
	Monitoring of Surface Water Quality	Performance of analyses on surface water for: pH, TDS, DO, BOD, EC/Salinity and Turbidity.
	Monitoring of Drinking Water Quality	Performance of analyses on drinking water for: arsenic, iron, chloride and total faecal coliform bacteria.
24	**Noise management**	Notify prior to any typical noise events
		Ensure construction activities do not generate unacceptably high level of noise
		Restrict working to daylight hours
		Provide noise barriers, if required
		Provide ear plugs and muffs at high noise area
25	**Water and Hydrology**	Preventing of water system by waste collection; re-vegetation and dust suppression etc.
		Insure proper drainage in working areas
26	**Flora and Fauna**	Agreeing with local authorities on tree felling.
		Document trees / area of trees.
		Avoid un necessary vegetation cutting and clearing.
		Re-vegetate
		Prevent disturbance of animals
		Ensuring sufficient free flow in the construction work for fish migration
27	**Deployment of EHS Supervisor**	Employ one full-time Environment and Safety Supervisor for compliance monitoring of EMP
28	**Reporting and Documentation**	The following records will be kept at site: • Environmental Monitoring Results • EIA report; Updated C-ESMP/EAP; EHS risk assessment Report; • EHS registers (Compliance and Non-Compliance registers); • Accident register; • Waste management/disposal register; • Noise level measurement register; • Toolbox/training register; • Complaints Register; • Monitoring Checklist and • Environmental (Air/Soil/Water) quality monitoring/tests result.
29	**Public Disclosure and consultation**	• Discussion meetings amongst stakeholders shall be organized by the contractor before commencement of major physical works of the project

Sl No.	Elements	Sub-elements
		• Conduct public consultation as necessary during project implementation • Disclose the relevant project documents to local community • Establish rapport with community to liaise with community • Avoid religious conflict
30	**Tool-box talk/safety training**	Environmental training on EMP will be arranged for Construction Field supervisors and Environment & Safety Supervisors.
31	**Complaints on health safety, Environmental hazards and GRM**	Provide **COMPLAIN BOX** in CC block casting yard
		Grievance Redress Mechanism will be established.
		Complaints received from the public
		All environmental incidents will be recorded and be brought to the attention of the Site Engineer accordingly ESIRT
		Action will be taken within 7 working days.
32	**Keeping worker history**	Record keeping on various information of the individual workers which will be useful to face emergency situation during any accident. Workers' history including name and address, gender, age, medical history and name of next of kin are recorded by the Contractors to face emergent situations, which is supervised by the Environmental Specialists during field visits found that the contractor is keeping the records of worker's information fairly as instructed.

8.1 Package-1 Polders

With the help of PMU, DDSC & PMSC, Field Office of Khulna and Third Party M&E Consultants, the contractor has addressed the findings of the WB Safeguard mission and they have implemented the environmental items of agreed actions of the mission. The EHS committee, which has been established previously, sits in meetings to monitor the implementation qualities of EHS issues. The EHS committee could not hold meeting due to outbaeak of Covid-19. The contractor was requested to assess the EHS qualities of all active work locations and campsites up to the mark of satisfaction.

In general, the contractor has improved the implementation of the EMP though the nubmer of workers and volume of works have been reduced to a great extent due to evolving of pandemic situation all over the world. The Contractor of Package-1 has implemented Covid-19 OHS measures in all sites following OHS protocals. The contractor took measures like providing of PPE, face mask, hand gloves, hand sanitizer, checking of worker's body temperature, disinfecting camp and work sitesand imposing restrictions including social/personal distancing and preparation of isolation area. Fencing of work locations with the placing of warning signs / signs and signboards made at crucial locations, first aid kits with required medication and contract information from doctors are also ensured.The provision of workers rest room and hygienic latrines have been installed. Safety issues for fuel storage, fire extinguishing, life jackets during boat navigation, speed limits for vehicle movements in the workplace etc. have

also been established. An impermeable surface such as concrete pavement, collection tray and a leak set / absorbent mat have ensured for the collection of oil leaks in the refueling area. The safety data sheet from the fuel supplier has been placed for improved EHS quality. In addition, general housekeeping has improved over the reporting period, as evidenced by waste separation and disposal at workplace and construction camps. Establish household waste management system by digging a ditch to dispose of household waste on daily basis which is fenced and provided with signboard and a roof over the ditch location. A second ditch is dug for the purpose, when a ditch gets filled up. A site has been set up for the temporary collection of industrial waste and for proper disposal and management in all CC plants, but now the plants are closed due to the manufacturing required number of CC blocks according to the contact feature. Regular Toolbox is in practice for increasing employee awareness for improved health and safety. Noise level is being monitored, recorded and included in the monthly progress report (MPR). The contractor of package W-01 also meets the requirement of third annual environmental audit report, proposed by third party M&E consultant, prepared after the carrying out of the audit activities in January 2019.

Thus it is observed that the quality of compliance with the environmental conditions gradually improves with the improvement of the perception of its importance through regular monitoring and awareness of the contractor and the employees concerned by PMU, DDSC & PMSC, Field Office of Khulna and third party M&E Consultants. However, there is further scope for improvement of environmental management practices by imposing frequent and effective practices learned from over past four years. Regular monitoring and on-the-job training by PMU, DDSC & PMSC, Field Office of Khulna and external M&E Consultants must be continued and is expected. Some images of EMP compliance are shown in Annexure 2.

The physical work is only implemented in Nalian closure on Polder 32 and dyke re-sectioning in Polders 32 & 35/1 during the reporting period. All types of work at Polders 33 & 35/3 were completed on June 2019.

The EMP compliance for Package-1 during reporting period has been summarized in Table 15.

Legend:

Compliance ratings:

Very good : The term used here means that the level of compliance is significant - that is, the item in question is in compliance an estimated 90-100% of the time (or locations).

Good : This describes that the level of compliance is satisfactory, but there is room for improvement - that is, the item in question is in compliance an estimate 75-90% of the time (or locations).

Fair This means the level of compliance is satisfactory in many instances, but there is a need to improve the level of compliance - that is, compliance estimated at 50-75% of the time (or locations.)

Poor : This means the level of compliance is not satisfactory, and has not reached to a minimum level - 49%

Fully Non-compliant : This means that level compliance is zero

Trend ratings : Improving, steady, deteriorating.

Table 14: General Level of EHS Risk Assessment and EAP Compliance in the Package 01 Polders

Sl No.	EMP Parameters	EMP status as of 31 December, 2019	Compliance rating and trend	Follow up actions by 30 June, 2020
Polder 32, Package 1, Khulna				
1	Erection of Signboards/ signage	Required signboard/signage are erected in right locations	• Very good compliance; • Improving	Needs to be continued up to completions of works
2	First aid	All most all required facilities related to workers' first aid have been available at site	• Good compliance; • Improving	The good practice of proper medicine supply to be maintained by the Contractor at sites
3	PPE	Contractor has provided required PPE for the workers and workers found using adequately	• Good compliance; • Steady	The Contractor need to supply quality PPE throughout working period in large scale
4	Toilet and water supply	Cleanliness of toilet maintained through training and motivation of workers	• Good compliance; • Improving	Keeps to be cleaned and motivated the workers for using enough water
5	Fire extinguishers	Training of the workers on fire safety provided by the Contractor and the	• Good compliance; • Steady	The Contractor need to train the workers to take necessary

Sl No.	EMP Parameters	EMP status as of 31 December, 2019	Compliance rating and trend	Follow up actions by 30 June, 2020
		workers, and staff are aware		step against breaking out fire and extinguishing the fire whenever it breaks up.
6	Traffic management	It has been improved by ensuring traffic personnel in work site with proper signaling and demarcated roads in the work site	• Very good compliance; • Steady	The workers need training and more numbers of workers may need to be engaged, Contractors be to made motivated through monitoring
7	Waste collection and disposal	The practice of waste disposal has been improved through number of good practices (e.g. separate bin, selling plastic wastes to local scarp shops)	• Good compliance; • Improving	Waste disposal has to be monitored.
8	Dust control	Contractor strictly maintained water spraying for dust control	• Good compliance; • steady	Monitoring to be done properly during dry season mainly for management of dust
9	Safe pedestrian	Contractor complied where necessary	• Good compliance; • steady	Monitoring to be continued
10	Conduct of tool box talk	It is being done regularly in each work sites	• Very good compliance; • steady	The Contractor needs to improve awareness to hold tool box talk everyday
11	Establishing temporary storage for industrial waste	This practice has been improving	• Good compliance; • Improving	Supervision and monitoring to be continued
12	Turfing	Turfing is already established on embankment slope	• Good compliance; • Improving	Needs to be protected from grazing by cattle
13	Safety in barge	The contractor already taken enough safety measures in barge	• No work	
14	Environmental monitoring	Environmental quality is being monitored by KUET in yearly basis, whereas Noise level is being measured fortnightly and incorporated in MPR	• No activity	Initiatives should be taken for testing of required environmental Parameter
15	Deployment of EHS officer	The deplored EHS officers are working with great skill	• Good compliance; • Improving	Continuation is required

Sl No.	EMP Parameters	EMP status as of 31 December, 2019	Compliance rating and trend	Follow up actions by 30 June, 2020
16	Public disclosure and consultation	The tasks are being conducted by PMU and DDCS&PMS consultants, sometimes World Bank team also make disclosure with PAP	• Good compliance; • Improving	Continuation is required
17	Provided Grievances collection box	Required number of Grievances collection boxes are provided in site	• Good compliance; • Improving	Motivation of the workers should be continued for droping complain in the grievance collection box.
18	GRM	Established GRM. No complaint specific to environment is received. Grievance boxes have been installed in the camp sites.	• Good compliance; • Improving	The workers will be aware about their grievance specific to environment also if any Continuation is required.
19	Keeping worker history	Records keeping of the individual employed workers are maintaining to face emergency situation during any accident.	• Very good compliance; • Improving	Needs to be updated
20	Reporting on incident	The new reporting system is being practiced in site	• Good compliance; • Improving	Needs to be reported following the provision of ESIRT
21	Reporting and documentation	The required EHS documents are kept in site, which are also being followed	• Very good compliance; • Improving	Continuation is required
22	Implementation of Covid-19 OHS measures		• Good compliance	Improvement is required obeying Covid19 OHS protocols
	Polder 35/1, Package 1, Bagerhat			
1	Erection of Signboards/ signage	Required signboard/signage are erected in right locations	• Good compliance; • Improving	Needs to be continued up to completions of works
2	First aid	All most all required facilities related to workers' first aid have been available at site	• Good compliance; • Improving	The good practice of proper medicine supply to be maintained by the Contractor at sites

Sl No.	EMP Parameters	EMP status as of 31 December, 2019	Compliance rating and trend	Follow up actions by 30 June, 2020
3	PPE	Contractor has provided required PPE for the workers and workers found using adequately	• Good compliance; • Steady	The Contractor need to supply quality PPE throughout working period in large scale
4	Toilet and water supply	Cleanliness of toilet maintained through training and motivation of workers	• Good compliance; • Improving	Keeps to be cleaned and motivated the workers for using enough water
5	Fire extinguishers	Training of the workers on fire safety provided by the Contractor and the workers, and staff are aware	• Good compliance; • Steady	The Contractor need to train the workers to take necessary step against breaking out fire and extinguishing the fire whenever it breaks up.
6	Traffic management	It has been improved by ensuring traffic personnel in work site with proper signaling and demarcated roads in the work site	• Good compliance; • Steady	The workers training should be continued
7	Waste collection and disposal	The practice of waste disposal has been improved through number of good practices (e.g. separate bin, selling plastic wastes to local scarp shops)	• Good compliance; • Improving	Waste disposal has to be monitored.
8	Dust control	Contractor strictly maintained water spraying for dust control	• good compliance; • steady	Monitoring to be done properly during dry season mainly for management of dust
9	Safe pedestrian	Contractor complied where necessary	• Good compliance; • steady	Monitoring to be continued
10	Conduct of tool box talk	It is being done regularly in each work sites	• Very good compliance; • steady	The Contractor needs to improve awareness to hold tool box talk everyday
11	Establishing temporary storage for industrial waste	This practice has been improving	• Good compliance; • Improving	Supervision and monitoring to be continued
12	Turfing	Turfing is already established on embankment slope	• Very good compliance; • Improving	Needs to be protecting from grazing by cattle
13	Environmental	Environmental quality is being	• No activity	Initiatives should be taken for

Sl No.	EMP Parameters	EMP status as of 31 December, 2019	Compliance rating and trend	Follow up actions by 30 June, 2020
	monitoring	monitored by KUET in yearly basis, whereas Noise level is being measured fortnightly and incorporated in MPR		testing of required environmental Parameter
14	Deployment of EHS officer	The deplored EHS officers are working with great skill	• Good compliance; • Improving	Continuation is required
15	Public disclosure and consultation	The tasks are being conducted by PMU and DDCS&PMS consultants, sometimes World Bank team also make disclosure with PAP	• Very good compliance; • Improving	Continuation is required
16	Provided Grievances collection box	Required number of Grievances collection boxes are not provided in site	• Good compliance; • Improving	More Grievances collection box needs to be provided in site
17	GRM	GRM system is working effectively	• good compliance; • Improving	The workers will be aware about their grievance specific to environment also if any Continuation is required. Continuation is required
18	Keeping worker history	Records keeping of the individual employed workers are maintaining to face emergency situation during any accident.	• Very good compliance; • Improving	Needs to be updated
19	Reporting on incident	The new reporting system is being practiced in site	• Good compliance; • Improving	Needs to be reported following the provision of ESIRT
20	Reporting and documentation	The required EHS documents are kept in site, which are also being followed	• Very good compliance; • Improving	Continuation is required
21	Implementation of Covid-19 OHS measures		• Good compliance	Improvement is required obeying Covid19 OHS protocols

8.2 Package-2 Polders

The EHS qualities in package 2 have been improved through regular site visits by the environmental specialist (PMU/Field) and DDCS & PMS environmental specialist during the reporting period. The staff of the contractor is motivated to provide support in achieving improved quality in EHS issues. The contractor also provides regular training to his employees to improve the quality of environmental management on a monthly basis as a routine program. During each field visit, the weaknesses of environmental compliance issues are identified, recorded in EHS registers and discussed with the contractor to address those problems within a specified timeframe as agreed by the contractor. The EHS committee, which has been established previously, sat in a meetings to monitor the implementation qualities of EHS issues in March 2020. The EHS committee could not hold more meeting due to outbreak of Covid-19.

In general, the contractor has improved the implementation of the EMP though the nubmer of workers and volume of works have been reduced to a great extent due to evolving of pandemic situation all over the world. The Contractor of Package-2 has implemented Covid-19 OHS measures in all sites following OHS protocals. The contractor took measures like providing PPE, face mask, hand gloves, hand sanitizer, checking of worker's body temperature, disinfecting camp and work sitesand imposing restrictions including social/personal distancing and preparation of isolation area. PPE has been provided and is being used by workers on a much larger scale than before, although there is a small gap to ensure all required PPE at all work locations. The erection of warning signs / signs at crucial locations, first aid kits with required medicine and contract information from doctors are guaranteed in work sites and CC block yards. The accommodation, clean wash room, kitchen and dining are installed. Safety issues for fuel storage, arranging fire extinguishing, supply and use of life jackets during boat movement, speed limit for vehicle movements in the workplace etc. have also been established. The general housekeeping of camps has improved during the reporting period, as evidenced by waste separation, cleanliness of the workplace and construction camps, storage of goods, etc. Establish household waste management system by digging a ditch to dispose of household waste on daily basis which is fenced and provided with signboard and a roof over the roof location. A second ditch is dug for the purpose, when a ditch gets filled up. There are regular discussions with Toolbox. Temporary storage sites for industrial waste and hazardous substances have been installed and maintained at CC yards and also at other important work locations.The industrial wastes are categorized as Metal, Tin and Plastic & rubber which are kept segregated on paved floor and the wastes are sold to the interested parties (vendors) and these are kept recorded. Noise levels are monitored monthly and results are reported in the consultants monthly progress report (MPR). The workers use ear plug/muff for noise safety. Noise levels in few locations where it exceeds 60 dBa (pemisible for mixed area); the Contractor has established noise barrier and shifting facility of workers which have been checked by the Environmental Specialist of PMU, DDCS&PMS Consultants and Third Party M&E Consultants during their firld visits. Some required noise barriers such as i) closed plant operators rooms, ii) wooden/tin barrier on both side of the plant iii) tin barrier around the C.C block manufacturing compound which seperates the nearby community and residential area of camp site have been installed. Nevertheless, hearing tests for workers once in every six months is being conducted though it was not possible during the reporting period due to pandemic situation.
The contractor has also set up enough complaints collection box to submit workers' complaints. It was found that contractors are fairly keeping the records of workers information as instructed.
Some images of EMP implementation and compliance are provided in Annexure-3. The EMP compliance for Package-2 during reporting period has been summarized in Table 16.

Legend:

Compliance ratings:

Very good : The term used here means that the level of compliance is significant - that is, the item in question is in compliance an estimated 90-100% of the time (or locations).

Good : This describes that the level of compliance is satisfactory, but there is room for improvement - that is, the item in question is in compliance an estimate 75-90% of the time (or locations).

Fair This means the level of compliance is satisfactory in many instances, but there is a need to improve the level of compliance - that is, compliance estimated at 50-75% of the time (or locations.)

Poor : This means the level of compliance is not satisfactory, and has not reached to a minimum level - 49%

Fully Non-compliant : This means that level compliance is zero

Trend ratings : Improving, steady, deteriorating.

Table 15: General Level of EHS Risk Assessment and C-ESMP Compliance in the Package 02 Polders

Sl No.	EMP Parameters	EMP status as of 31 December, 2019	Compliance rating and trend	Follow up actions by 30 June, 2020
Polder 39/2C, Package 2, Bhandaria, Pirojpur				
1	Erection of Signboards/ signage	Required signboard/signage are erected in right locations	• Very good compliance; • Improving	Needs to be continued up to completions of works
2	First aid	All most all required facilities related to workers' first aid have been available at site. The area is also confined in this polder for easier to workers	• Good compliance; • Improving	The good practice of proper medicine supply to be maintained by the Contractor at sites
3	PPE	Contractor has provided required PPE for the workers and workers found using adequately	• Good compliance; • Steady	The Contractor need to supply quality PPE throughout working period in large scale
4	Toilet and water supply	Cleanliness of toilet maintained through training and motivation of workers	• Good compliance; • Improving	Keeps to be cleaned and motivated the workers for using enough water

Sl No.	EMP Parameters	EMP status as of 31 December, 2019	Compliance rating and trend	Follow up actions by 30 June, 2020
5	Fire extinguishers	Training of the workers on fire safety provided by the Contractor and the workers, and staff are aware	• Good compliance; • Steady	The Contractor need to train the workers to take necessary step against breaking out fire and extinguishing the fire whenever it breaks up.
6	Traffic management	It has been improved by ensuring traffic personnel in work site with proper signaling and demarcated roads in the work site	• Good compliance; • Steady	The workers need training and more numbers of workers may need to be engaged, Contractors be to made motivated through monitoring
7	Waste collection and disposal	The practice of waste disposal has been improved through number of good practices (e.g. separate bin, selling plastic wastes to local scarp shops)	• Good compliance; • Improving	Waste disposal has to be monitored.
8	Dust control	Contractor strictly maintained water spraying for dust control	• Very good compliance; • steady	Monitoring to be done properly during dry season mainly for management of dust
9	Safe pedestrian	Contractor complied where necessary	• Very good compliance; • Improving	Monitoring to be continued
10	Conduct of tool box talk	It is being done regularly in each work sites	• Very good compliance; • steady	The Contractor needs to improve awareness to hold tool box talk everyday
11	Establishing temporary storage for industrial waste	This practice has been improving	• Good compliance; • Improving	Supervision and monitoring to be continued
12	Hearing test for automatic plant operators	The contractor arranges the facilities for hearing test of automatic plant operators by qualified physicians in presence of PMU Environmental specialist as half-yearly basis and found good hearing capacity	• Hearing test not done	Hearing test need to be conducted during next reporting period
13	Safety in barge	The contractor already taken enough safety measures in barge	• No activity	

Sl No.	EMP Parameters	EMP status as of 31 December, 2019	Compliance rating and trend	Follow up actions by 30 June, 2020
14	Safety manual	The contractor is more cordial to follow the safety procedures while carrying out the construction work	• Good compliance; • Improving	Continuation is required
15	Accommodation facility	The contractor has ensured accommodation facilities at camp site	• Good compliance; • Improving	Continuation is required
16	Environmental monitoring	Environmental quality is being monitored by KUET in yearly basis, whereas Noise level is being measured fortnightly and incorporated in MPR	• No activity	Initiatives should be taken for testing of required environmental Parameter
17	Deployment of EHS officer	The deployed EHS officers are working	• Good compliance; • Improving	Continuation is required
18	Public disclosure and consultation	The tasks are being conducted by PMU and DDCS&PMS consultants	• Good compliance; • Improving	Continuation is required
19	Provided Grievances collection box	Required number of Grievances collection boxes are provided in site	• Good compliance; • Improving	Continuation is required
20	GRM	Established GRM. No complaint specific to environment is received. Grievance boxes have been installed in the camp sites.	• Good compliance; • Improving	The workers will be aware about their grievance specific to environment also if any. Continuation is required
21	Keeping worker history	Records keeping of the individual employed workers are maintaining to face emergency situation during any accident.	• Very good compliance; • Improving	Needs to be updated
22	Reporting on incident	The new reporting system is being practiced in site	• Good compliance; • Improving	Needs to be reported following the provision of ESIRT
23	Reporting and documentation	The required EHS documents are kept in site, which are also being followed	• Very good compliance; • Improving	Continuation is required
24	Noise level	Noise levels in few locations where it exceeds 60 dBa (pemisible for mixed area); the Contractor has established noise barrier and shifting facility of workers. The workers also use ear plug/muff for noise safety.	• Good compliance; • Improving	Needs continuation

Sl No.	EMP Parameters	EMP status as of 31 December, 2019	Compliance rating and trend	Follow up actions by 30 June, 2020
Polder 40/2, Package 2, Patharghata, Barguna				
1	Erection of Signboards/ signage	Sufficient signboard/signage are not erected in right locations	• Fair compliance; • Steady	Needs to be erected more cautionary signage in right locations
2	First aid	All most all required facilities related to workers' first aid have been available at site	• Good compliance; • Improving	The good practice of proper medicine supply to be maintained by the Contractor at sites
3	PPE	Contractor has provided required PPE for the workers and workers found using adequately	• Good compliance; • Steady	The Contractor need to supply quality PPE throughout working period in large scale
4	Toilet and water supply	Cleanliness of toilet maintained through training and motivation of workers	• Good compliance; • Improving	Continued to clean and motivate the workers for using enough water
5	Fire extinguishers	Training of the workers on fire safety provided by the Contractor and the workers, and staff are aware	• Good compliance; • Steady	The Contractor need to train the workers to take necessary step against breaking out fire and extinguishing the fire whenever it breaks up.
6	Traffic management	Improved by ensuring traffic personnel in work site with proper signaling and demarcated roads in the work site	• Good compliance; • Steady	The workers need training and more numbers of workers may need to be engaged, Contractors be to made motivated through monitoring
7	Waste collection and disposal	The practice of waste disposal has been improved through number of good practices (e.g. separate bin, selling plastic wastes to local scarp shops)	• Fair compliance; • Improving	Needs to be improved
8	Safe pedestrian	Contractor complied where necessary	• Good compliance; • steady	Monitoring to be continued
9	Safety manual	The contractor is more careful to follow the safety procedures while carrying out the	• Very good compliance; • Improving	Continuation is required

Sl No.	EMP Parameters	EMP status as of 31 December, 2019	Compliance rating and trend	Follow up actions by 30 June, 2020
		construction work		
10	Accommodation facility	The contractor has ensured accommodation facilities at camp site	• Good compliance; • Improving	Continuation is required
11	Conduct of tool box talk	It is not done in regular	• Fair compliance; • steady	The Contractor needs to improve awareness to hold tool box talk everyday
12	Establishing temporary storage for industrial waste	The industrial waste storage area is not well established	• Fair compliance; • Improving	Needs to be improved
13	Turfing	Turfing is already established on embankment slope	• good compliance; • Improving	Needs to be protecting from grazing by cattle
14	Environmental monitoring	Environmental quality is being monitored by KUET in yearly basis, whereas Noise level is being measured fortnightly and incorporated in MPR	• No activity	Initiatives should be taken for testing of required environmental Parameter
15	Deployment of EHS officer	The deployed EHS officers are working	• Good compliance; • Improving	Continuation is required
16	Public disclosure and consultation	The tasks are being conducted by PMU and DDCS&PMS consultants, sometimes World Bank team also make disclosure with PAP	• Very good compliance; • Improved	Continuation is required
17	Provided Grievances collection box	Required number of Grievances collection boxes are not provided in site	• Fair compliance; • Steady	More Grievances collection box needs to be provided in site
18	GRM	Some of the grievances are unresolved which need to be resolved	• Good compliance; • Improving	The workers will be aware about their grievance specific to environment also if any. Continuation is required
19	Keeping worker history	Records keeping of the individual employed workers are not maintaining smartly to face emergency situation during any accident.	• Fair compliance; • Steady	Needs to be improved
20	Reporting on incident	The new reporting system is being practiced in site	• Good compliance; • Improving	Needs to be reported following the provision of ESIRT
21	Reporting and documentation	The required EHS documents are kept in site, which are also being followed	• Very good compliance; • Improving	Continuation is required

Sl No.	EMP Parameters	EMP status as of 31 December, 2019	Compliance rating and trend	Follow up actions by 30 June, 2020
22	Fencing around camp with protected entrance	Fencing around camp with protected entrance was absent have been complied subsequently	• Good compliance • Improving	Requires fencing around camp with protected entrance was an issue of monthly EHS meeting held on 26 January 2020 which was resolved by fencing around the camp and provision of protected entrances (2 gates) in the camp site
23	Noise level	Noise levels of few locations are little bit higher than 60 dBa (permissible limit for mixed area); the workers use ear plug/ muff for noise safety	• Good compliance • Improving	Continuation is required
	Polder 41/1, Package 2, Sadar, Barguna			
1	Erection of Signboards/ signage	Required signboard/signage are erected in right locations	• Good compliance; • Improving	Needs to be continued up to completions of works
2	First aid	All most all required facilities related to workers' first aid have been available at site. The area is also confined in this polder for easier to workers	• Good compliance; • Improving	The good practice of proper medicine supply to be maintained by the Contractor at sites
3	PPE	Contractor has provided required PPE for the workers and workers found using adequately	• Good compliance; • Steady	The Contractor need to supply quality PPE throughout working period in large scale
4	Toilet and water supply	Cleanliness of toilet maintained through training and motivation of workers	• Good compliance; • Improving	Keeps to be cleaned and motivated the workers for using enough water
5	Fire extinguishers	Training of the workers on fire safety provided by the Contractor and the workers, and staff are aware	• Good compliance; • Steady	The Contractor need to train the workers to take necessary step against breaking out fire and extinguishing the fire whenever it breaks up.
6	Traffic management	It has been improved by ensuring traffic personnel in work site with proper signaling	• Good compliance; • Steady	The workers need training and more numbers of workers may

Sl No.	EMP Parameters	EMP status as of 31 December, 2019	Compliance rating and trend	Follow up actions by 30 June, 2020
		and demarcated roads in the work site		need to be engaged, Contractors be to made motivated through monitoring
7	Waste collection and disposal	The practice of waste disposal has been improved through number of good practices (e.g. separate bin, selling plastic wastes to local scarp shops)	• Very good compliance; • Improving	Waste disposal has to be monitored.
8	Safe pedestrian	Safe pedestrian is ensured	• Good compliance; • Improving	Needs to be improved
9	Establishment of chemical/refueling area	Improvement of chemical and refueling area had been noticed. e.g arrangement of absorbent mats have been introduced	• Good compliance; • Improving	Continuation is required
10	Accommodation facility	The contractor has ensured accommodation facilities at camp site	• Good compliance; • Improving	Continuation is required
11	Conduct of tool box talk	It is being done regularly in each work sites	• Very good compliance; • steady	The Contractor needs to improve awareness to hold tool box talk everyday
12	Establishing temporary storage for industrial waste	This practice has been improving. e.g boundary wall and roofing over the storage area have been provided	• Good compliance; • Improving	Supervision and monitoring to be continued
13	Safety manual	The contractor is more cordial to follow the safety procedures while carrying out the construction work	• Very good compliance; • Improved	Continuation is required
14	Environmental monitoring	Environmental quality is being monitored by KUET in yearly basis, whereas Noise level is being measured fortnightly and incorporated in MPR	• No activity	Initiatives should be taken for testing of required environmental Parameter
15	Deployment of EHS officer	The deplored EHS officers are working	• Good compliance; • Improving	Continuation is required
16	Public disclosure and consultation	The tasks are being conducted by PMU and DDCS&PMS consultants	• Good compliance; • Improving	Continuation is required
17	Provided Grievances collection box	Required number of Grievances collection boxes are provided in site	• Good compliance; • Improving	Continuation is required

Sl No.	EMP Parameters	EMP status as of 31 December, 2019	Compliance rating and trend	Follow up actions by 30 June, 2020
18	GRM	Some of the grievacnes raised are pending which need to be resolved	• Good compliance; • Improving	The workers will be aware about their grievance specific to environment also if any. Continuation is required
19	Keeping worker history	Records keeping of the individual employed workers are maintaining to face emergency situation during any accident.	• Very good compliance; • Improved	Needs to be continued
20	Reporting on incident	The new reporting system is being practiced in site	• Good compliance; • Improving	Needs to be reported following the provision of ESIRT
21	Reporting and documentation	The required EHS documents are kept in site, which are also being followed	• Very good compliance; • Improving	Continuation is required
22	Noise level	Noise levels of few locations are little bit higher than 60 dBa (permissible limit for mixed area) and the workers use ear plug/muff for noise safety.	• Good compliance • Improving	Continuation is required
	Polder 43/2C, Package 2, Galachipa, Patuakhali			
1	Erection of Signboards/ signage	Required signboard/signage are erected in right locations	• Good compliance; • Improving	Needs to be continued up to completions of works
2	First aid	All most all required facilities related to workers' first aid have been available at site. The area is also confined in this polder for easier to workers	• Good compliance; • Improving	The good practice of proper medicine supply to be maintained by the Contractor at sites
3	PPE	Contractor has provided required PPE for the workers and workers found using adequately	• Good compliance; • Steady	The Contractor need to supply quality PPE throughout working period in large scale
4	Toilet and water supply	Cleanliness of toilet maintained through training and motivation of workers	• Good compliance; • Improving	Keeps to be cleaned and motivated the workers for using enough water
5	Fire extinguishers	Training of the workers on fire safety provided by the Contractor and the workers, and staff are aware	• Good compliance; • Steady	The Contractor need to train the workers to take necessary step against breaking out fire and extinguishing the fire whenever it

Sl No.	EMP Parameters	EMP status as of 31 December, 2019	Compliance rating and trend	Follow up actions by 30 June, 2020
				breaks up.
6	Traffic management	It has been improved by ensuring traffic personnel in work site with proper signaling and demarcated roads in the work site	• Good compliance; • Steady	The workers need training and more numbers of workers may need to be engaged, Contractors be to made motivated through monitoring
7	Waste collection and disposal	The practice of waste disposal has been improved through number of good practices (e.g. separate bin, selling plastic wastes to local scarp shops)	• Good compliance; • Improving	Waste disposal has to be monitored.
8	Safe pedestrian	Safe pedestrian is not ensured	• Fair compliance; • Improving	Needs to be improved
9	Accommodation facility	The contractor has ensured the excellent accommodation facilities at camp site	• Very good compliance; • Improving	Continuation is required
10	Conduct of tool box talk	It is being done regularly in each work sites	• Very good compliance; • steady	The Contractor needs to improve awareness to hold tool box talk everyday
11	Establishing temporary storage for industrial waste	This practice has been improving	• Fair compliance; • Improving	Supervision and monitoring to be continued
12	Safety manual	The contractor is more cordial to follow the safety procedures while carrying out the construction work	• Very good compliance; • Improving	Continuation is required
13	Environmental monitoring	Environmental quality is being monitored by KUET in yearly basis, whereas Noise level is being measured fortnightly and incorporated in MPR	• No activity	Initiatives should be taken for testing of required environmental Parameter
14	Deployment of EHS officer	The deplored EHS officers are working	• Good compliance; • Improving	Continuation is required
15	Public disclosure and consultation	The tasks are being conducted by PMU and DDCS&PMS consultants, sometimes World Bank team also make disclosure with PAP	• Good compliance; • Improving	Continuation is required
16	Provided Grievances	Required number of Grievances collection	• Good compliance;	Continuation is required

Sl No.	EMP Parameters	EMP status as of 31 December, 2019	Compliance rating and trend	Follow up actions by 30 June, 2020
	collection box	boxes are provided in site	• Improving	
17	GRM	No pending/ grievance	• Good compliance; • Improving	The workers will be aware about their grievance specific to environment also if any. Continuation is required
18	Keeping worker history	Records keeping of the individual employed workers are maintaining to face emergency situation during any accident.	• Very good compliance; • Improving	Needs to be updated
19	Reporting on incident	The new reporting system is being practiced in site	• Good compliance; • Improving	Needs to be reported following the provision of ESIRT
20	Reporting and documentation	The required EHS documents are kept in site, which are also being followed	• Very good compliance; • Improving	Continuation is required
21	Noise level	Noise levels of few locations are little bit higher than 60 dBa (permissible limit for mixed area); workers use ear plug/muff for noise safety	• Good compliance • Improving	Continuation is required
Polder 47/2, Package 2, Kalapara, Patuakhali				
1	Erection of Signboards/ signage	Required signboard/signage are erected in right locations	• Good compliance; • Improving	Needs to be continued up to completions of works
2	First aid	All most all required facilities related to workers' first aid have been available at site. The area is also confined in this polder for easier to workers	• Good compliance; • Improving	The good practice of proper medicine supply to be maintained by the Contractor at sites
3	PPE	Contractor has provided required PPE for the workers and workers found using adequately	• Good compliance; • Steady	The Contractor need to supply quality PPE throughout working period in large scale
4	Toilet and water supply	Cleanliness of toilet maintained through training and motivation of workers	• Good compliance; • Improving	Keeps to be cleaned and motivated the workers for using enough water
5	Fire extinguishers	Training of the workers on fire safety provided by the Contractor and the workers, and staff are aware	• Good compliance; • Steady	The Contractor need to train the workers to take necessary step against breaking out fire and

Sl No.	EMP Parameters	EMP status as of 31 December, 2019	Compliance rating and trend	Follow up actions by 30 June, 2020
				extinguishing the fire whenever it breaks up.
6	Waste collection and disposal	The practice of waste disposal has been improved through number of good practices (e.g. separate bin, selling plastic wastes to local scarp shops)	• Very good compliance; • Improved	The practice needs to be continued
7	Safe pedestrian	Safe pedestrian is not ensured	• Fair compliance; • Improving	Needs to be improved
8	Accommodation facility	The contractor has ensured accommodation facilities at camp site	• Good compliance; • Improving	Continuation is required
9	Conduct of tool box talk	It is being done regularly in each work sites	• Good compliance; • steady	The Contractor needs to improve awareness to hold tool box talk everyday
10	Establishing temporary storage for industrial waste	This practice has been improving	• Fair compliance; • Improving	Supervision and monitoring to be continued
11	Safety manual	The contractor is more cordial to follow the safety procedures while carrying out the construction work	• Very good compliance; • Improving	Continuation is required
12	Environmental monitoring	Environmental quality is being monitored by KUET in yearly basis, whereas Noise level is being measured fortnightly and incorporated in MPR	• No activity	Initiatives should be taken for testing of required environmental Parameter
13	Deployment of EHS officer	The deplored EHS officers are working	• Good compliance; • Improving	Continuation is required
14	Public disclosure and consultation	The tasks are being conducted by PMU and DDCS&PMS consultants, sometimes World Bank team also make disclosure with PAP	• Good compliance; • Improving	Continuation is required
15	Provided Grievances collection box	Required number of Grievances collection boxes are provided in site	• Good compliance; • Improving	Continuation is required
16	GRM	GRM system is well functional and no grievance to resolve	• Good compliance; • Improving	The workers will be aware about their grievance specific to environment also if any.

Sl No.	EMP Parameters	EMP status as of 31 December, 2019	Compliance rating and trend	Follow up actions by 30 June, 2020
				Continuation is required
17	Keeping worker history	Records keeping of the individual employed workers are maintaining to face emergency situation during any accident.	• Very good compliance; • Improving	Needs to be updated
18	Reporting on incident	The new reporting system is being practiced in site	• Good compliance; • Improving	Needs to be reported following the provision of ESIRT
19	Reporting and documentation	The required EHS documents are kept in site, which are also being followed	• Very good compliance; • Improving	Continuation is required
20	Noise level	Noise level of all the 5 locations are higher than 60 dBa (permissible limit for mixed area); the workers use ear plug/muff for noise safety	• Good compliance • Improving	Continuation required
Polder 48, Package 2, Kalapara, Patuakhali				
1	Erection of Signboards/ signage	Sufficient signboard/signage are not erected in right locations	• Fair compliance; • Steady	Needs to be erected more cautionary signage in right locations
2	First aid	All most all required facilities related to workers' first aid have been available at site	• Good compliance; • Improving	The good practice of proper medicine supply to be maintained by the Contractor at sites
3	PPE	Contractor has provided required PPE for the workers and workers found using adequately	• Good compliance; • Steady	The Contractor need to supply quality PPE throughout working period in large scale
4	Toilet and water supply	Cleanliness of toilet maintained through training and motivation of workers	• good compliance; • Improving	Keeps to be cleaned and motivated the workers for using enough water
5	Fire extinguishers	Training of the workers on fire safety provided by the Contractor and the workers, and staff are aware	• Good compliance; • Steady	The Contractor need to train the workers to take necessary step against breaking out fire and extinguishing the fire whenever it breaks up.
6	Traffic management	It has been improved by ensuring traffic	• Fair compliance;	The workers need training and

Sl No.	EMP Parameters	EMP status as of 31 December, 2019	Compliance rating and trend	Follow up actions by 30 June, 2020
		personnel in work site with proper signaling and demarcated roads in the work site	• Steady	more numbers of workers may need to be engaged, Contractors be to made motivated through monitoring
7	Waste collection and disposal	The practice of waste disposal has been improved through number of good practices (e.g. separate bin, selling plastic wastes to local scarp shops)	• Fair compliance; • Improving	Needs to be improved
8	Safe pedestrian	Contractor complied where necessary	• Good compliance; • steady	Monitoring to be continued
9	Safety manual	The contractor is more cordial to follow the safety procedures while carrying out the construction work	• Very good compliance; • Improving	Continuation is required
10	Accommodation facility	The contractor has ensured accommodation facilities at camp site	• Good compliance; • Improving	Continuation is required
11	Conduct of tool box talk	It is not done in regular	• Fair compliance; • steady	The Contractor needs to improve awareness to hold tool box talk everyday
12	Environmental monitoring	Environmental quality is being monitored by KUET in yearly basis, whereas Noise level is being measured fortnightly and incorporated in MPR	• No activity	Initiatives should be taken for testing of required environmental Parameter
13	Establishing temporary storage for industrial waste	This practice has been improving	• Fair compliance; • Improving	Supervision and monitoring to be continued
14	Deployment of EHS officer	The deployed EHS officers are working	• Good compliance; • Improving	Continuation is required
15	Public disclosure and consultation	The tasks are being conducted by PMU and DDCS&PMS consultants, sometimes World Bank team also make disclosure with PAP	• Good compliance; • Improving	Continuation is required
16	Provided Grievances collection box	Required number of Grievances collection boxes are not provided in site	• Fair compliance; • Steady	More Grievances collection box needs to be provided in site
17	GRM	The GRM system is well functional and there is	• Good compliance;	The workers will be aware about

Sl No.	EMP Parameters	EMP status as of 31 December, 2019	Compliance rating and trend	Follow up actions by 30 June, 2020
		no grievance to resolve	• Improving	their grievance specific to environment also if any. Continuation is required
18	Keeping worker history	Records keeping of the individual employed workers are not maintaining smartly to face emergency situation during any accident.	• Fair compliance; • Steady	Needs to be improved
19	Reporting on incident	The new reporting system is being practiced in site	• Good compliance; • Improving	Needs to be reported following the provision of ESIRT
20	Reporting and documentation	The required EHS documents are kept in site, which are also being followed	• Very good compliance; • Improving	Continuation is required
21	Noise level	Noise levels of few locations exceeds the standards a little for which the workers use ear plug/muff for noise safety	• Good compliance; • Improving	Continuation required

9. Field visits

The Environmental Specialists of CEIP-1 carried out field visits to different areas of Polder locations of Package-2 for conducting various activities related to monitoring of environmental issues during the reporting period (January-June, 2020). Details of the field visits of different Environmental personnel are briefed as follows:

Field visits of Mr.Md. Amir Faisal, Sr. Environmental Specialist, PMU, Mr.Abu Bakr Siddique, Environmental Specialist, DDCS&PMS Consultant CEIP-1 and Dr. Md.Towhidul Islam, Environmental Specialist, PMU during January to June, 2020

Sl. No.	Date of Visit	Activities Performed
1.	10 March, 2020	• A meeting was held in Polder 39/2C located in Pirojpur with Mr. Li Guofang, Acting Project Manager, Package-2 on improvement of environmental mitigation issues, which are yet to be addressed. • Visited camp site of CC block manufacturing plants in Polder 39/2C of Package-2 in Pirojpur District to monitor the Contractor's EHS compliance level and provision of suggestion for their improvement as required. • Visited Drainage Sluice-8, which started working on 13 February, 2020. Monitored EHS compliance level and suggested for improvement thereof
2.	11 March, 2020	• Participated monthly EHS Committee meeting for the month of March, 2020, Chaired by Executive Engineer, Patuakhali O&M Division, BWDB, Patuakhali. • Monitored the EHS qualities of camp site of Polder 43/2C. Also visited Drainage Sluice 3 and Drainage Sluice 8 to monitor the EHS qualities and asked Mr. Ma Dian Yoner (Environmental in charge) to further improvement of EHS qualities in the work sites.
3.	12 March, 2020	• Visited Flushing sluice-5 and Drainage sluice-3 of Polder 41/1 of Package-2 in Barguna District to monitor the Contractor's EHS compliance level, which need to be improved further. • Visited camp site of Polder 40/2 in Barguna district and discussion was made with Mr. Bu Shidong, Chinese EHS officer, Polder 40/2 on EHS related issues. He has been asked to improve EHS qualities at various work sites of Polder 40/2. Finalized appointment of Mr. Nazmul Ahsan as Local EHS officer for Polder 40/2. • Visited Drainage sluice 10 of Polder 40/2 in Barguna District to monitor the EHS qualities and asked Mr. Bu Shidong and Mr. Nazmul Ahsan to further improve the the EHS qualities at camp site and work sites.

In addition, Dr. Md. Towhidul Islam, Environmental Specialist, PMU conducted various field visits to different locations of Package-1 and Package-2 of CEIP-1 during the reporting periods for environmental monitoring and other environment-related activities as and when required.

No further field visit could be carried within the reporting period due to outbreak of COVID 19 pandemic.

The PMU field level environmental specialist of CEIP-1 has made several EHS visits in Polder locations of Package-1, Package-2 and also monitored the NGO activities for conducting various activities related to environment as well as NGO consultancy services during the reporting period (January-June, 2020). Details but not limited to below are as follows:

- Frequent trip to examine the EHS compliances in Packages W-01 & W-02.
- Monitoring Tool-box talking (virtually and spot visit).
- Adopting enough protection measures to combat **Covid-19** crises as well as ensuring personnel safety while carrying out the civil/construction works and driving the vehicles in Contract Package W-01.
- Make arrangement for measuring the body temperature to be stopped the spreading of **Covid-19**.
- Ensuring enough sanitization arrangements in Polder 40/2.
- Establishment of confined chemical storage area in Polder 40/2.
- Right positioning the Grievance collection box in Polder 39/2C.
- Make arrangements of absorbent mats to manage oil leakage in different polders of contract Package-2.
- Preparedness taken and conducting public disclosures to tackle super cyclone Amphan in **Polder 32** & **Polder 35/1**.
- Meeting conducted with ACF, DoF, Bagerhat & Khulna and finalized the beneficiary lists for social forestation in Polder no. 32, 33, 35/1 & 35/3 under NGO consultancy services package nos. A & B.
- Meeting conducted with NGO key experts & community organizers and finalized the training participants lists for Polder no. 32, 33, 35/1 & 35/3 under NGO consultancy services package nos. A & B.
- Attended in the pot song dummy session of Shushilan and provided comments for further development.
- Public disclosure for social forestation in Polder 33.

10. Testing

Testing of various parameters like Water quality (Surface and drinking), soil quality and air quality are measured once a year. The Contractors of Package-1 and Package-2 of CEIP-1 had been asked to carry out tests for 2020 during the month of March, 2020 (on 05.03.2020). But they could not start their activities due to outbreak of COVID-19 pandemic. The concerned technical persons to be involved in sample collection from the specific sites were not available as well as the laboratories for testing ceased their functioning. As such testing of these parameter was not possible to conduct during the reporting period. However, all of them resumed functioning in the later period and the works for testings are in progress.

Measurement of noise level of the susceptible locations are carried out on monthly basis, which are incorporated in the monthly environmental progress report. An example of the same measurement is attached herewith that was included in the monthly progress report of March, 2020 for both Package-1 and Package-2 below:

Noise Measurement, Package-1

The contractor, Package-1 has recorded noise to evaluate the intensity of Noise Quality (dB) upon the sensitive receivers (House, School, College, Hospital, Madrasa, Mosque etc.) around the CC Block Manufacturing Plant of Polder 35/1 as given below:

Table 16: Noise level of Tafalbari Automatic CC Block Manufacturing Plant

Monitoring Location		**Polder 35/1, Tafalbari CC Block Manufacturing Plant, Coordinates: N** $22^0 16' 21.03''$ **E** $89^0 50' 20.47''$
Monitoring Date & Time		09. 03. 2020 (Day time)
Noise Meter Model		**Digital Sound Level Meter AR**824
Noise source(s) during monitoring		Fork Lift, Motor Vehicles and Generator operations [although production of CC Block in Tafalbari Manufacturing Plant is off this month]
Location category		Commercial area
Measurement Result(s),dB	Plant operator	112.8, 105.2, 102.6
	Curing area (Start point)	94.5, 90.8, 84.3
	Curing area (End point)	86.6, 78.4, 85.7
	Stacking area	80.7, 75.6, 79.8
	House no. 01	64.6, 65.7, 68.4
	Rod cleaning area	63.8, 54.6, 55.2
	Drilling area	67.8, 58.7, 59.6
Daytime Standard of sound, dB (ECR 1997)		50(residential area); 60(mixed area); 70(commercial area); 75(industrial area)

Daytime Standard of sound, dB (WHO, 1999)	55 (residential); 55 (institutional); 55 (educational); 70 (commercial area); 75 (industrial area)

Note: Works of other automated CC plants of Package-1 have been kept suspended during the month of March, 2020.

Noise Measurement, Package-2

The Contractor, Package-2 has recorded the noise levels of the automated CC plant (Polder 39/2C) and other noise susceptible locations of non-automated CC plants (Polders 40/2, 41/1, 43/2C, 47/2 and 48)during the month of March, 2020 as provided in the following Table and Tables 4-8 respectively below:

Table 17: Noise recording of Polder 39/2C

Polder 39/2C Noise Record		
Monitoring Location:		Polder 39/2C - Camp Area, Automated CC Block, Manufacturing plant & River Side
Monitoring Date		14 March-2020
Noise Meter Model		Digital sound level meter AS804
Major noise sources during monitoring		CC block manufacturing plant, Generator.
Location category		Commercial area
Measurement results, dB	Operator of Automatic CC Block Machine (Down) Yard-1 (x-486822.98, y-501222.532) Yard-2 (x-486645.32, y-500866.968) Yard-3 (x-479145.64, y-497806.564)	73.6 75.2 74.4 No work this month No work this month
	Operator of Automatic CC Block Machine (Up) Yard-1 (x-486822.98, y-501222.532) Yard-2 (x-486645.32, y-500866.968) Yard-3 (x-479145.64, y-497806.564)	72.2 74.3 73.25 No work this month No work this month

	Area for Tray Replacement x-486835.47, y-50222.124	69.3 70.2 67.75
	Generator Room (Outside) Yard-1 (X:486814.56 Y:501221.421) Yard-2 (X:486659.23 Y:500870.523) Yard-3 (X:479160.18 Y:497811.852)	88.4 89.3 88.85 No work this month No work this month
	Generator Room (Inside) Yard-1 (X: 486814.69 Y:501221.431) Yard-2 (X: 486654.22 Y:500870.548) Yard-3 (X: 479160.18 Y:497811.852)	85.3 86.4 85.85 No work this month No work this month
	CC Block Stack Area (80 M from Machine) x-486734.18, y-501289.32	68.3 69.3 68.8
	Workshop Area x-486732.741, y-502101.72	67.4 69.3 68.8
	Camp Area x-486715.108, y-502101.107	58.2 59.4 58.8
	Community (East) x-486513.74, y-502104.15	67.4 68.3 68.8
	Community (West) x-486789.23, y-502103.163	58.3 59.2 58.75
	River Side x-486899.756, y-501973.934	59.2 60.4 59.8
Daytime standard of sound, dB (ECR 1997)		50(residential area) ; 60(mixed area); 70(commercial area); 75(industrial area)

Daytime Standard of sound, dB (WHO, 1999)	55 (residential); 55 (institutional); 55 (educational); 70 (commercial area); 75 (industrial area)

Table 18: Noise recording of Polder 40/2

Polder 40/2		
Monitoring Location		Polder 40/2,CC Block producing mixture machine, camp
Monitoring Date		31.3.2020 (Day time)
Noise Meter Model		Digital sound level meter AS804
Major noise sources during monitoring		CC block manufacturing plant, generator
Location category		Commercial area
Measurement results, dB	CC block casting area (E497100.876 N434366.099 2.90)	59.59.58
	Curing area (start point) (E497106.635 N434368.626 2.78)	58,59,58
	Curing area (end point) (E497090.418 N434360.046 2.31)	61,61,60
	Stacking area (E497126.491 N434341.003 2.88)	60,60,59
	Generator house (E497000.16 N434328.054 3.05)	75,75,74
	Kitchen (E497101.516 N434323.099 2.64)	54,54,53
	Camp room No.1(E497100.876 N434366.099 2.66)	52,52,53
	Camp room No.2(E497121.312 N434331.878 2.65)	50,50,51
	Workers' rest house (E497090.418 N434360.046 2.31)	51,51,52
Daytime standard of sound, dB (ECR 1997)		50(residential area); 60(mixed area); 70(commercial rea);

	75(industrial area)
Daytime Standard of sound, dB (WHO, 1999)	55 (residential); 55 (institutional); 55 (educational); 70 (commercial area); 75 (industrial area)

Table 19: Noise Recording of Polder 41/1

Polder 41/1 Noise Record		
Monitoring Location		Polder 41/1 Coordinates: N447305.458 E521446.412
Monitoring Date		30.3.2020 (Day time)
Noise Meter Model		Digital sound level meter AS804
Major noise sources during monitoring		CC block producing mixer machine, Generator
Location category		Commecial area
Measurement results, dB	Generator room N447291.788 E521447.84	70.2 73.2 75
	Curing area (start point) N447318.086 E521433.608	70 71 72
	Curing area(end point) N447305.458 E521446.412	65.2 65.3 66
	Stacking area N447365.951 E521434.048	60 63.2 65.2
	Kitchen N447392.819 E52141.700	69.9 68.2 65
	House No.1 N447368.946 E521409.219	66.5 64 65
	House No.2 N447389.027 E521416.627	75 74.2 74
Daytime standard of sound, dB (ECR 1997)		50(residential area); 60(mixed area);

	70(commercial area); 75(industrial area)
Daytime Standard of sound, dB (WHO, 1999)	55 (residential); 55 (institutional); 55 (educational); 70 (commercial area); 75 (industrial area)

Table 20: Noise Recording of Polder 43/2C

Polder 43/2C Noise Record		
Month: March, 2020		
Monitoring Location		Polder 43/2C,D/S 8 construction site Coordinates: N454740.798 E540181.012
Monitoring Date		30.03.2020(Day time)
Noise Meter Model		Digital sound level meter AS804
Major noise sources during monitoring		D/S 8, Generator
Location category		Commercial area
Measurement results, dB	D/S 8 country side N454704.912 E540183.263	48.1 49 45.3
	CC Block manufacture area	49.1 50 53.2
	Mixer machine	60 61.3 65.2
	Generator	69.3 65 68.2
	D/S3 box area	63.2 65.4 65.2
Daytime standard of sound, dB (ECR 1997)		50(residential area); 60(mixed area); 70(commercial area); 75(industrial area)
Daytime Standard of sound, dB (WHO, 1999)		55 (residential); 55 (institutional); 55 (educational); 70 (commercial area); 75 (industrial area)

Table 21: Noise Recording of Polder 47/2

Polder 47/2 Noise Record		
Month: March, 2020		
Monitoring Location		Polder 47/2 Coordinates: N423238.5061 E518603.9325
Monitoring Date		30.03.2020 (Day time)
Noise Meter Model		Digital sound level meter AS804
Major noise sources during monitoring		Generator
Location category		Commercial area
Measurement results, dB	Mechanical area N423140.8130 E518585.0610	64 63 65
	CC Block casting yard N423082.1580 E518565.5899	65 68.2 69.5
	Kitchen N423202.3607 E518670.3063	71.3 71.5 73.2
	Outside of generator	85.2 84.3 84.2
	Inside of generator	80.2 82.3 82.3
Daytime standard of sound, dB (ECR 1997)		50 (residential area); 60 (mixed area); 70(commercial area); 75 (industrial area)
Daytime Standard of sound, dB (WHO, 1999)		55 (residential); 55 (institutional); 55 (educational); 70 (commercial area); 75 (industrial area)

Table 22: Noise Recording of Polder 48

Polder 48 Noise Record	
Monitoring Location	Polder 48, CC block yard Coordinates: N416325.431 E512365.154
Monitoring Date:	30.03. 2020
Noise Meter Model	Digital sound level meter AS804

Major noise sources during monitoring		Generator, fork lift, workers
Location category		Commercial area
Measurement results, dB	CC Mixer machine N416380.152 E512338.650	63.2 62.2 62
	Curing area (start point) N416365.201 E512314.320	61.2 60.5 61.4
	Curing area (end point) N416412.693 E512374.993	60.2 62.0 59
	Stacking area N416410.630 E512390.085	57.4 57.8 59
	Kitchen N416375.098 E512307.765	57.2 57.2 58
	House No.1 N416359.302 E512310.137	59.3 59 56
	House No.2 N416365.201 E512327.038	50.8 50.4 50
Daytime standard of sound, dB (ECR 1997)		50(residential area); 60(mixed area); 70(commercial area); 75(industrial area)
Daytime Standard of sound, dB (WHO, 1999)		55 (residential); 55 (institutional); 55 (educational); 70 (commercial area); 75 (industrial area)

11. Status of Contractor Environment Management Plan (EMP)

(EHS) management as well as Mitigation measures during pre-construction, construction and operation phases of the project have been strictly followed by the both of the Contractors of W01 and W02.

Environmental Action Plans (EAPs) are Contractor's living documents and are subject to revision as per requirements, which have been revised (Version 4) and submitted to DDSC & PMS Consultants. After review Environmental Action Plan (EAP) for Package-1 and Contractor's Environment, Social Management Plan (C-ESMP) for Package-2 are synonyms and are prepared

by the Contractors to work as tool to be followed by them for implementation of EMP and according to which various agencies of the project (like PMU, DDCS&PMS Consultants, the Third Party M&E Consultants and the World Bank) will monitor the compliance level of EMP by the Contractor during all phases of project completion.

11.1 Contractor Environmental Action Plan (EAP) for Package 1

According to the contract agreement and as per Aid Memoire of The World Bank during October 21 to 25, 2018 , the Contractor of Package 1 have prepared and submitted the Environmental Action Plans (EAP) as well as EHS risk Assessment for 4 polders: 32, 33, 35/1 & 35/3 of Package-1 based on the guidelines of EIA including EMP. The submitted documents ensured the right compliance of Environment, Health and Safety from the Consultants' side, these were submitted to PMU for sharing with The World Bank. The World Bank re-reviewed the Version 4 of EAPs and cleared the document. The EAPs have also been translated in Bangla and Chinese and available in the existing CC plant sides and important construction sites to be followed properly. The EAPs of the 4 polders of the packge-1 were approved by World Bank.

Like EAPs, EHS Risk Assessment reports are also living documents and are subject to revision as per requirements. The draft EHS Risk Assessments (4 nos. for 4 Polders) submitted by the contractor of Package 01 were updated by incorporation of the World Bank comments and those were submitted to World Bank. The submitted assessment reports have been approved by World Bank. The finalized EHS Risk Assessments have been also translated to Bangla and Chinese by the Contractor, Package-1 for general understanding and proper follow up accordingly. Considering the current COVD-19 situaiton, contractor has been implementing the Covid-19 OHS manual exclusively.

11.2 Contractor Environmental and Social Management Plan (C-ESMP) for Package 2

The contractor of Package 2 was obliged to submit comprehensive Environmental and Social Management Action Plan (C-ESMP) as per their contract agreement. According to the contract agreement and as per Aide Memoire of The World Bank during October 21 to 25, 2018, the Contractor of Package 2 also prepared the C-ESMP and EHS risk Assessment for 6 Polders: 39/2C, 40/2, 41/1, 43/2C, 47/2 & 48 based on the guidelines of EIA and comments received from the World Bank.

Draft Contractor Environmental and Social Management Action Plans (C-ESMPs) were prepared by a team of consultants hired by Contractor of Package 2. The C-ESMPs were submitted to DDSC&PMS Consultants and also reviewed by DDSC&PMS Consultants, PMU and 3rd Party M&E Consultants. In the present context, the Contractor has prepared the responses of the comments of the World Bank comments, which have been reviewed by the Environmental Specialists of PMU and DDCS&PMSC for updating of C-ESMP of Polder 40/2. The reports were shared with the World Bank for approval, following which the updating of the rest 5 C-ESMPs were carried out. Based on the comments of World Bank the revised C-ESMPs were submitted to World Bank and those were approved by the World Bank.

As per demand of Aide Memoire of The World Bank during October 21 to 25, 2018 the contractors of Package 02 prepared the draft EHS Risk Assessment for sharing with The World Bank for review. The World Bank, after reviewing the draft EHS Risk Assessment made comments on them for updating. The comments of World Bank were addressed and the assessment report was submitted to World Bank. The submitted report was approved by World Bank on 23 October 2019. The Contractor is also complying various practective measures required against infection of workers by Covid-19 virus.

Grievance Redress Mechanism

11.3 Overview

Several social and environmental issues may arise during implementation stages of the Project. Following are some of the environmental issues that could be subjected to grievances from the affected people, concerned public, construction workers and civil society members:

- Soil, water, dust, noise and air pollution from construction related activities;
- Traffic movement and congestion;
- Lack of adequate safety at the construction areas and approach roads;
- Lack of water and sanitation facilities at the construction sites/camps;
- Waste disposal;
- Conflicts among construction workers and with local community;
- Disturbances to flora and fauna;
- Failure to comply with standards or contractual obligations.

Of course the GRM will also entertain concerns about matters of resettlement and land acquisition including livelihood restoration.

In order 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 (GRM) has been established which aims to provide a time bound and transparent mechanism to voice and resolve social and environmental concerns. The CEIP-1 has designed the GRM and the PMU with assistance of the DDSC&PMSC's team has been putting it in place. The grievance mechanism has been scaled to the risks and adverse impacts of the project. It has addressed 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 cost and without retribution. The mechanism does not impede access to the country's judicial or administrative remedies. The affected people were appropriately informed about the detailed mechanism by a Bengali-language brochure. The GRM Process is depicted in Figure 3.

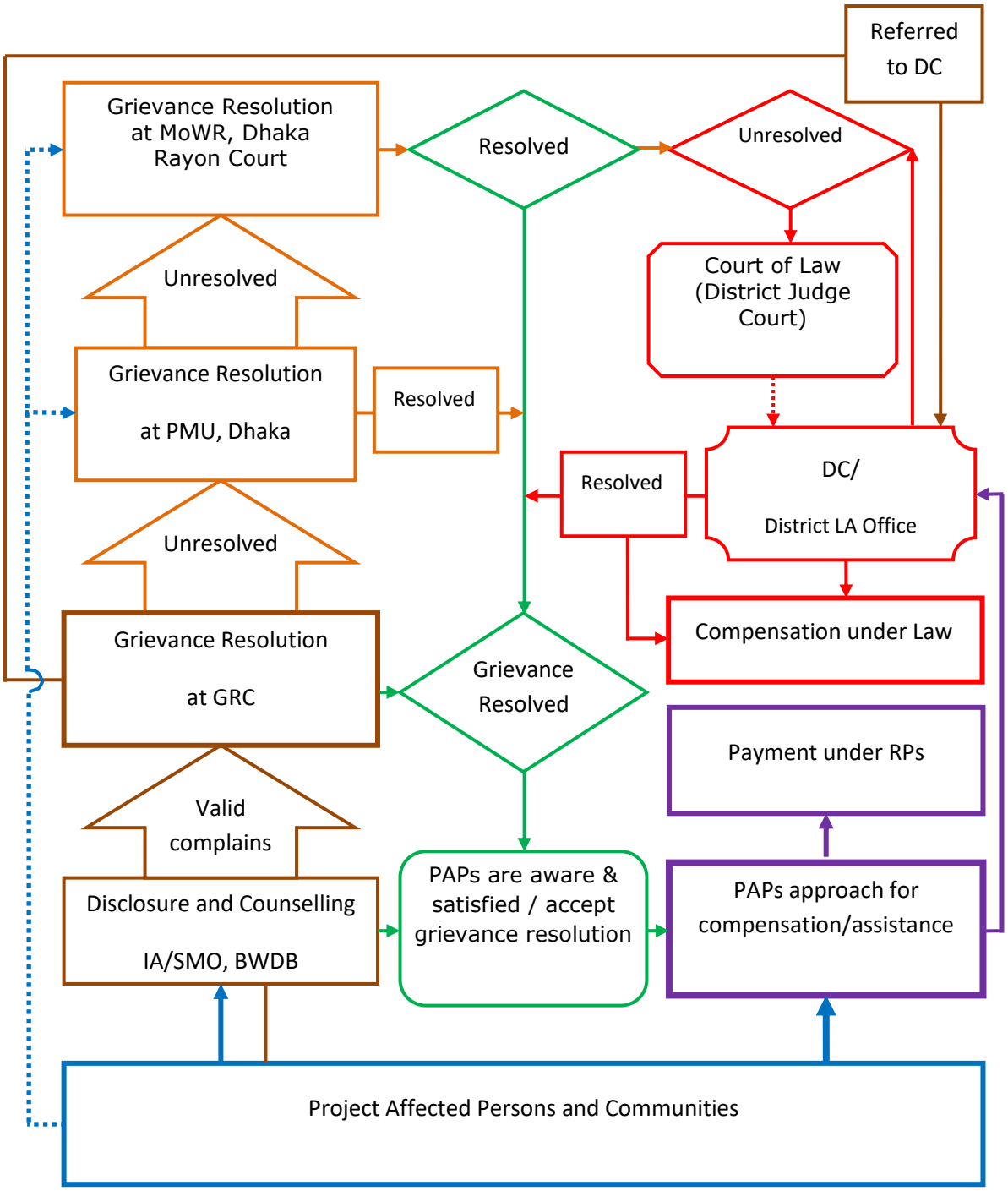

Figure 3: GRM Process Flow Chart

The Project Management Unit (PMU) and Project Implementing Offices (PIOs) are making the public aware of the GRM through public awareness campaigns by its Resettlement Action Plan (RAP) implementing Team. The contact phone number of the respective PIOs and the PMU is serving as a hotline for complaints and have been publicized through the media and placed on notice boards outside their offices and at construction sites. The project information brochure included information on the GRM are being widely disseminated throughout the embankment by the RAP implementing team and PIOs. Grievances can be filed in writing to any member of the Committee.

One GRC has beenformed for each Union with union level representation to ensure easy accessibility by the project affected persons and communities as comprised below:

Membership of GRC

1. Executive Engineer (BWDB Division Office) : Convener
2. Representative of the RAP Implementing NGO : Member -Secretary
3. Local UP Member / Ward Councillor : Member
4. Teacher from Local Educational Institution (nominated by Upazila Administration) : Member
5. Representative from Local Women's Group : Member
6. Representative from the PAP Group : Member

11.4 Grievance Redress Mechanism (GRM) for Package-1

There are 15 Grievance Redress Committees (GRC) at local level for Package-1 since this package coves 15 unions. A Grievance Redress Committees (GRC) have been formed earlier at each Union of all Polders under Package-1 with the representatives of BWDB, Union Parishad, educational institute, PAPs and DDCS&PMS Consultants. All cases have been tried to reach resolution within the four-week time from the dates of receiving the complaints and trying to resolve locally.

A total number of 151 complaints/grievances have been received up to December 2019 by GRC in package-1. Among those, 37 cases have been resolved at the entry level and 114 cases have been resolved through investigation and formal hearing by GRC. Table-27 shows the status of complaints/cases received & resolved so far by GRC. The type and latest status of the complaints are shown in Table 28.

Table 23: Summary of Decisions Arrived at on Hearing Complaints by GRC

Sl. No.	District	Polder no	Total Complaints/ cases	Resolved by field level investigation	Resolved by GRC	Pending with GRC
1	Khulna	32	58	19	29	10
2	Khulna	33	17	08	06	03
3	Bagerhat	35/1	30	08	19	03
4	Bagerhat	35/3	70	07	60	03
Total			175	42	114	19

Source: MPR, June, 2020, DDCS&PMS Consultant

Though awareness raising of the GRM covers both social and environmental concerns, no grievance has been registered specific to environmental issues till now. The environmental hazards caused during construction are being minimized and are localized which local people generally tolerate as they consider that the project will provide many benefits to them. Consultant has instructed the Contractor to avoid and/or mitigate even the minor and localized pollution.

11.5 Grievance Redress Mechanism (GRM) for Package-2

There are 21 Grievance Redress Committees (GRC) at local level for Package-2 since this package coves 21 unions. A Grievance Redress Committees (GRC) have been formed earlier at each Union of all Polders under Package-2 with the representatives of BWDB, Union Parishad, educational institute, PAPs and DDCSPMS Consultants. All cases have been tried to reach resolution within the four-week time from the dates of receiving the complaints and trying to resolve locally. vvbgxSEDR

A total number of 45 complaints/grievances have been received up to December 2019 by GRC. Among those, 25 cases have been resolved at the entry level. The remaining 20 cases have

been placed for further field investigation by GRC. Table-27 shows the status of complaints/cases received & resolved so far by GRC. The type and latest status of the complaints are shown in Table 29.

Table 24: Summary of Decisions Arrived at on Hearing Complaints by GRC

Sl. No.	District	Polder no	Total Complaints/ cases	Resolved by field level investigation	Resolved by GRC	Pending with GRC
1	Pirojpur	39/2C	0	0	0	0
2	Barguna	40/2	18	4	0	14
3	Barguna	41/1	16	13	0	3
4	Patuakhali	43/2C	17	17	0	0
5	Patuakhali	47/2	0	0	0	0
6	Patuakhali	48	0	0	0	0
Total			51	34	0	17

Source: MPR, June, 2020, DDCS&PMS Consultants

Table 25: Type and Status of Pending Complaints/Cases

Polder	No. of pending Complaints	Description of the Complaints	Present status		Action taken so far for the pending complaints	Deadline to resolve the pending complaints
			Resolved	Pending		
Land acquisition						
-	-	-	-	-	-	-
Resettlement						
40/2	12	Application for getting additional compensation for damaging the household structure during construction of embankment.	4 complaint out of 12 pending cases has been resolved during June 2020	8 complaints pending with GRC	GRC has reviewed all the complaints; GRC has reviewed the video of the alignment with structures and ready to sit for meeting with the persons raised complaints to resolve. GRC is trying to resolve the complaint after proper investigation.	30 December 2020 (May be deviated depending on the pandemic situation)
41/1	16	Application for getting additional compensation for damaging the household structure during construction of embankment.	9 complaints out of 8 pending cases have been resolved during June 2020	7 complaints pending with GRC	GRC has reviewed all the complaints; GRC has reviewed the video of the alignment with structures and ready to sit for meeting with the persons raised complaints to resolve. GRC is trying to resolve the complaint after proper investigation.	30 June 2020 (May be deviated depending on the pandemic situation)
Livelihood						
-	-	-	-	-	-	
Environment related						
-	-	-	-	-	-	
Total	20		3	17	-	

Source: Resettlement team, PMU and DDCS&PMS Consultants

No grievance has been registered specific to environmental issues till now. The environmental hazards caused during construction are being minimized and are localized which local people generally tolerate as they consider that the project will provide many benefits to them. Consultant has instructed the Contractor to avoid and/or mitigate even the minor and localized pollution. Moreover, CEIP-1 has introduced grievance boxes for the workers in all the CC block manufacturing yards of Package 01 and Package 02 areas. No grievances have been raised yet. To enhance the system, CEIP-1 is motivating the workers aware about the grievance system and it is expected that the system will work effectively soon.

12. Training

CEIP-1 always wants to ensure the protection of the environment and the health of staff at workplaces, where the contribution of EHS training is of great importance.

The Package-1 Contractor has conducted a robust program of monthly environmental training during the January-June, 2020, period. Around 3200 participants (staff and workers) were trained, allowing for multiple-counting wherein one person may have been trained more than once as would be the case for refresher training or training in additional topics. Please see table below for the breakdown:

Table 26: Number of Package 01 Participants (staff and workers) those received Environmental Training during January-June 2020

Polder	Jan	Feb	Mar	Apr	May	Jun	6-month Total
32	98	119	84	54	184	157	**696**
33	70	73	62	51	101	84	**441**
35/1	201	229	194	187	211	204	**1226**
35/3	37	40	34	21	73	66	**271**
Khulna	178	171	50	3	12	12	**426**
Nalian closure	31	31	31	11	25	26	**155**
Total	**615**	**663**	**455**	**327**	**606**	**549**	**3215**

The Contractor of Package 02 also reportedly conducted a very good training program. About 1300 participants (Staff and workers) were trained. The summary of the training of Package-2 is also provided in table below.

Table 27: Number of Package 02 participants (staff and workers) that received Environmental Training during January-June 2020

Polder	Jan	Feb	Mar	Apr	May	Jun	6-month Total
39/2C	110	80	60	30	20	23	**323**
40/2	30	30	50	40	20	20	**190**
41/1	50	50	70	50	8	12	**240**
43/2C	50	50	50	60	20	20	**250**
47/2	20	20	20	0	0	0	**60**
48	40	40	40	25	25	27	**197**
Total	**300**	**270**	**290**	**205**	**93**	**102**	**1260**

The details of trainings including topics, trainers and trainees are shown in Table-29 on this page.

Table 28: List of Training including topics, trainers and Trainees

Training topics	Trainers	Trainees	Remarks
The training of various EHS topics include education on environmental protection, safety knowledge and precaution against contagious diseases (like AIDS and STD) etc. In order to describe broadly, the major issues include • Safety measures against Covid-19 pandemic • Training for use of PPE; • Training for procedure of equipment operation; • Training for electrical safety and traffic safety and working in high work places; • Training for driver's safety; • Training for use of first aid facilities and fire extinguishers; • Training for CC block dumping; • Training for closure works; • Training on accident management. The above training are related to safety of working in automated CC plant, sluice construction/rehabilitation, embankment se-sectioning, re-excavation work and CC block dumping works	Trainers include the Contractors' Environmental officer in Charge, Chinese and local EHS Officers of the concerned Polder. For training on equipment operation, Technician/Engineers are also engaged	The trainees include Local labours, Chinese staffs, Drivers, Equipment operators, Electricians, Mechanics, welders etc.	The Environmental Specialists of PMU, DDCS&PMSC and Third party M&E also provide training during their combined/together visits at work sites.

13. Programme for the next term (July-December, 2020)

The argeted tasks not limited to will be carried out during the period from July to December, 2020. Those are as follows:

I. Conduct regular monthly EHS committee meeting and sharing the meeing announcement & minutes wih the World Bank

II. Local EHS officers Polder 39/2C of Package-2 needs to be re-hired immediately

III. Ensure sufficient arrangements to combat Covid-19 pandemic

IV. Prepare Emergency Preparedness Plan (EPP) following the guidelines of COVID-19 Protocols prepared by the WB.

V. Finalization of EIA reports of Package-3.

VI. Finalization of 4th revised Annual Environmental Audit report.

VII. Preparation of action plan on 4th Annual Environmental Audit report.

VIII. Reporting on accident accordingly ESIRT and immediate reporting to the PMU and also to the Bank.

IX. Proper placement of grievance collection box in Polder 32, Polder 41/1 and Polder 43/2C.

X. Assuring potable water and FAF for embankment and slope protection work in Package-1.

XI. Establishment of confined and paved industrial wastage storage area at Polders 40/2, 43/2C and 48.

XII. Confined chemical storage area in Polders 41/1, 43/2C and 48.

XIII. Establishment of household waste management at Polders 40/2, 43/2C and 48.

XIV. Conduct regular environmental sampling/testing in Packages-1 & 2.

XV. The grievance redress collection box for workers, which the contractors started to implement needs to be increased in number and placed in less visible places to encourage workers to submit their grievances without fear.

XVI. The number of toilets and shower rooms should also be increased, especially with the anticipated increase in the number of workers when work resumes in full swing.

XVII. The contractors also need to improve and standardize the records of their workers, specifically in terms of age, gender, medical history, contact details and next of kin to notify in case of accidents/emergency.

XVIII. Implementation of IPM/IPSNM practices at farmer's field.

XIX. Arrange useful training program for WMGs.

14. Conclusion and Recommendations

The quality of compliance with the environmental conditions are gradually improving with the improvement of the perception of its importance through regular monitoring and awareness of the contractor and the employees concerned by PMU, DDSC & PMSC, Field Offices and third party M&E Consultants. However, there is further scope for improvement of environmental management practices by imposing frequent and effective practices learned from over past four years. Regular monitoring and on-the-job training by PMU, DDSC & PMSC, Field Office of Khulna and third party M&E Consultants must be continued and is expected. The following recommnedations are made to address by the both Contractors to improve the EHS quality:

- Assure strict compliance of OHS protocols prepared for measures against spreading of Covid-19 at working sites and camps.
- Provide translated version of Bangla and Chinese of Emergency Preardness Plan (EPP) for Covid-19 measures.
- Monitor the incidents as per ESIRT of the World Bank.
- Both Contractors to implement the action plan prepared on the basis of 4th Environmental Audit report and the incomplete action plan of 3rd Audit report.
- Both the contractor should conduct regular Environmental test from recognaised laboratory with the frequencies as stipulated in EAP and C-ESMP.
- Assure the use of PPE by the workers.
- Adequate toilet facilities should be provided in all working sites. Special care should be taken for cleaness of toilets.
- Both the contractors should follow the test result of drinking water, surface water, soil quality, air quality and noise quality and take necessary action accordingly.
- Continue for carry out the practice of hearing test of the worker who are working in high noise area in both packages.
- Ensure regular toolbox talk at all sites including awareness of measures against Covid-19.
- Follow the safety procedure of the equipment at all sites.
- Aware the workers about the existance of grievance box and register their demand/complain.
- Construct separate road way for vehicle and padestrians.
- Regular exchange visit of EHS team of Package-1 and 2 to be ensured for adopting good practices.
- Engage EHS Chinese and Local officer in every poder where same has been discontinued.

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Annexure-1: Environmental Clearance Certificate of CEIP-1

শেখ হাসিনার বাংলাদেশ
পরিচ্ছন্ন পরিবেশ

Government of the People's Republic of Bangladesh
Department of Environment
Head Office, Paribesh Bhaban
E-16 Agargaon, Dhaka-1207
www.doe.gov.bd

Memo No: DoE/Clearance/5196/2013/11 Date: 19/01/2020

Subject: Renewal of Environmental Clearance Certificate for Polders-32, 33, 35/1 & 35/3 at Khulna Division under Package-1 and Polders-39/2C, 40/2, 41/1, 43/2C, 47/2 & 48 at Barishal Division Under Package-2 of Coastal Embankment Improvement Project, Phase-1 (CEIP-1), Bangladesh Water Development Board.

Ref: Your Application dated 28/10/2019 and 22/12/2019.

With reference to the above, the Department of Environment has decided to renew the Environmental Clearance Certificate in favor of Polders-32, 33, 35/1 & 35/3 at Khulna Division under Package-1 and Polders-39/2C, 40/2, 41/1, 43/2C, 47/2 & 48 at Barishal Division Under Package-2 of Coastal Embankment Improvement Project, Phase-1 (CEIP-1) subject to fulfilling the following terms and conditions.

I. The terms and conditions as stated in the Environmental Clearance Certificate issued on 05.11.2018 vide DoE/Clearance/5196/2013/1035 shall remain valid for the renewed period.
II. This renewal is valid upto 04.11.2020. Application for further renewal along with the renewal fee and Vat on renewal fee in separate Treasury Chalan shall have to be submitted to the Director General, Department of Environment, Head Office, Dhaka with a copy to concerned divisional office at least 30 days before the expiry.

19.01.2020

(Syed Nazmul Ahsan)
Director (Environmental Clearance)
Phone # 8181673

Chief Engineer & Project Director
Coastal Embankment Improvement Project, Phase-1 (CEIP-1)
Bangladesh Water Development Board (BWDB)
House-15, Road-24
Gulshan-2, Dhaka.

Copy Forwarded to :

1) PS to the Secretary, Ministry of Environment, Forest and Climate change, Bangladesh Secretariat, Dhaka.
2) Director, Department of Environment, Barishal/Khulna Divisional Office, Barishal / Khulna.
3) Deputy Director, Department of Environment, Bagerhat District Office, Bagerhat.
4) Assistant Director, Office of the Director General, Department of Environment, Head Office, Dhaka

Annexure-2: Labor Influx Report

Report on Labour Influx in CEIP-1

Labour Influx of Package-1

Initial information on labour influx risks, requirements and implication for work package W-01 under CEIP-1

	1. PROJECT DATA	
1.1	Name of Project	Coastal Embankment Improvement Project - Phase I (P128276)
1.2	Contract Package	Package-1
1.3	Date of Commencement	January 2016
1.4	Date of Completion	June 2020
1.5	Location	Polder-32 and Polder-33 under Khulna district; & Polder-35/1; Polder-35/3 under Bagerhat District
1.6	Name and Contact Information (email/phone) of Contractor	CHWE, mainland China
1.7	Name and Contact Information (email/phone) of all sub-Contractors	Project Manager Mr. Sun Huaxin; No sub-contractors; about 170 Chinese labour and skilled workers influx; 01 Indian worker; local labour and foremen about 600 persons;
1.8	Type of Works (single site, linear, clustered and construction duration)	Civil engineering/hydraulic works: earthen embankment; water control sluices; river bank protection works; embankment slope protection works; closure dam; offices and site buildings; excavation of sediment internal channels (khals); social re-afforestation; single and localized sites, stand-alone site for construction of one structure or one stretch of embankment etc; These are the standard engineering interventions in a typical coastal polder in Bangladesh, since 'time immemorial'; a lot of manual labour work activities, for men and women both;

	2. INITIAL SCREENING LABOR INFLUX REQUIREMENTS AND IMPLICATIONS	
2.1	Will the project potentially involve an influx of migrant workers? If yes, are there also foreign labourers mobilized on site?	Yes, there are Migrant workers influx at Project area, relatively small numbers and scattered all over the many construction sites; foreign labourers yes, only Chinese, around 200 persons including mid level technicians and Master of Science level engineers; The mobilization of foreign worker started in November 2015 and onward.
2.2	Is the influx of non-local workforce significant for the local community?	Not significant because there are many stand-alone construction sites and the number of Chinese/foreign workers per stand-alone site is about 3 to 5 Chinese men; this is not disruptive for the social cohesion of the local site; local stand-alone construction sites are mostly far away from community centres (rural setting, remote sites; sluices are not located inside a community); In the camp site, there have a separate place for their living, dining. Also police from local Thana/authority provide the security for the safety of Chinese workers. There have two or three local translator; if any problem arises they will arrange communication with local people.

2. INITIAL SCREENING LABOR INFLUX REQUIREMENTS AND IMPLICATIONS		
		Even now there is no complain from local people, mentioned that in camp site also have a register to note down to take proper action within appropriate time. At least certain percentage of local people would have been mobilized in civil work that would be beneficial for the local people.
2.3	What are the opportunities for local laborers?	Of course there were opportunities for local worker in civil work. Local residents are poor people with virtually no mobility or transport facilities and are employed in agriculture, aquaculture and civil construction works such as road, buildings etc in 'urban' areas, mostly intermittent job contracts. There is some small business such as small shops, chicken and duck breeding/farm, aquaculture, and motorbike repair workshops etc which do not employ many people; e.g. Polder-35/1 is located 100 km away from the city of Khulna, hence not much influx from Khulna to Polder-35/1; due to few numbers of small rudimentary road tracks, there is hardly any economic traffic to the 4 Polders; one needs to cross many rivers with (small) ferries; labour market is non-existent for local laborers; During December, 2019 for polder-32, 244 local workers engaged for construction workers; in Polder-33, 127 local workers; in P-35/1, 172 local workers and in Polder-35/3; 38 local workers. There are no women workers because, for heavy civil work women are not suitable, although few women are employed in kitchens for preparing food for workers in various working camps. By negotiating we fixed the salary, so there is no dissatisfactory and no complain.
2.4	Frequency of outsider's visit	Chinese labourers are generally permanently stationed and working; they live together inside a fenced compound, with professional security guards; Non-local labours are regular, but they have the seasonal vacation during rainy season.
2.5	Environmental sensitivity of the project site	Refer to the four approved EIA Reports of the 4 Polders; in general, the close location of the border lines of the Sundarbans mangrove forest prompt the Chinese Contractor to take care/be alerted of the possible negative impacts on the water, noise, environment, biodiversity of the Sundarbans;
2.6	Community experience with similar projects?	Community is well experienced with similar works, as all 139 coastal polders were built back in the 1970s and 1980s and had undergone many subsequent small and big interventions, emergency works, repair and recovery after huge flood disaster events etc; local labourers are fully familiar with similar types of civil engineering works; And also familiar with the similar movement of non-local labour, because, in coastal region different improvement works have been done on different periods;

3. SOCIO-ECONOMIC CONSIDERATIONS		
3.1	How similar are local and migrant labour backgrounds? (cultural, religious and demographic considerations)	The background particularly cultural, religious and demographic point of view is dissimilar in many ways and similar in some ways. They have different language, ethnicity, belief system even political system but it does not create any problem to perform the job or pose any risk for the project. The migrant is few in number that does not make any imbalance in local social coherence. The main similarities imply that both groups come from same profession; There is no issue at all, because the non-local workers are busy in day time for work. Also the work site is

		located in different place from their residence. No negative impact on job market because this project makes the more opportunity of job for local people. Group means not like two separate parts. Both local and non-local workers are working as a part of the project as like a team work.
3.2	Are there increased competitions for resources (e.g. accommodation, water, food, fuel) with the local community?	Absolutely not;
3.3	Given local community characteristics any specific adverse impacts anticipated?	No adverse impact is anticipated at the moment;

4. LOCAL COMMUNITY (Please provide Polder wise description of Facilities)				
4.1	Size of Local Population	Bangladesh is highly densely populated country but the project area has lesser density. It is found from the RAP document that inside the Polder-32, 33, 35/1 and 35/3 the total population amounts to 38397, 62305, 99182 and 33075 respectively.		
4.2	Working age population and capacity (education, skills, experience)	The labour force (age between 15 and 59 year), the actual number of people available for work is 61%. The labour force includes both the employed and the unemployed. According to BBS, 30% of the people fall in the age group 1-15 year. The literacy rate in the project area roams around 58% whereas the national figure is 51.8%. The livelihood of 66.1% of people depends on agriculture activities. The Contractor was instructed not to engage any under age workers at any site. They were advised to verify the NID during engagement. The issue is being monitored by PMU, DDCS&PMS Consultants and Third Party M&E Consultants.		
4.3	Working age population capacity	*Education*	*Skill*	*Experience*
		No information is available	No information	No information
4.4	Local capacity for infrastructure, services, utilities, health (please provide a short brief)	Inside the 4 Polders, both earthen and pucca roads are available and there are waterways also. There are academic institution, market, religious institution, local government offices, providing necessary public services to the local people. Motor bikes play important role to communicate in project areas. Auto rickshaw and manually driven rickshaw are also main transportation vehicle; No, there is no impact of these facility due to the inflow of Chinese people.		
4.5	Availability of accommodation, food, water (please provide a short brief)	Contractor provides adequate accommodation, water and food, protective sheds etc to their workers; Yes these facilities are easily available for rent and consumption		
4.6	Are there any security considerations?	Not from the local governments; however, police from Thana employed for maintaining security force mainly in work site cum residential sites.		
4.7	Are there any marginalized, vulnerable, ethnic, indigenous-communities?	There are some marginalized and vulnerable people are in the project side like other places of the country but there are no ethnic and indigenous groups.		

	5. MAINTENANCE OF OTHER LABOR RECORDS	
5.1	Is a copy of photo ID of each labourer kept with the Contractor/ Sub-contractor?	Yes. NID for local workers and visa copy for chinese workers; no sub-contractors;
5.2	Is contact information of labour's next-of-kin kept for each labourer?	Yes. Family members are mostly close-by. Chinese contractor recruits mainly from the locality;

6. LABOR PROFILE (Please provide Polder wise information)

This data is to be collected for each Polder where civil works has commenced, and cover the regular labour, temporary labour, labour hired through sub-contractors or labour contractors / groups.

6.1	Number of laborers by sex	*Male*	*Female*	*Total*	
		660	-	660	
6.2	Number of laborers by skill	*Skilled*	*Semi-skilled*	*Unskilled*	*Total*
		410	166	84	660
6.3	Number of laborers by origin	*Local (same or adjoining district)*	*Other districts*	*Other Country*	*Total* 660
		395	204	61	
6.4	Number of laborers by age	*18-25*	*25-50*	*Above 50*	*Total*
		301	287	72	660
6.5	Source of labour	*Contractor*	*Subcontractor*	*Independent*	*Other*	*Total*
		660	0	0	0	660

	7. FACILITIES (Please provide Polder wise description of Facilities)				
7.1	Details of labour camps	Number	Permanent/Temp.	Location	Distance from nearest village/habitation
		2	*Permanent*	Every CC blocks yard and every work site	Almost within 100m
		4	*Temporary*		
7.2	Type of housing in labour camp on leased land (temporary shelters / kuchha /pukka)	Work site have temporary shelter but CC block yard has pucca house			
7.3	Is there any housing on public land like roadsides, open fields and other spaces?	No. Only housing exist inside the constructional premises.			
7.4	Is there any housing in rented accommodation in residential	Yes, for the Chinese and Bangladeshi senior staff. Contractor rents the buildings themselves			

	areas? If so, who is it rented by?	
7.5	How many laborers have families on/near worksite?	The migrant workers do not live with their family. Sometime their family member visit here for very short time. The local worker mostly live with their family, living nearby
7.6	Likelihood of family members accompanying (visiting)	They hardly visit the project side. Labourers have family homes close by; daily transport is done by motorbikes or by vehicles of Contractor
7.7	Is drinking water available on site and at the campsite?	Yes
7.8	Are latrines and urinals provided on site and at the campsite?	Yes
7.9	Are First Aid facilities provided on site?	Yes
7.10	Does a doctor visit the worksite / campsite regularly?	Yes
7.11	Is there a tie-up with a hospital or dispensary near the worksite / campsite	Yes
7.12	Is there a facility for cooking / canteen facility for all labour?	Yes
7.13	Are leisure activities / facilities available for all labour	Yes, the workers have leisure between lunch shift and evening shift
7.14	Is transport to and from the worksite provided to labour?	Yes, there is transport for migrant labourer but there is no provision for unskilled local labourer.

	8. SUPERVISION BY LABOR OFFICIALS	
8.1	Has the worksite / campsite been inspected by a labour official?	In 20-22 November, 2017 and 04-06 February, 2018 the WB team visited the work area of CEIP-1,
8.2	How many times has the worksite / campsite been inspected by a labour official since commencement of work?	Six times since commencement from WB. From the part of PMU and BEDB, visited the woks site frequently, as per the need basis.
8.3	What documents were inspected by labour officials?	Accident /injury register, salary sheet/record
8.4	What documents were maintained and which ones were not?	Safety training record, accident register, safety guideline document, compliance register, GRM system notice. Nothing missing, if anything required please give us the valuables suggestion. We will ensure it in work site.
8.5	What directions were given by labour officials?	Was asked to maintain personal health and safety issues
8.6	What is the mode of compliance with such directions?	Action taken in field level as soon as possible
8.7	Are you facing any legal proceedings on labour issues in Labour Court/ Other?	None;

	9. ACCIDENTS, EMERGENCIES AND INCIDENTS (Please provide Polder wise description of Facilities)	
9.1	What is the nature of accidents / emergencies usually occurring at a worksite like yours?	The accidents took place with the workers were of minor types mainly. No major accident so far has been taken place
9.2	Is a functioning First Aid available at the campsite / worksite?	Yes

	9. ACCIDENTS, EMERGENCIES AND INCIDENTS (Please provide Polder wise description of Facilities)	
9.3	Is functioning fire-fighting equipment available at the campsite / worksite?	Yes
9.4	Which is the nearest doctor / clinic / dispensary?	Within some kilometres, alert by mobile phone of which the number is known to all Chinese people (Chinese medical doctor available); doctor covers the four Polders
9.5	Which is the nearest hospital?	The nearest hospital is situated at Upazila head quarters. But there some clinic or satellite clinic inside the polder. If any worker required critical services then he/she refer to Khulna or Dhaka. The contractor have own car for every camp site and CC block manufacturing site to transport he/she to Khulna or Dhaka.
9.6	Which is the nearest Police Station?	In any Polder, there is Police office close-by, within 10 km range. On the other hand a team of 2-3 nos. police available in work camp site and cc block manufacturing site cum residential site. If required they will help us. But no such situations arose in this regards.
9.7	Are details of nearest doctor / clinic / dispensary / hospital / Police station available and prominently displayed at worksite / campsite?	Yes
9.8	What is the system of informing next of kin?	For the migrant worker, there is focal person to deal with the issue. The contact numbers of all workers are well documented. For the local worker, the system is same. Bengali senior staff employed by the Chinese contractor.
9.9	What is your familiarity with accident reporting procedures?	Chinese Contractor holds regular drills on procedures and protocols to enact in case of accidents
9.10	What is your familiarity with police reporting procedures?	We are well familiar to local police reporting system and we have their contact number and relation. So far, no such incident whereby Police is to be called upon. It is worthy to mention that Contractor site camps are secured by police protection permanently.
9.11	Is there any mechanism to address the work place Sexual Harassment of Women at the project sites?	Yes (sanctions are known to Chinese workers and their bosses). Mechanism is there. We have gender policy. There is complaint system to mitigate sexual harassment. Finally, legal step can be applied if necessary;

Labour Influx of Package-2

Initial information on labour influx risks, requirements and implication for work package W-02 under CEIP-1

	1. PROJECT DATA	
1.1	Name of Project	Coastal Embankment Improvement Project - Phase I (CEIP-1)
1.2	Contract Package	Package-2
1.3	Date of Commencement	12th July, 2017
1.4	Date of Completion	11th January, 2021
1.5	Location	Polder-39/2C, Polder-40/2, Polder-41/1, Polder-43/2C, Polder-47/2 and Polder-48
1.6	Name and Contact Information (email/phone) of Contractor	Chongqing International Construction Corporation cicobangladesh@gmail.com/+8801917264485
1.7	Name and Contact Information (email/phone) of all sub-Contractors	None
1.8	Type of Works (single site, linear, clustered and construction duration)	1. Upgrading via new construction and re-sectioning of embankments with a length of about 208.71km; 2. Excavation and re-excavation of drainage channels in the Polders with a total length of about 154.63 km; 3. Construction of 50 drainage sluices; 4. Repairing of 6 drainage sluices; 5. Construction of 51flushing sluices; 6. Repairing of 30 flushing sluices; 7. Construction of embankment slope protection works with a total length of some 9.48km; 8. Construction of river bank protection works with a total length of 5.395 km; 9. Construction of 8 Khal Closing Closures with varying widths between 35m to 60m; 10. Dismantling of 36 drainage sluices, 70 flushing sluices and road pavement for about 50 km; 11. Construction of RCC Flood wall with a length of about 17km; 12. Construction of Road Pavement with a length of about 51km. Construction duration: 42 months

2. INITIAL SCREENING LABOR INFLUX REQUIREMENTS AND IMPLICATIONS		
2.1	Will the project potentially involve an influx of migrant workers? If yes, are there also foreign laborers mobilized on site?	Yes, scattering all over the construction sites. There are no foreign labours mobilized onsite.
2.2	Is the influx of non-local workforce significant for the local community?	Yes, these benefits are typically related to economic opportunities through employment and/or training by the project, or through selling goods and services. Other benefits include the provision of local infrastructure (e.g., access roads, power or water connection) which is developed for the project and which serves the community beyond the project duration.
2.3	What are the opportunities for local laborers?	It will bring more employment opportunities to the local labours. It will improve the education status because of workers' training.
2.4	Frequency of outsider's visit	Normal
2.5	Environmental sensitivity of the project site	Fuel supply for cooking and heating, fuel storage area, by-pass road construction, sanitation, water supply and construction work.
2.6	Community experience with similar projects?	Embankment construction, Regulator construction and road pavement construction etc. are known to the community

3. SOCIO-ECONOMIC CONSIDERATIONS		
3.1	How similar are local and migrant labour backgrounds? (cultural, religious and demographic considerations)	The labour no matter where they from are Bangladeshi citizen. They almost have the same cultural and religious background. The demographics are shifted just from one region to another and there is no change on total demographics of Bangladesh.
3.2	Are there increased competitions for resources (e.g. accommodation, water, food, fuel) with the local community?	More water, electricity, medical services, transport, education and social services will be required with the execution of works.
3.3	Given local community characteristics any specific adverse impacts anticipated?	It will bring more influx of additional population and increased pressure on accommodations and rents, increase in traffic and related accidents

4. LOCAL COMMUNITY (Please provide Polder wise description of Facilities)				
4.1	Size of Local Population	Polder-39/2C: 84853, Polder-40/2: 41317, Polder 41/1: 41051, Polder-43/2C: 14851, Polder-47/2: 5411, Polder-48: 26260		
4.2	Working age population and capacity (education, skills, experience)	The Contractor was instructed not to engage any under age workers at any site. They were advised to verify the NID during engagement. The issue is being monitored by PMU, DDCS&PMS Consultants and Third party M&E Consultants and found they are fairly following the instruction		
4.3	Working age population capacity	*Education*	*Skill*	*Experience*
		No information	No information	No information

4.4	Local capacity for infrastructure, services, utilities, health (please provide a short brief)	the health centre and hospital are available in local the places.
4.5	Availability of accommodation, food, water (please provide a short brief)	Accommodation, water and food is available to the local community.
4.6	Are there any security considerations?	Yes
4.7	Are there any marginalized, vulnerable, ethnic, indigenous-communities?	No

	5. MAINTENANCE OF OTHER LABOR RECORDS	
5.1	Is a copy of photo ID of each labourer kept with the Contractor/ Sub-contractor?	Yes, NID for local workers and visa copy for Chinese workers; no sub-contractors;
5.2	Is contact information of labour's next-of-kin kept for each labourer?	No, however, recently the address of labours' next of kin are being collected

6. LABOR PROFILE (Please provide Polder wise information)

This data is to be collected for each Polder where civil works has commenced, and cover the regular labour, temporary labour, labour hired through sub-contractors or labour contractors / groups.

6.1	Number of laborer by sex	*Male*		*Female*		*Total*
		1168		15		1183
6.2	Number of laborers by skill	*Skilled*	*Semi-skilled*	*Unskilled*		*Total*
		298	275	610		1183
6.3	Number of laborers by origin	*Local (same or adjoining district)*	*Other districts*	*Other Country*		*Total* 1183
		948	235	0		
6.4	Number of laborers by age	*18-25*		*25-50*	*Above 50*	*Total*
		276		893	14	1183
6.5	Source of labour	*Contractor*	*Subcontractor*	*Independent*	*Other*	*Total* 1183
		1183	0	0	0	

	7. FACILITIES (Please provide Polder wise description of Facilities)				
7.1	Details of labour camps	Number	Permanent/Temp.	Location	Distance from nearest village/habitation
		6	*Temporary*	Near the project site	Within 1 km
7.2	Type of housing in labour camp on leased land (temporary shelters / kuchha /pukka)	Temporary shelter			
7.3	Is there any housing on public land like roadsides, open fields	Yes, there are housings on open field.			

	and other spaces?	
7.4	Is there any housing in rented accommodation in residential areas? If so, who is it rented by?	Yes, it is rented by the Chinese Contractor as temporary shelter.
7.5	How many laborers have families on/near worksite?	No information
7.6	Likelihood of family members accompanying (visiting)	Not allowed
7.7	Is drinking water available on site and at the campsite?	Yes
7.8	Are latrines and urinals provided on site and at the campsite?	Yes
7.9	Are First Aid facilities provided on site?	Yes
7.10	Does a doctor visit the worksite / campsite regularly?	No, sometimes when required
7.11	Is there a tie-up with a hospital or dispensary near the worksite / campsite	Yes
7.12	Is there a facility for cooking / canteen facility for all labour?	No
7.13	Are leisure activities / facilities available for all labour	Yes
7.14	Is transport to and from the worksite provided to labour?	Yes, for migrant labourer but no provision for unskilled local labourer.

	8. SUPERVISION BY LABOR OFFICIALS	
8.1	Has the worksite / campsite been inspected by a labour official?	No
8.2	How many times has the worksite / campsite been inspected by a labour official since commencement of work?	None
8.3	What documents were inspected by labour officials?	None
8.4	What documents were maintained and which ones were not?	None
8.5	What directions were given by labour officials?	None
8.6	What is the mode of compliance with such directions?	None
8.7	Are you facing any legal proceedings on labour issues in Labour Court/ Other?	No

	9. ACCIDENTS, EMERGENCIES AND INCIDENTS (Please provide Polder wise description of Facilities)	
9.1	What is the nature of accidents / emergencies usually occurring at a worksite like yours?	Drowning
9.2	Is a functioning First Aid available at the campsite / worksite?	Yes
9.3	Is functioning fire-fighting equipment available at the campsite / worksite?	Yes

9.4	Which is the nearest doctor / clinic / dispensary?	Polder-39/2C: Digital X-ray Clinic, 5 minutes by car away from the campsite, 01717-997-914, Kamrunnasar. Polder-41/1: DR. Abdus salam M.B.B.S Ex-medical officer of Barguna general hospital, clinic-sharif x-ray clinic, Dispensary mouir medical hall. Polder-47/2: 1 km from our working site to the nearest dispensary Polder-48: 100 m from our temporary camps to the nearest dispensary but the doctor and clinic are 1 km away.
9.5	Which is the nearest hospital?	Polder-39/2C: Upazila Health Complex, 5 minutes by car away from the campsite, 01735-950-462, Fakrel Islam. Polder-41/1: Barguna sader hospital Polder-47/2: 10 km from our working site to the nearest hospital. Polder-48: the nearest hospital is 3 km towards the seaside.
9.6	Which is the nearest Police Station?	Polder-39/2C: Bandarie Police staion, 5 minutes by car away from the campsite, 01713-374-337, Kamruzzaman. Polder-41/1: Barguna sader police station. Polder-47/2: 8 km from our working site to the nearest police station. Polder-48: the nearest police station is 3 km approximately around the third bridge.
9.7	Are details of nearest doctor / clinic / dispensary / hospital / Police station available and prominently displayed at worksite / campsite?	Polder-39/2C: Yes, such information shall be printed on paper and displayed at the site office. Polder-41/1: DR. Abdus salam M.B.B.S Ex-medical officer of Barguna general hospital, clinic-sharif x-ray clinic, Dispensary mouir medical hall, Barguna sader hospital, Barguna sader police station, above mentioned details information is true and they are able to respond within short period and mentioned location is very nearest to our worksite. Polder-47/2: Yes. such information shall be printed on paper and displayed at the site office. Polder-48: Yes, such information shall be printed on paper and displayed at the site office.
9.8	What is the system of informing next of kin?	A phone number chat including all the Chinese people has been distributed to all working site/ campsite, anything happening at site will be reported immediately to the person who is in charge of corresponding issue.
9.9	What is your familiarity with accident reporting procedures?	For any accident happened at site, the foreman shall report to the site office and site manager immediately, and site office shall write on the accident log book for records. Then site office shall report to the corresponded local government office.
9.10	What is your familiarity with police reporting procedures?	So far, no such incident whereby Police is to be called upon. The Contractor camps are secured by police.
9.11	Is there any mechanism to address the work place Sexual Harassment of Women at the project sites?	No, because all male workers at the project sites and no female workers.

Annexure-3: Images of EMP Compliances

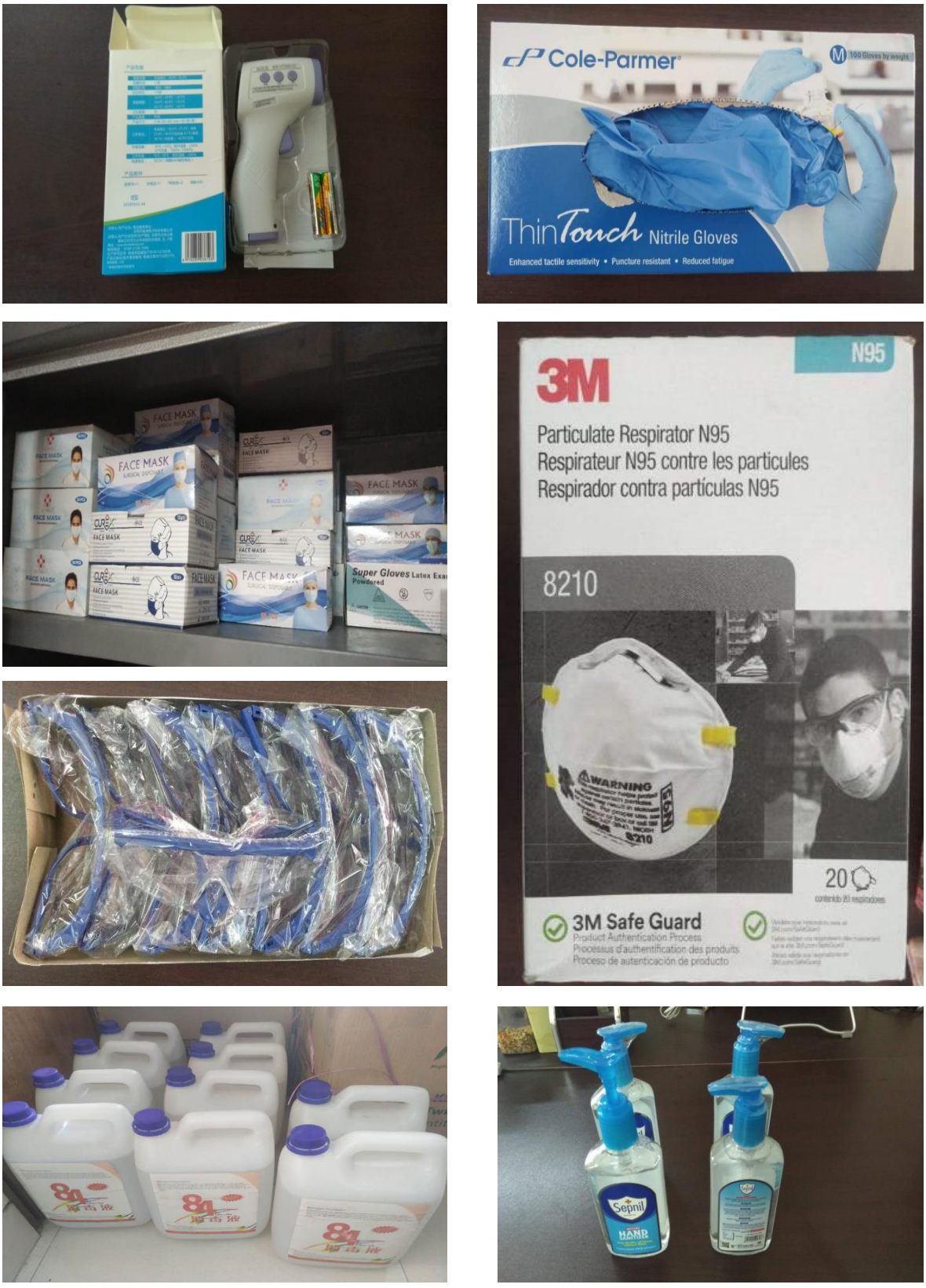

Fig. 1: Adoption of measures for protection from COVID-19 in Package-1

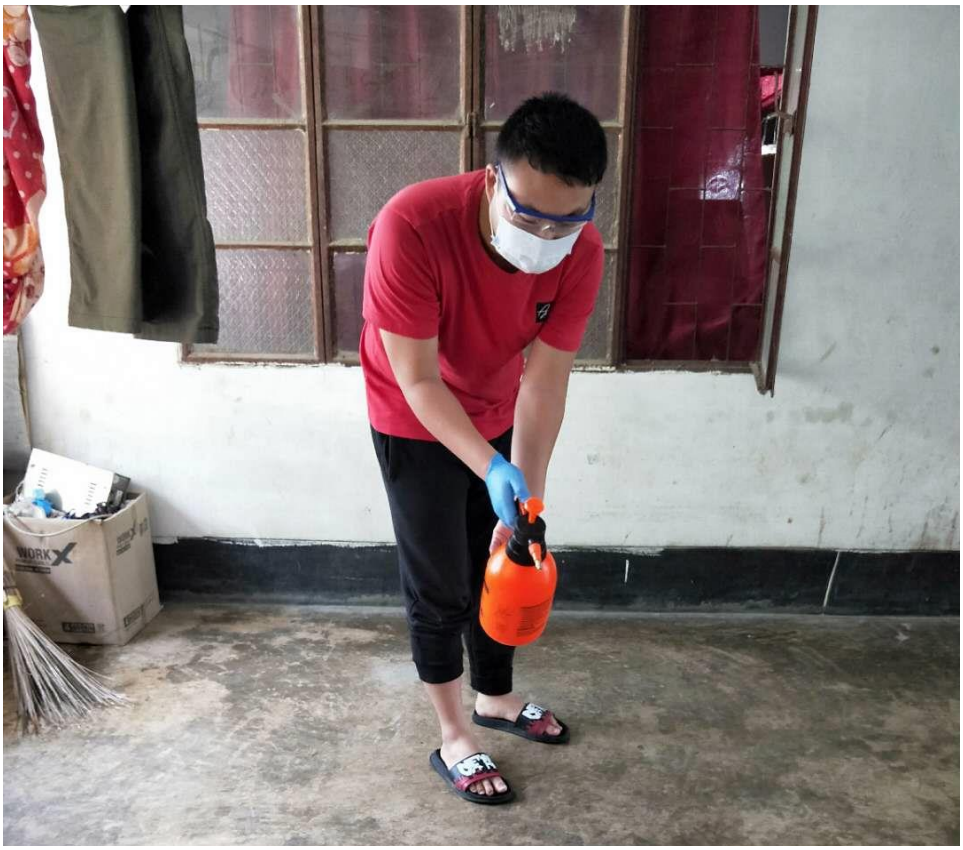

Fig. 2: Crush washing program for protection from COVID-19 in Package-1

Fig. 3: Sanitization activity to kill germ at P-35/1, Package-1

Fig. 4: Check body temperature before entering in campsite, P-39/2C, Package-2

Fig. 5: Frequent hand washing to combat Covid-19 at P-40/2, Package-2

Fig. 6: Hand washing arrangement in Polder- 43/2C, Package-2

Fig. 7: Potable drinking water facility in sluice site, P-40/2, Package-2

Fig. 8: Provide special type of CHAIR for workshop worker at P-35/1, Package -1

Fig. 9: Displayed cautionary symbol in workshop area, P-41/1, Package-2

Fig. 10: Establishment of confined chemical storage area at P-40/2, Package-2

Fig. 11: Hygienic wash room in camp site of P-43/2C, Package-2

Fig. 12: Clean kitchen in camp site of P-43/2C, Package-2

Fig. 13: Clean bed room in camp site of P-43/2C, Package-2

Fig. 14: Absorbent mats to manage oil leakage at P-39/2C, Package-2

Fig. 15: Absorbent mats to manage oil leakage at P-43/2C, Package-2

Fig. 16: Ensuring enough potable water in Nalian closure at P-32, Package-1

Fig. 17: Facilitated value chain training for WMG at P-32, Package-1

Fig. 18: Conducting training for BWDB staff & NGO's CO in Khulna, Package -1

Fig. 19: Safety briefing with dumping labour in Nalian closure site, P-32, Package-1

Fig. 20: Safety briefing with Chinese & local EHS personnel in P-41/1, Package-2

Fig. 21: Attended in the Monthly EHS meeting, Package-1 (Nov. 2019/Khulna)

Fig. 22: Attended in the Monthly EHS meeting, Package-2 (March, 20/Patuakhali)

Annexure-4: Data Collection Protocols, Formats and Checklists

FORM-R1

TEMPORARY ACQUISITION OF LAND

(Reporting by Contractor to Environmental Management Officer of DDSC&PMSC, XEN (Environmental), PMU)

Construction Stage: Monthly/Quarterly Report: Date ……. Month …….. Year……

(Site Layout Plan of all locations to be attached with format)

(Attach Photograph of the Site)

Sl. No	Item	Target Date for Establishment	Date of Establishment	Location		Present Landuse	Size (mxm)	Existing Trees	Distance from Nearest Settlement	Distance from Nearest Riverbank	Remarks by Environmental Management Officer,XEN (Environ-mental), PMO, if any
1		Work force Camps (WC)									
	WC 1										
2		Stock Yard Cement for fine and coarse aggregate (SY)									
	SY 1										
3		Site Store (SS)									
	SS 1										
4		Site Office (SO)									

Certified that the furnished information is correct and the quality of work is as per good practice

Environmental Management Officer, DDCD&PMSC	Executive Engineer (Environmental), PMO	Contractor or his representative

FORM-R2

SITE IDENTIFICATION AND SETTING UP OF WORKFORCE CAMP

(Reporting by Contractor to Environmental Management Officer of DDSC&PMSC, XEN (Environmental), PMU

Construction Stage Report: Date …….. Month …… Year……..

(Attach Photograph of the Camp Site)

Format to be submitted before target date of establishing camps as

Camp no.WC

Location of Camp: km_____ Package _____

Sl. No	Item	Unit	Details	Remarks by Environmental Management Officer,XEN (Environmental), PMO, if any
1	Detail of item camp	mxm		
a	Size of Camp	Mxm		
b	Area of Camp	Sqm		
c	Distance from Nearest Settlement	M		
d	Distance from Nearest Water Source/Riverbank	M		
e	Date of camp becoming operational	dd/mm/ yy		
f	Present land use			
g	No of trees with the Camp site			
2	Details of top soil stacking			
a	Quantity of top soil removed	Sq.m		
b	Detail of storage of topsoil	Cu.m		
3	Details of workforce	Nos.		
a	Total No of Labourers at work site	Nos		
b	Total no of Male Workers at work site	Nos		
c	No of Male Workers below 18 years of age	Nos		

Sl. No	Item	Unit	Details	Remarks by Environmental Management Officer,XEN (Environmental), PMO, if any
d	Total no of Female workers at work site	Nos		
e	No of Female workers below 18 years of age	Nos		
f	No of children	Nos		
4	*Details of dwelling units*			
a	No of dwellings	Nos		
b	Minimum size of dwelling	mxm		
c	Walls	Specifications		
d	Roofing	Specifications		
e	Flooring	Specifications		
f	Total no of Bathrooms	Nos		
5	Details of facilities			
a	Availability of security guard 24 hrs a day	Yes/ No		
b	First Aid Facility	Yes/ No		

Certified that the furnished information is correct and the quality of work is as per good practice

Environmental Management Officer, DDCD&PMSC	Executive Engineer (Environmental), PMO	Contractor or his representative

FORM-R3

RESTORATION OF CONSTRUCTION SITES

(Reporting by Contractor to Environmental Management Officer of DDSC&PMSC, XEN (Environmental), PMU)

Construction stage: Monthly Report – Date …….. Month ……. Year……

Sl. No	Item	Location	Unit (cum)	Volume of Topsoil Restored (cum)	Remarks by Environmental Management Officer,XEN (Environ-mental), PMO, if any
3	Restoring of topsoil at Workers Camp				
A					
B					
C					
D					
4	Restoring of topsoil at Construction/ stock yard and disposal of spoil				
A					
B					
C					
D					

Certified that the mitigation/enhancement works have been completed as specified and as per prevalent good construction practices

Environmental Management Officer, DDCD&PMSC	Executive Engineer (Environmental), PMO	Contractor or his representative

FORM-R4

SUMMARY MITIGATION AND ENHANCEMENT

(Reporting by Contractor to Environmental Management OfficerofDDSC&PMSC, XEN (Environmental), PMU)

Construction Stage: Monthly Report – Date …… Month …… Year……..

S.No	Item	Physical Target				Completion Target		
		Target		Target Achieved	% of task completed	Target Date	Date of Completion if task completed	Reason for delay if any
1	Protection of Cultural Properties	Unit						
2	Water Bodies	Nos						
3	Barrier to prevent garbage dumping	Nos						
4	Spill of oil lubricant control	Nos						
5	Washing Platform	Nos						
6	Trees planted and cared	Nos						
7	Turf area	m^3						
8	Top soil covers	m^3						
9								
10								

Completed as specified and as per prevalent good construction practices

Environmental Management Officer, DDCD&PMSC	Executive Engineer (Environmental), PMO	Contractor or his representative

Monitoring of Water Quality

Water Quality

In order to provide a clear view of the existing water quality inside the polder area, a number of water quality parameters – including salinity, Dissolved Oxygen (DO), temperature, electrical conductivity (EC), pH, Total Dissolved Solids (TDS), chlorides (Cl), suspended solids (SS), and arsenic (As), among others - were selected for monitoring.

The surface water and ground water was analyzed during the field level survey conducted in two different periods of the year. The surface water quality was measured at a number of locations (monitoring sites) of a Polder (shown in the Map included in the EIA Report of Polder under CEIP-1) in the month of December and the ground water quality was tested in the month of May. The results obtained in the two field surveys provided an understanding of the water quality in the polder, and these constitute the base data and can be compared with for impact evaluation of successive water quality analysis.

Sample Collection of Surface Water for Aquaculture and Agriculture Uses

a) Establish sampling sites (Location) with GPS referencing

b) Collect water sample from sampling site: Place sufficient water in bottles (leaving no empty space in the bottle) for the monitoring parameters –

c) **Bottle 1**: For analysis of pH, Total suspended solids (TSS), Total dissolved solids (TDS), Dissolved oxygen (DO), Biological oxygen demand (BOD), Chemical oxygen demand (COD)

d) **Bottle 2**: For analysis of Nitrate-N (NO_3-N), Salinity

e) **Bottle 3:** For analysis of Total and Fecal Coliform bacteria (Note: Coliform bacteria must be analyzed within 24 hours of sampling)

Sample Collection of Tubewell Water and other Supply Water for Drinking Use

a) Establish sampling sites (Location) with GPS referencing

b) Collect water sample from sampling site: Place sufficient water in bottles (leaving no empty space in the bottle) for the monitoring parameters –

c) **Bottle 1**: For analysis of pH, Total suspended solids (TSS), Total dissolved solids (TDS), Dissolved oxygen (DO), Arsenic (As), Iron (Fe), Chloride (Cl)

d) **Bottle 2:** For analysis of Nitrate-N (NO3-N), Salinity

e) **Bottle 3:** For analysis of Total and Fecal Coliform bacteria (Note: Coliform bacteria must be analyzed within 24 hours of sampling)

Label bottles with location, sampling depth, date & time of sampling

Water Quality Monitoring Plan (For Tubewell Water and other Supply Water for Drinking Use)	
Monitoring Parameters	*standard items:*pH, Temperature, Total suspended solids (TSS), Total dissolved solids (TDS), Dissolved oxygen (DO), Arsenic (As), Iron (Fe), Chloride (Cl), Conductivity, nitrate-N (NO_3-N, fecal and total coliform
Analysis Methods	Field measurements for pH, dissolved oxygen, conductivity, temperature; Standards Methods of Analysis for laboratory analysis.
Sampling Sites (Location) with GIS reference	Select monitoring sites of given Polder(with GIS referencing). At each site, 2 samples (Duplicate samples)
Monitoring frequency and periods	- Quarterly, during construction phase; - Half yearly, during operation phase
Responsible Agency	Contractor through a nationally recognized laboratory (BUET, KUET, Dhaka University, DPHE & DoE)
Supervised by	DDCS&PMS Consultant's Environmental Team, BWDB field staff

Water Quality Monitoring Plan (For Surface Water for Aquaculture and Agriculture Uses)	
Monitoring Parameters	*standard items:*pH, Total suspended solids (TSS), Total dissolved solids (TDS), Dissolved oxygen (DO), Biological oxygen demand (BOD), Chemical oxygen demand (COD), Nitrate-N (NO_3-N), Salinity, Electrical conductivity (EC),Total Coliform bacteria
Analysis Methods	Field measurements for pH, dissolved oxygen, conductivity, temperature; Standards Methods of Analysis for laboratory analysis.
Sampling Sites (Location) with GIS reference	Select monitoring sites of given Polder(with GIS referencing). At each site, 2 samples (Duplicate samples)
Monitoring frequency and periods	- Quarterly, during construction phase; - Half yearly, during operation phase
Responsible Agency	Contractor through a nationally recognized laboratory (BUET, KUET, Dhaka University, DPHE& DoE)
Supervised by	DDCS&PMS Consultant's Environmental Team, BWDB field staff

Noise Quality Monitoring Plan (Vehicular Traffic on the road is the key source of noise in the Polder)	
Monitoring Parameters	Noise Level (dB) in selected busy areas inside the Polder (under Normal Condition and with Traffic)
Analysis Methods	Field Noise Meter Calibrated to monitor dB for 40-90 dB
Sampling Sites (Location) with GIS reference	Select monitoring sites of given Polder(with GIS referencing). At each site, 2 samples (normal condition & with traffic)
Monitoring frequency and periods	- Noise level for 1 hour at 0700, 1200 & 2000 hrs on three consecutive days each week
Responsible Agency	Contractor through a nationally recognized laboratory (BUET, KUET, Dhaka University, DPHE & DoE)
Supervised by	DDCS&PMS Consultant's Environmental Team, BWDB field staff

Air Quality Monitoring Plan	
Monitoring Parameters	*standard items:*Suspended Particulate Matter (SPM 2.5/10), Sox, NOx, CO
Analysis Methods	Field standard Air Analyser
Sampling Sites (Location) with GIS reference	Select monitoring sites of given Polder (with GIS referencing).
Monitoring frequency and periods	- At selected sites, once in 6 months, or as required.
Responsible Agency	Contractor through a nationally recognized laboratory (BUET, KUET, Dhaka University, DPHE &DoE)
Supervised by	DDCS&PMS Consultant's Environmental Team, BWDB field staff

Soil Quality Monitoring Plan	
Monitoring Parameters	*standard items:* Organic matter, pH, N, P, K, Salinity, Fe, Mn, Mo, Pb
Analysis Methods	Field standard Soil Analyzer Kit
Sampling Sites (Location) with GIS reference	Select monitoring sites of given Polder (with GIS referencing).
Monitoring frequency and periods	- At selected sites, once in 3 months
Responsible Agency	Contractor through a nationally recognized laboratory (BUET, KUET, Dhaka University, DPHE &DoE)
Supervised by	DDCS&PMS Consultant's Environmental Team, BWDB field staff

Annexure-4

Template for-A. Surface Water Quality in Project Area (Fishing and Irrigation uses)

Sample Location	GIS Reference	Water Quality Monitoring Parameters									
		Temp (°C)	pH	TSS mg/l	TDS mg/l	DO mg/l	Salinity ppt	NO_3-N mg/l	Cl Mg/l	EC µs/cm	Total Coliform
SL-1	GIS-1										
SL-2	GIS-2										
SL-3	GIS-3										
Bangladesh Standard Value	Irrigation	20 - 30	7.0-8.5			5.0				400-1000	
	Fishing	20 - 30	6.7-9.5			4.0-6.0					

Template for-B.Tubewell and supply Bottle Water Quality (Drinking Uses)

Sample Location	GIS Reference	Water Quality Monitoring Parameters										
		Temp (°C)	pH	TSS mg/l	TDS mg/l	DO mg/l	Salinity ppt	NO_3-N mg/l	Cl Mg/l	Fe Mg/l	EC µs/cm	Total Coliform
SL-1	GIS-1											
SL-2	GIS-2											
SL-3	GIS-3											
Bangladesh Standard Value			6.5-8.5						150-600	0.3-1.0	400-1000	

Environmental Monitoring Plan during Construction and Operation of Rehabilitation and Improvement of Polders System

(Source: EIA Report CEIP-1, Polder 35/1)

Parameter	Location	Means of Monitoring	Frequency	Responsible Agency	
				Implemented by	Supervised by
During Construction					
Sources of Material	Work Site	Possession of official approval or valid operating license of suppliers materials (Cement, soil).	Before an agreement for the supply of material is finalized.	Contractor	CS, M&E Consultant, BWDB
Operation of borrow site	Borrow pit/site	Visual inspection of borrow site and ensuring operational health and safety	monthly	Contractor	CS, M&E Consultant, BWDB
Top Soil	Storage area	Top soil of 0.15 m depth will be excavated and stored properly	Beginning of earthwork	Contractor	CS, BWDB
	do	The stored top soils will be used as cladding material over the filled lands	Immediately after filling and compaction of dredge materials	Contractor	CS, BWDB
	Work Site	Some of the top soil are placed on top and berm of embankment for turfing and plantation	At the end of filling activity	Contractor	CS, BWDB
Erosion	Side slopes of the embankments and material storage sites	Visual inspection of erosion prevention measures and occurrence of erosion	At the end of filling activity	Contractor	CS, M&E Consultant, BWDB
Hydrocarbon and chemical storage	Construction camps	Visual Inspection of storage facilities	Monthly	Contractor	CS, BWDB
Traffic safety	Construction area	Visual inspection to see whether proper traffic signs are placed and flagmen for traffic management are	Monthly	Contractor	CS, BWDB

Parameter	Location	Means of Monitoring	Frequency	Responsible Agency	
				Implemented by	Supervised by
		engaged			
Air quality (dust)	Construction site	Visual inspection to ensure good standard equipment is in use and dust suppression measures (spraying of waters) are in place.	Daily	Contractor	CS, BWDBgs/
	Material storage sites	Visual inspection to ensure dust suppression work plan is being implemented	Monthly	Contractor	CS
Air Quality (PM_{10}, $PM_{2.5}$)	Close to School/ Madrasha, Hospital &Villages	Air quality monitoring	Half Yearly	Contractor through a nationally recognized laboratory	CS, M&E Consultant, BWDB
Noise	Construction sites	Visual inspection to ensure good standard equipment are in use	Weekly	Contractor	CS, M&E Consultant, BWDB
	Construction sites	Ensure work restriction between 09:00 pm-6:00 am close to School/ Madrasha, Hospital & Villages	Weekly	Contractor	CS, M&E Consultant, BWDB
Surface Water Quality (TDS, Turbidity, pH, DO, BOD, COD etc)	Water sample at each of river for each polder	Sampling and analysis of surface water quality	Half Yearly	Contractor through a nationally recognized laboratory	CS, M&E Consultant, BWDB
Drinking Water Quality(TDS, Turbidity, pH, FC, as if groundwater etc)	Sources of drinking water at construction camp/site	Sampling and analysis of water quality	yearly	Contractor through a nationally recognized laboratory	CS, M&E Consultant, BWDB
Sanitation	Construction camp/site	Visual Inspection	Weekly	Contractor	CS, M&E Consultant, BWDB
Waste Management	Construction camp and	Visual inspection of collection,	Weekly	Contractor	CS, M&E Consultant,

Parameter	Location	Means of Monitoring	Frequency	Responsible Agency	
				Implemented by	Supervised by
	construction site	transportation and disposal of solid waste and solid waste is deposited at designated site			BWDB
Flora and Fauna	Project area	Survey and comparison with baseline environment	Yearly	Contractor through nationally recognized institute	CS, M&E Consultant, BWDB
Cultural and archeological Sites	At all work sties	Visual observation for chance finding	Daily	Contractor	CS, M&E Consultant, BWDB
Reinstatement of Work Sites	All Work Sites	Visual Inspection	After completion of all works	Contractor	CS, M&E Consultant, BWDB
Safety of workers Monitoring and reporting accidents	At work sites	Usage of Personal Protective equipment	Monthly	Contractor	CS, M&E Consultant, BWDB
During Operation and Maintenance					
Surface Water Quality (TDS, Turbidity, pH, DO, BOD, COD etc)	Water sample at each of river for each polder	Sampling and analysis of surface water quality	Yearly	BWDB through a nationally recognized laboratory	M&E Consultant
Air Quality (Dust PM_{10}, $PM_{2.5}$)	At the baseline monitoring site	24 hours Air quality monitoring	Yearly	BWDB through a nationally recognized laboratory	M&E Consultant
Flora and Fauna specially fisheries	In the project area	Detail species assessment and compare with baseline	Yearly	BWDB through a nationally recognized institution	M&E Consultant
Agriculture	In the project area	Compare the production with the baseline	Yearly	BWDB through a nationally recognized institution	M&E Consultant
Operation of hydraulic structure	In the project area	Visual inspection and public feedback	Yearly	BWDB	M&E Consultant

Environmental Monitoring Plan during Construction and Operation of Afforestation

Parameter	Location	Means of Monitoring	Frequency	Responsible Agency	
				Implemented by	Supervised by
During Implementation					
Plant Selection	Nursery	Visual inspection. Type and variety of plant species to be planted for turfing on the top of embankment and foreshore	Before plantation	Contractor	CS, BWDB, M&E Consultant
Water Quality	Water bodies near nursery	Odor and chemical testing	Half yearly	Contractor through nationally recognized laboratory	CS, BWDB, M&E Consultant
Waste Management	Work site and Nursery	Visual inspection of collection, transportation and disposal of grasses, debris and is deposited at designated site	Weekly	Contractor	CS, BWDB, M&E Consultant
	Work site and Nursery	Visual inspection of Water bars & cut-offs .sediment traps to prevent water pollution caused by run-off from harvesting areas	Beginning of work	Contractor	CS, BWDB, M&E Consultant
Nursery Embankment Management	Nursery	Visual inspection of height of embankment, possibility of water logging and connection to the waterbodies	Beginning of each nursery	Contractor	CS, BWDB, M&E Consultant
During Operation and Management					
Multilevel belt of trees	Polder top and along the polder	Visual inspection	yearly	BWDB through nationally recognized institution	M&E Consultant
Flora and Fauna	In the project area	Detail species assessment and compare with baseline	Yearly	BWDB through a nationally recognized institution	M&E Consultant
Erosion	Along Alignment	Visual Inspection presence of gullies or erosion	Yearly	BWDB	M&E Consultant

Annexure 5: Environmental Management Plan–Chapter 10 of EIA for Typical Polder (Polder no. 47/2)

10. Environmental Management Plan

673. This chapter presents the Environmental Management Plan (EMP) for the rehabilitation activities in the Polder- 47/2. The EMP essentially provides the implementation mechanism for the environmental and social mitigation measures discussed in Chapter .

6.10.1 Objectives of EMP

674. The basic objective of the EMP is to manage, prevent, and mitigate potentially adverse impacts of Project interventions. The specific objectives of the EMP are to:

- Facilitate the implementation of the environmental and social mitigation measures identified during the present EIA and discussed in Chapter 6.
- Indicate the responsibilities for project proponent, contractors, consultants, and other members of the Project team for the environmental and social management of the Project;
- Define a monitoring mechanism and identify monitoring parameters to ensure effective implementation of the mitigation measures; and
- Assess environmental training requirements for different stakeholders at various levels. Describe communication and documentation requirements.

10.2 EMP Components

675. The EMP components are listed below:

- Institutional Arrangement
- Mitigation Measures and Plan
- Monitoring Plan
- Documentation and reporting
- Contractual arrangements for EMP implementation
- EMP implementation cost
- Capacity building
- Grievance redress mechanism

676. These components are discussed in Sections below.

103 Institutional Arrangement

677. Clearly defined and functional institutional arrangements are essential for ensuring effective and sustainable implementation of the EMP, particularly the mitigation measures identified in the EIA. An Organogram showing the institutional setup of CEIP-1 including organisation for implementation and monitoring of the EMP is shown in Figure 10.1.

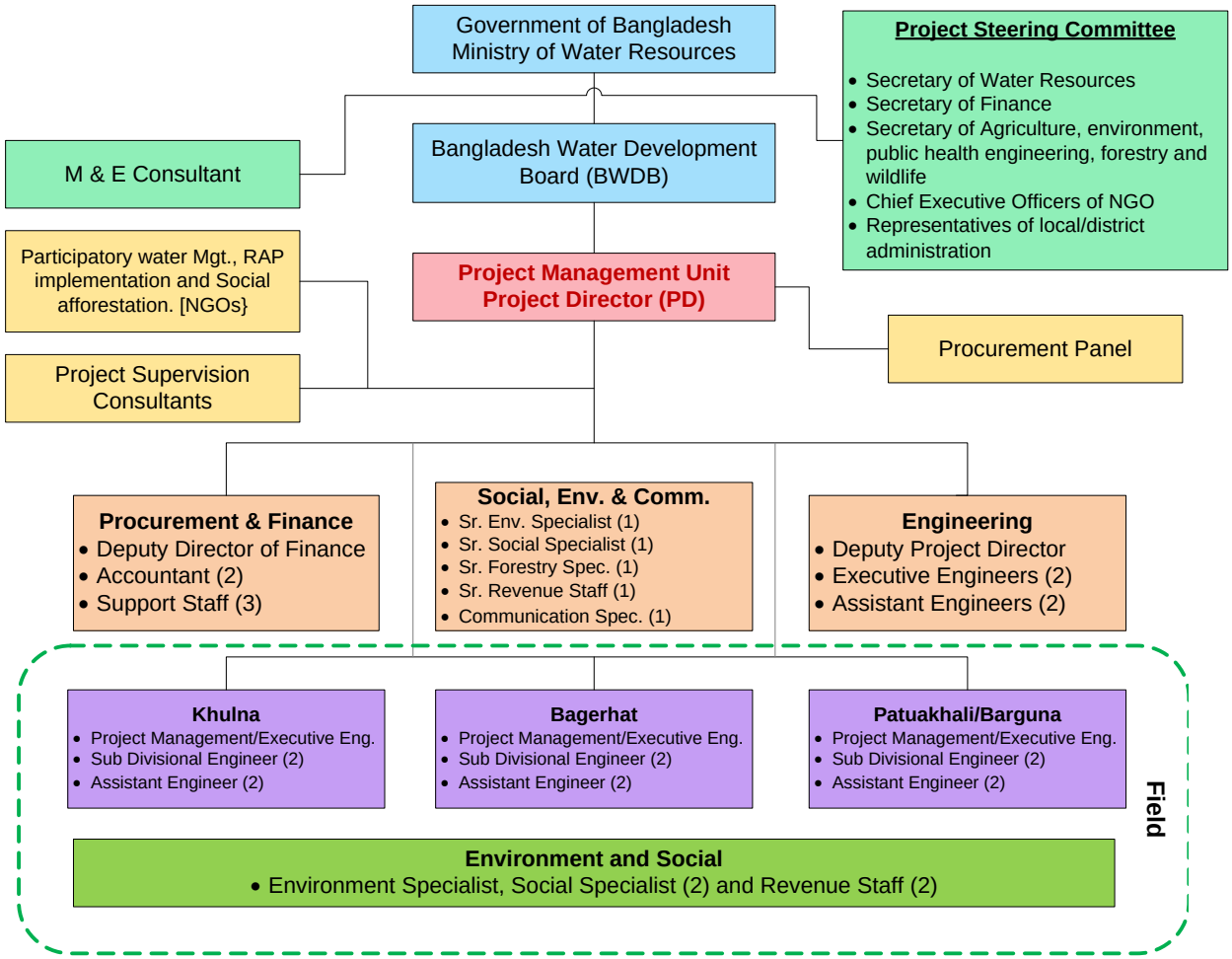

Figure 10.1: Organogram showing the institutional setup for CEIP-I

678. The institutional arrangements proposed to implement the EMP of Polder 48 are described in detail below.

10.3.1 Overall Responsibility

679. The overall responsibility of EMP implementation and fulfilling other environmental obligations during the Project rests with the Project Director (PD). For this purpose, the PD will be supported by Environmental and Social staff of the PMU, DCSC and Contractors.

10.3.2 Construction Phase

a. Environment and Social Staff in PMU

680. As described in Section 4.8, the BWDB will set up the PMU to manage the Project implementation. The PMU will be led by the Project Director (PD). To manage and oversee the environmental and social aspects of the Project, the PMU will have an Environment, Social, and Communication (ESCU). The Unit will supervise compliance with and implementation of the EMP. The Unit will include a Senior Environmental Specialist. One environment specialist will be posted

at the field level to support all three divisions. The ESCU will maintain liaison with WB safeguards team, regulatory agencies and other stakeholders during the Project implementation. The ESCU will also coordinate with the environmental staff of the DCSC In order to manage the EA process and EMP implementation effectively; the ESCU will be established and made operational before awarding the contract to Contractor. BWDB will update the EIA report, if necessary. The Mode of EMP implementation is shown in the Figure-10.2 as follows:

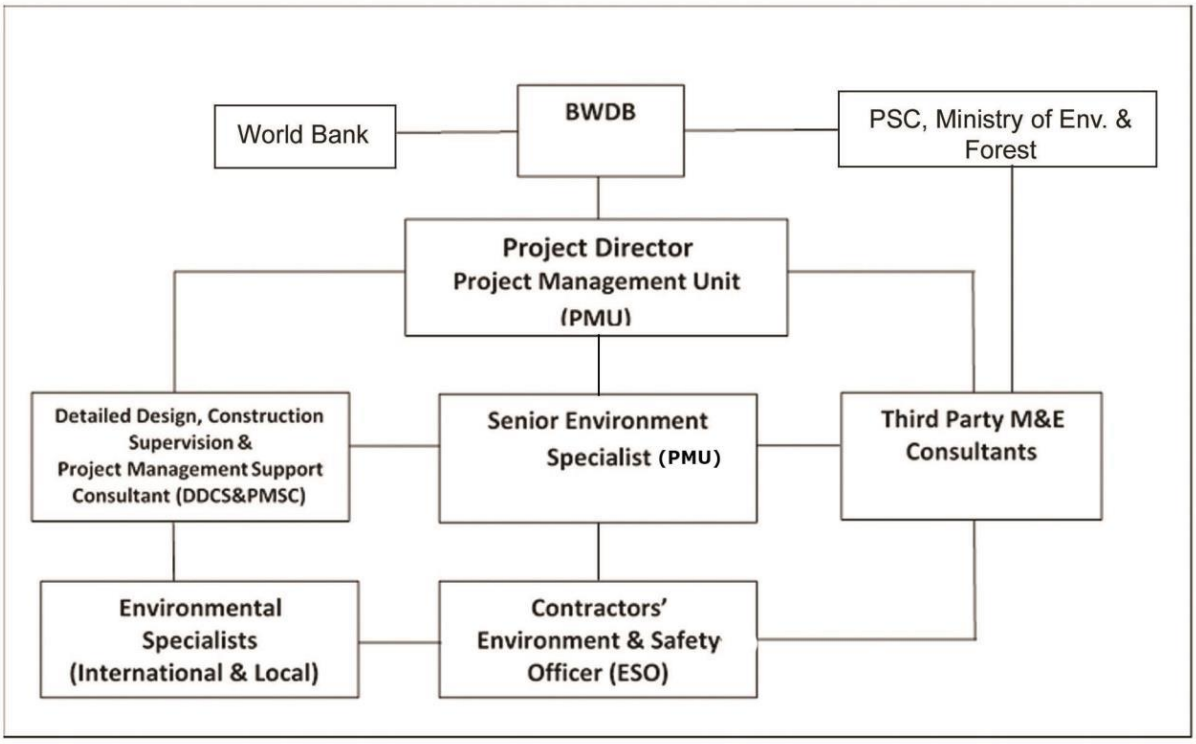

Figure 10.2: Organogram for Mode of EMP Implementation

b. Environment and Social Staff with Detail Design, Construction Supervision and Project Management Support Consultants (DDCS&PMSC)

681. The DDCS&PMSC will be responsible for overall supervision of polder rehabilitation related activities. The DDCSPMSC will ensure quality control and report to the PD. The DDCS&PMSC will also assist the ESCU for ensuring environmental compliance and monitoring of progress including EMP and/or ECoP implementation. The DDCS&PMSC will supervise the contractors, ensuring design compliance and quality of works. For supervising the EMP implementation, DDCS&PMSC will have dedicated and adequately qualified and experienced environmental staff including field-based environmental monitors (EMs). The DDCS&PMSC will supervise and monitor contractors to ensure compliance with the EMP. The DCSC consultants' environmental staff will maintain coordination with the ESCU for the effective implementation of EMP and other environmental commitments and obligations of the Project.

c. Contractor's Environment Supervisors

682. The construction contractors will have an adequate number of dedicated, properly qualified and experienced, site-based Environment Supervisors (ESs) at the construction sites. The ESs will be responsible to implement various aspects of the EMP particularly the mitigation measures to ensure that the environmental impacts of the construction works remain within acceptable limits. The EMs will maintain coordination with the DCSC at the site level. The ESs will also be responsible to conduct environmental trainings for the construction crew.

10.3.3 Post-Construction Phase

683. The BWDB monitoring unit has postings of 4 Assistant Chiefs and 2 Deputy Chiefs to oversee the overall environmental compliance of BWDB implemented projects. Under CEIP, the ESCU will provide training to the BWDB people responsible for monitoring of environmental compliance. Thus, a smooth transition to BWDB will happen to ensure environmental compliance during the O&M after the project completion. These staff will be responsible to manage the environmental aspects of the operation and maintenance of polder, its water control structures, and other relevant issues such as protection of key environmental resources of the older and maintain fish migration. Water Management Organizations (WMO) will be formed under the Bangladesh Guidelines for Participatory Water Management (Nov 2000) and involve the beneficiary communities. WMOs will be trained by BWDB to ensure environmental management during project operation. The Environmental Management Unit of BWDB will ensure and oversee the environmental management during project implementation and operation. The Water Management Organization will also be trained and involved in EMP implementation during the operation phase.

10.4 Mitigation Measures and Plan

684. Mitigation is an integral part of impact evaluation. Where mitigation is deemed appropriate, a proponent should strive to act upon effects, in the following order of priority, to:

- Eliminate or avoid adverse impacts, where reasonably achievable.
- Reduce adverse impacts to the lowest reasonably achievable level.
- Regulate adverse impacts to an acceptable level, or to an acceptable time period.
- Create other beneficial impacts to partially or fully substitute for, or counter-balance, adverse effects.

685. Project specific construction environmental management plans will be prepared by the Contractor and implemented upon approval by the DSC consultant and the PMU. These plans will specify precautions and mitigation measures for construction activities. Good Environmental Construction guidelines have been compiled in Appendix 10 of Environmental Management Framework.

686. Impacts identified severe in consequence category and or likelihood category will be further analyzed to identify additional mitigation measures that are potentially available to eliminate or reduce the predicted level of impact. Potential mitigation measures will include:

- Habitat compensation program
- Species specific management program
- Engineering design solutions

- Alternative approaches and methods to achieving an activity's objective
- Stakeholders participation in finalizing mitigation measures
- Construction practice, including labor safety and welfare measures.
- Operational control procedures
- Management systems

687. Based on the past experience, a generic Mitigation/Compensation Measures Guideline for the EMP has been developed and is presented in Table 10.1 below for reference. This has been used as a reference material for comprehending the scope of the EMP. Table 10.1 will be used in conjunction with the implementation of the polder specific mitigation measure stated in Chapter 6.

Table 10.1: Generic Mitigation/Compensation Measures/Guideline

(ECoP: Environmental Code of Practice)

Parameter/Activities	Mitigation/Compensation Measure/Guideline
ECoP 1: Soil/ Land Management	
Sources of Material for Earthwork	• During design, the segment-wise soil requirement and location of the sources of soil for earthwork for each polder construction/rehabilitation will be identified. • Selection of Borrow pit areas for earthen material collection. • No objection from land owner/Revenue authorities as applicable • Contractor shall ensure that borrowed materials used for embankment filling is free of pollutants • Disposal of excess soil will be made at site with no objection from DoE and local authority
Borrowing of Earth	**Borrow Area Selection** Borrowing of spoil from places close to the toe line on any part of the embankment is prohibited. Earth available from dredging as per design, may be used as embankment material (if necessary and applicable), subject to the approval of the Engineer, with respect to acceptability of the material. Borrowing to be avoided from the following areas: • Borrowing of soil from close to the toe line on any part of the embankment is prohibited. • No borrowing of earth to be done from irrigated agricultural lands (In case of necessity for borrowing from such lands, the topsoil shall be preserved in stockpiles), although borrowing from agricultural land need to be avoided • Borrowing of earth is prohibited from grazing land. • No borrowing of earth is permissible from near to the settlements. • Borrowing of earth is prohibited from environmentally sensitive areas such as reserve forests, protected forests, sanctuary, and wetlands. • Borrowing of earth will not be done from streams and seepage areas. • Borrowing of earth will be avoided from areas supporting rare plant/ animal species.

Parameter/Activities	Mitigation/Compensation Measure/Guideline
	Documentation of Borrow Pit The contractor must ensure that following data base is documented for each identified borrowing areas before commencing the borrowing activity that provide the basis of the redevelopment plan. • Chainage along with offset distance; • Area (Sq.m); • Photograph and plan of the borrowing area from all sides; • Type of access/width/kutcha/pucka etc. from the roadway; • Soil type, Slope/drainage characteristics; • Water table of the area identified from the nearest well, etc.; • Existing land use, for example barren / agricultural /grazing land; • Location/name/population of the nearest settlement from borrowing area; • Quantity excavated (likely and actual) and its use; • Copy of agreement with owner/government; and • Community facility in the vicinity of borrow pit. • Rehabilitation certificate from the land owner along with at least four photograph of the rehabilitated site from different angles.
Excavation operation and Management of Excavated Material	To minimize any adverse impact during excavation of material following measures are need to be undertaken: • Adequate drainage system shall be provided to the excavated area • The Contractor shall construct sediment barriers at the stockpiling locations to prevent the erosion of excavated material due to runoff. The followings precautions shall be undertaken during quarry operations. • Overburden shall be removed. • During excavation slopes shall be flatter than 20 degrees to prevent any sliding. • The Contractor shall ensure that all workers related safety measures shall be taken. • The Contractor shall ensure maintenance of crushers regularly as per manufacturer`s recommendation. • During transportation of the material, measures shall be taken to minimize the generation of dust and to prevent accidents.
Handling Dredged Material from River Dredging	• Deposition of dredged material will be far away from the channel edge to limit damage to streamside habitats. This also allows a degree of flooding to occur on the floodplain, thereby creating opportunities for wet grassland, scrub/wet woodland, wetlands and seasonally grazed rough grass. • Apply biotechnical engineering where possible for example geo textiles, may be used to help in stabilizing the material and aid re-colonization. • Other possibilities include: drying and spreading the spoil over adjacent land, which can improve soil fertility in some cases, but may also smother important flora and habitats; excavating a trench and infilling it with spoil, thus minimizing disturbance to agriculture and the local environment; dumping off-site is possible but expensive, using spoil to create artificial wetlands.
ECoP 2: Water Resource & Hydrology Management	
Hazardous Waste Management	The contractor will minimize the generation of sediment, oil and grease, excess nutrients, organic matter, litter, debris and any form of waste (particularly petroleum and chemical wastes).

Parameter/Activities	Mitigation/Compensation Measure/Guideline
Ponding of water/water logging	• Do not allow ponding of water especially near the waste storage areas and construction camps • Discard all storage containers,which are capable of storing water, after use or store them in inverted position • Reinstate relief and landscape • Monitor drainage pattern after high down pouring and recession flood • Connect water pockets to the nearest drainage channels/canals
Soil Erosion and siltation	The Contractor shall • Water the material stockpiles, access roads and bare soils on an as and where required basis to minimize dust. Increase the watering frequency during periods of high risk (e.g. high winds) • All working sites (except permanently occupied by the road and supporting facilities) will be reinstated to its initial conditions (relief, topsoil, vegetation cover). • Ensure that roads used by construction vehicles are swept regularly to remove sediment
Dredging	• Disturbance can be minimized if mechanical excavators work from one bank. If the channel is too wide, the digger must work within the channel. Disruption can be minimized by diverting the river down one side of the channel and dredging the other side while it is 'dry'. Smaller plant equipment generally limits the level of impact on bank-side and in-stream habitats.
Construction activities in water bodies	• Protect water bodies from sediment loads by silt screen or bubble curtains or other barrier. • Do not discharge cement and water curing used for cement concrete directly into water courses and drainage inlets • Monitor the water quality in the runoff from the site or areas affected by dredge plumes, and improve work practices as necessary
ECoP 3: Air Management	
Construction vehicular traffic	The Contractor will • Fit vehicles with appropriate exhaust systems and emission control devices. Maintain these devices in good working condition. • Operate the vehicles in an efficient manner • Covered haul vehicles to be used carrying dusty materials (cement, borrow and quarry) moving outside the construction site • Impose speed limits on all vehicle movement at the worksite to reduce dust emissions • Control the movement of construction traffic • Water construction materials prior to loading and transport • Service all vehicles regularly to minimize emissions • Materials will be transported to site in off peak hours.
Construction activities	• Water the material stockpiles, access roads and bare soils on an as and where required basis to minimize the potential for environmental nuisance due to dust. • Increase the watering frequency during periods of high risk (e.g. high winds). • Stored materials such as excavated earth, dredged soil, gravel and sand shall be covered and confined to avoid them from wind-drift • Minimize the extent and period of exposure of the bare surfaces • Reschedule earthwork activities or vegetation clearing activities, where

Parameter/Activities	Mitigation/Compensation Measure/Guideline
	practical, if necessary to avoid during periods of high wind and if visible dust is blowing off-site • Restore disturbed areas/side of the embankment as soon as practicable by plantation/vegetation/grass-turfing • Establish adequate locations for storage, mixing and loading of construction materials, in such a way that dust dispersion is prevented because of such operations • Crushing of rocky and aggregate materials shall be wet-crushed, or performed with particle emission control systems.
Odor from Construction labor Camps	• Construction worker's camp shall be located at least500 m away from the nearest habitation. • The waste disposal and sewerage system for the camp shall be properly designed, built and operated so that no odor is generated.
ECoP 3: Agriculture Management	
Loss of Top Soil	• Soil from fallow lands/ non-agricultural lands will be used in all type of earthwork and in embankments • Collect/strip top soil before earth filling and store the same for and reusing it for final surfacing of embankment top and tree plantation/afforestation. • Strip the top soil to a depth of 15 cm and store in stock piles of height not exceeding 2m • Remove unwanted materials from top soil like grass, roots of trees and similar others • The stockpiles will be maintained a slopes of 2:1 to reduce surface runoff and enhance percolation through the mass of stored soil • Locate topsoil stockpiles in areas outside the drainage lines and protect from erosion • Spread the topsoil to maintain the physio-chemical and biological activity of the soil. • The stored topsoil will be utilized for covering all disturbed area and along the proposed plantation sites • Topsoil stockpiles will be monitored and the adverse conditions are to be identified and the following corrective actions are to be undertaken: o Anaerobic conditions-turning the stockpile or creating ventilation holes through the stockpile; o Erosion – temporary protective silt fencing will be erected;
Soil salinity	• Use of duckweed will remove soil salinity • Flushing with pre-monsoon rain water will reduce soil salinity. • Saline tolerant crops need to be cultivated. • Environmentally and socially responsive shrimp farming e.g. shrimp-rice farming system to be encouraged. • Increasing upland discharge of fresh water will push back ingress of saline water from the sea • Green manure application is to be promoted • Ground water abstraction for shrimp farming will be avoided.
ECoP 4: Noise Management	
Construction vehicular traffic	• Maintain all vehicles in order to keep it in good working condition in accordance with manufactures maintenance procedures • Organize the loading and unloading of trucks, and handling operations for

Parameter/Activities	Mitigation/Compensation Measure/Guideline
	the purpose of minimizing construction noise at the work site.
Construction machinery	• Appropriately site all noise generating activities to avoid noise pollution to local residents • Maintain all equipment in order to keep it in good working order in accordance with manufactures maintenance procedures.
Construction activity	• Notify adjacent landholders/Schools prior any typical noise events outside of daylight hours • Employ best available work practices on-site to minimize occupational noise levels • Install temporary noise control barriers where appropriate • Plan activities on site and deliveries to and from site to minimize impact • Monitor and analyze noise and vibration results and adjust construction practices as required • Avoid working during 09:00pm to 06:00 am within 500m from residences.
ECoP 5: Ecology Management	
Flora	
Vegetation Clearance	• Tree outingwill be performed upon preliminary notification to the relevant authority (District Forest Office, DoE). • Preparation of maps in GIS format, cadastral description of trees to be felled, marking, and supervision of Forest Department are necessary elements of the procedure. • Provide adequate knowledge to the workers regarding nature of protection and the need of avoid felling trees during construction • Fruit and timber trees owned by local population will be compensated at their replacement cost according to market prices
Plant Management	• Tree seedlings of local/indigenous species are planted in such a way that minimizes damage to the soil, while facilitating seedling survival. Tree seedling species are to be selected appropriately for maintaining long-term productivity. • Focus on tree species suitable for site condition • Prevent unreasonable species resulting in slow growth, less water and soil conservation and pest or disease outbreaks • Local species as planting materials, since natural selection and succession are most suitable for local climates and natural conditions • Ensure of avoiding single species or clone monoculture • Choose suitable species for berm, turfing and side
Planting	• Leave set back requirements around streams, restricted areas e.g. native vegetation, protected riparian strips, historic and heritage sites, research areas. • For nursery raising, physical and biological controls are to be practiced to control the pests and diseases in the nurseries. • Do not plant spread-prone species on sites where there is a high risk of uncontrollable wilding spread beyond the boundaries of the plantation. • Consider appropriate species, patterns and layout when planting areas with high visual values and/or with important recreational values

Parameter/Activities	Mitigation/Compensation Measure/Guideline
Polypropylene Bags Handling	• Make a borrow Pit at each site for collection of poly bags • Collect all bags at the pits after plantation • If feasible, inform private sector to collect those bag for recycling
Pest Management to Nursery	• During outbreak of any deadly plant disease develop a plan to manage pest in coordination with neighbors by identifying existing pests and diseases and the risks for the introduction of new pests and diseases.
Water Management	• Install temporary sediment basins, where appropriate, to capture sediment-laden run-off from nursery • Divert runoff from undisturbed areas around the harvesting site • Stockpile of fertilizer or agrichemical should be far away from drainage lines • Prevent all solid and liquid wastes entering waterways by collecting solid waste, oils, chemicals, fertilizer waste and transport to an approved waste disposal site
Fauna	
Construction works in the surrounding lands	• Pre-entry survey and prevention of damage to fauna prior to start up • Limit the construction works within the designated sites allocated to the contractors • To restrict any destruction of active nests or eggs of resident birds • Provide adequate knowledge to the workers regarding protection of flora and fauna, and relevant government regulations and punishments for illegal poaching.
ECoP 6: Fisheries Management	
Construction works in the rivers and on the surrounding lands	• Critical breeding areas of major fish species will be identified and declared as sanctuaries. • Creation of small lagoons and pools,which may trap the fishes should be avoided. • Creation of artificial waterfalls and other barriers for migration will be avoided. • Natural river channel will be reinstated after completion of construction works
Hydraulic Structure	• Sufficient free flow will be guaranteed in the design and construction work to ensure free passage of migrating fishes. • Hydraulic structure will be operated considering the time of fish migration and spawning time • Area specific hydraulic structure operation guideline will have to be developed
Dredging	• Ensure that the dredging activity will create minimum sediment load in the water • Avoid dredging during spawning period of fish
ECoP 7: Socio-Economic Management	
Construction Camp Management	
Location of constructionCamps (MRDI, 2011)	• The contractor shall hoist signboard/s at worksite mentioning the details of adtivities to be performed along with cost, work tenure and name and address of the firm. It will also contain the address of the supervision organization, who may be informed of any grievances of the activities. • Locate the construction camps at areas which are acceptable from

Parameter/Activities	Mitigation/Compensation Measure/Guideline
	environmental, cultural or social points of view. • Consider the location of construction camps away from communities in order to avoid social conflict in using the natural resources such as water or to avoid the possible adverse impacts of the construction camps on the surrounding communities. • BWDB will endorse detailed layout plan for the development of the construction camp submitted by the contractor. The plan will show the relative locations of all temporary buildings and facilities that are to be constructed together with the location of site roads, fuel storage areas (for use in power supply generators), solid waste management and dumping locations, and drainage facilities, prior to the development of the construction camps. • Local authorities responsible for health, religious and security shall be duly informed on the set up of camp facilities so as to maintain effective surveillance over public health, social and security matters
Construction Camp Facilities	The following facilities will have to be provided by the Contractor • Adequate housing for all workers • Safe and reliable water supply • Hygienic sanitary facilities and sewerage system. • Treatment facilities for sewerage of toilet and domestic wastes • Storm water drainage facilities • Provide in-house community/common entertainment facilities, dependence of local entertainment outlets by the construction camps to be discouraged/prohibited to the extent possible.
Solid Waste Management	• Ensure proper collection and disposal of solid wastes within the construction camps • Store inorganic wastes in a safe place within the household and clear organic wastes on daily basis to waste collector. • Establish waste collection, transportation and disposal systems with the manpower and equipment/vehicles needed. • Not to establish site specific landfill sites. All solid waste will be collected and removed from the work camps and disposed in approved disposal sites
Fuel supplies for cooking and heating purposes	• Provide fuel to the construction camps for their domestic purpose, in order to discourage them to use fuel wood or other biomass. • Conduct awareness campaigns to educate workers to protect the biodiversity and wildlife of the project area, and relevant government regulations and punishments on wildlife protection.
Health and Hygiene	• Provide adequate health care facilities within construction sites • Provide first aid facility round the clock. Maintain stock of medicines in the facility • Provide ambulance facility for the laborers during emergency for transferringto nearest hospitals. • Initial health screening of the laborers coming from outside areas • Train all construction workers on basic sanitation and health care issues and safety matters, and on the specific hazards of their work • Provide HIV awareness programming, including STI (sexually transmitted infections) • And HIV information, education and communication for all workers on regular basis

Parameter/Activities	Mitigation/Compensation Measure/Guideline
	• Provide adequate drainage facilities throughout the camps to ensure that disease vectors such as stagnant water bodies and puddles do not form. Regular mosquito repellant sprays during monsoon. • Carryout short training sessions on best hygiene practices to be mandatorily participated by all workers. • Place display boards at strategic locations within the camps containing messages on best hygienic practices
Payment of Wages	• The payment of wages will be as per the Minimum Wages Act, Department of Labor, and Government of Bangladesh for both male and female workers. • Display of the minimum wages board at camps and major construction sites will be made in local languages at the construction and labor camp sites. • Wages will be paid to the laborers only in the presence of BWDB staff; • Contractor is required to maintain register for payment of labor wages with entry of every labor working for him. Also, he has to produce it for verification if and when asked by the DDCS&PMSC, PMUand/or the concerned BWDB staff/DSC's representative • Cotractor to follow the guidelines of prevalent by-laws of Bangladesh Labour Act, 2006.
Rehabilitation of Labor and Construction Camp	At the completion of construction, all construction camp facilities shall be dismantled and removed from the site. The site shall be restored to a condition in no way inferior to the condition prior to commencement of the works. Various activities to be carried out for site rehabilitation include: • Oil and fuel contaminated soil shall be removed and transported or buried in waste disposal areas. • Soak pits, septic tanks shall be covered and effectively sealed off. • Debris (rejected material) will be disposed of suitably. • Underground water tank in a barren/non-agricultural land should be covered. However, the tank shall be removed from agricultural land. • If the construction camp site is on an agricultural land, preserve top soil and good earth can be spread back for a minimum 30cm for faster rejuvenation of the land. • Proper documentation of rehabilitation site is necessary. • This shall include the following: • Photograph of rehabilitated site; • Land owner consent letter for satisfaction in measures taken for rehabilitation of site; and • Undertaking from contractor; In cases, where the construction camps site is located on a private land holding, the contractor would still have to restore the campsite as per the guideline. The rehabilitation is mandatory and will be included in the agreement with the landowner by the contractor. Also, he would have to obtain a certificate for satisfaction from the landowner.
Damage and Loss of Cultural Properties	
Conservation of Religious Structures and Shrines	• All necessary and adequate care shall be taken to minimize impact on cultural properties which includes cultural sites and remains, places of worship including mosques, temples, churches and shrines, etc., graveyards, monuments and any other important structures as identified

Parameter/Activities	Mitigation/Compensation Measure/Guideline
	during design and all properties / sites / remains notified. No work shall spill over to these properties and premises. The design options for cultural property relocation and enhancement need to be prepared. • All conservation and protection measures will be taken up as per design. Access to such properties from the road shall be maintained clear and clean.
	• During earth excavation, if any property is unearthed and seems to be culturally significant or likely to have archaeological significance, the same shall be intimated to the Engineer. Work shall be suspended until further orders from the PD. The Archaeological Department shall be intimated of the chance find and the DDCS&PMSC shall carry out a join inspection with the department. Actions as appropriate shall be intimated to the Contractor along with the probable date for resuming the work. • All fossils, coins, articles of value of antiquity, andstructures and other remains or things of geological or archaeological interest discovered on the site shall be the property of the Government, and shall be dealt with as per provisions of the relevant legislation.
Worker's Accident Risk	
Risk from Operations	• The Contractor is required to comply with all precautions as required for the safety of the workmen as per the International Labor Organization (ILO) convention. The contractor shall supply all necessary safety appliances such as aprons, safety goggles, helmets, masks, boos, etc., to the workers and staff. The contractor has to comply with all regulation regarding safe scaffolding, ladders, working platforms, gangway, stairwells, excavations, trenches and safe means of entry and outlet.
Risk from Electrical Equipment	• Adequate precautions will be taken to prevent danger from electrical equipment. No materials on any of the sites will be so stacked or placed as to cause danger or inconvenience to any person or the public. All necessary fencing and lights will be provided to protect the public. All machines to be used in the construction will conform to the relevant Bangladesh Standards (BS) codes, will be free from patent defect, will be kept in good working order, will be regularly inspected and properly maintained as per BS provisions and to the satisfaction of the DDCS&PMSC.
Risk from Hazardous Activity	• All workers employed on mixing material, cement, lime mortars, concrete etc., will be provided with protective footwear and protective goggles. Workers, who are engaged in welding works, would be provided with welder's protective eye-shields. Stone-breakers will be provided with protective goggles and clothing and will be seated at sufficiently safe intervals.
Malarial Risk	• The Contractor shall, at his own expense, conform to all anti-malarial instructions given to him by the DDCS&PMSC and the EMU, including filling up any borrow pits which may have been dug by him.
Disruption to Users	
Loss of Access	• At all times, the Contractor shall provide safe and convenient passage for vehicles, pedestrians and livestock. Work that affects the use of existing accesses shall not be undertaken without providing adequate provisions to the prior satisfaction of the DDCS&PMSC. • The works shall not interfere unnecessarily or improperly with the convenience of public or the access to, use and occupation of public or

Parameter/Activities	Mitigation/Compensation Measure/Guideline
	private roads, and any other access footpaths to or of properties whether public or private.
Traffic Management	• Special consideration shall be given in preparation of the traffic control plan for the safety of pedestrians and workers at night • The temporary traffic detours in settlement areas shall be kept free from dust by frequent application of water
Traffic Control and Safety	• The Contractor shall take all necessary measures for the safety of traffic during construction and provide, erect and maintain barricades, including signs, markings, flags, lights and flagmen as may be required by the DSC for the information and protection of traffic approaching or passing through the cross section.

10.5 Chance-Find Procedures for Physical Cultural Property

688. The Contractor will be responsible for familiarizing themselves with the following "Chance Finds Procedures" in case culturally valuable materials are uncovered during excavation or any project activities as per Antiquities Act, 1968, including:

- Stop work immediately following the discovery of any materials with possible archeological, historical, paleontological, or other cultural value, announce findings to project manager and notify relevant authorities;
- Protect artifacts as well as possible using plastic covers, and implement measures to stabilize the area, if necessary, to properly protect artifacts;
- Prevent and penalize any unauthorized access to the artifacts; and
- Restart construction works only upon the authorization of the relevant authorities (e.g. UpazilaNirbahi Officer, Deputy Commissioner and Department of Archeology).

10.6 Monitoring Plan

689. Extensive monitoring of the environmental concerns of the CEIP project will be required as per World Bank guideline. The monitoring program will help to evaluate: (i) the extent and severity of the environmental impacts against the predicted impacts and baseline; (ii) the performance of the environmental protection measures or compliance with pertinent rules and regulations; (iii) trends in impacts; and (iv) overall effectiveness of the project environmental protection measures. The monitoring plans should be included in the EMP for specific sub-projects. Moreover, for all type of monitoring, a comprehensive database of the polder specific Environmental Impact and Monitoring information should be created, which will help to evaluate the impacts easily.

690. The Monitoring activities during design/preconstruction period are:

(i) checking the contractor's bidding documents, particularly to ensure that all necessary environmental requirements have been included; and

(ii) checking that the contract documents' (Construction Environmental Action Plan) references to environmental mitigation measures requirements have been incorporated as part of contractor's assignment and making sure that any advance works are carried out in good time.

691. Construction environmental monitoring is a function of supervision, and the essential purpose is to ensure adherence to the EMP. The monitoring is a daily process, which ensures that departures from the EMP are avoided or quickly rectified, or that any unforeseen impacts are quickly discovered and remedied.

692. Post project monitoring evaluation will be carried to evaluate the impacts of the Project during first three (3) years of operation of the Project. Regular monitoring of the condition of the embankment, drainage structures and slope protection structures and afforestation are important from an environmental management point of view. In addition to this activity, information on the locations, type and consequences of flooding, erosion, flora and fauna mortality, availability of fish, occupational shift, migration is required. Recommended air, noise and water quality monitoring, greening and landscaping and community feedback are also included in the Monitoring Plan. The monitoring plan and details of monitoring locations for environmental condition indicators of the project during the construction and operation stage are presented in Table 10.2 and Table 10.3.

Table 10.2: Environmental Monitoring Plan during Construction and Operation of Rehabilitation and Improvement of Polders System

Parameter	Location	Means of Monitoring	Frequency	Responsible Agency	
				Implemented by	Supervised by
During Construction					
Sources of Material	Work Site	Possession of official approval or valid operating license of suppliers materials (Cement, soil).	Before an agreement for the supply of material is finalized.	Contractor	DDCS&PMSC and M&E Consultants, BWDB
Operation of borrow site	Borrow pit/site	Visual inspection of	monthly	Contractor	DDCS&PMSC and M&E Consultants,

Parameter	Location	Means of Monitoring	Frequency	Responsible Agency	
				Implemented by	Supervised by
		borrow site and ensuring operational health and safety			BWDB
Top Soil	Storage area	Top soil of 0.15 m depth should be excavated and stored properly	Beginning of earthwork	Contractor	DDCS&PMSC Consultant, BWDB
	do	The stored top soils should be used as cladding material over the filled lands	Immediately after filling and compaction of dredge materials	Contractor	DDCS&PMSC and BWDB
	Work Site	Some of the top soil are placed on top and berm of embankment for turfing and plantation	At the end of filling activity	Contractor	DDCS&PMSC and BWDB
Erosion	Side slopes of the embankments and material storage sites	Visual inspection of erosion prevention measures and occurrence of erosion	At the end off filling activity	Contractor	DDCS&PMSC and M&E Consultants, BWDB
Traffic safety	Construction area	Visual inspection to see whether proper traffic signs are placed and flagmen for traffic management are engaged	Monthly	Contractor	DDCS&PMSC and BWDB
Air quality (dust)	Construction site	Visual inspection to ensure good standard equipment is in use and dust suppression measures (spraying of waters) are in place.	Daily	Contractor	DDCS&PMSC and BWDB
	Material storage sites	Visual inspection to ensure dust suppression	Monthly	Contractor	DDCS&PMSC and BWDB

Parameter	Location	Means of Monitoring	Frequency	Responsible Agency	
				Implemented by	Supervised by
		work plan is being implemented			
Air Quality (PM_{10}, $PM_{2.5}$)	Close to School/ Madrasha, Hospital &Villages	Air quality monitoring	Half Yearly	Contractor through a nationally recognized laboratory	DDCS&PMSC, M&E Consultants and BWDB
Noise	Construction sites	Visual inspection to ensure good standard equipment are in use	Weekly	Contractor	DDCS&PMSC, M&E Consultants and BWDB
	Construction sites	Ensure work restriction between 09:00 pm-6:00 am close to School/ Madrasha, Hospital & Villages	Weekly	Contractor	DDCS&PMSC, M&E Consultants and BWDB
Surface Water Quality (TDS, Turbidity, pH, DO, BOD, COD etc.)	Water sample at each of river for each polder	Sampling and analysis of surface water quality	During dry season	Contractor through a nationally recognized laboratory	DDCS&PMSC, M&E Consultants and BWDB
Drinking Water Quality (TDS, Turbidity, pH, FC, as if groundwater etc.)	Sources of drinking water at construction camp/site	Sampling and analysis of water quality	yearly	Contractor through a nationally recognized laboratory	DDCS&PMSC, M&E Consultants and BWDB
Waste Management	Construction camp and construction site	Visual inspection of collection, transportation and disposal of solid waste and solid waste is deposited at designated site	Weekly	Contractor	DDCS&PMSC, M&E Consultants and BWDB
Reinstatement of Work Sites	All Work Sites	Visual Inspection	After completion of all works	Contractor	DDCS&PMSC, M&E Consultants and BWDB
Top Soil	Storage area	Top soil of 0.15 m depth should be excavated and stored properly	Beginning of earthwork	Contractor	DDCS&PMSC and BWDB
	Storage area	The stored top	Immediately	Contractor	DDCS&PMSC and

Parameter	Location	Means of Monitoring	Frequency	Responsible Agency	
				Implemented by	Supervised by
		soils should be used as cladding material over the filled lands	after filling and compaction of dredge materials		BWDB
	Work Site	Some of the top soil are placed on top and berm of embankment for turfing and plantation	At the end of filling activity	Contractor	DDCS&PMSC and BWDB
Workers' Health safety	Workers' camp site and work site	Use of PPE by the workers, provision of safe drinking water, sanitation and first aid facilities	Daily	Contractor	DDCS&PMSC and BWDB
Habitat Condition	Khals	Observation	Four (4) times of year (dry & wet season)	Consultancy farm	DoF, BFRI, DDCS&PMSC, M&E Consultants and BWDB
Fish Migration		Catch Assessment Survey	Two (2) times of year (dry & wet season)	Consultancy farm	DoF, BFRI, DSCS, M&E Consultants and BWDB
Vegetation clearance	Each of construction sites at embankment and proposed khal bank	Survey and comparison with baseline environment	Quarterly	Contractor through nationally recognized institute	DDCS&PMSC, M&E Consultants and BWDB
During Operation and Maintenance					
Surface Water Quality (TDS, Turbidity, pH, DO, BOD, COD etc)	Water sample at each of river for each polder	Sampling and analysis of surface water quality	Yearly	BWDB through a nationally recognized laboratory	M&E Consultant
Air Quality (Dust PM_{10}, $PM_{2.5}$)	At the baseline monitoring site	24 hours Air quality monitoring	Yearly	BWDB through a nationally recognized laboratory	M&E Consultant
Operation of hydraulic structure	In the project area	Visual inspection and public feedback	Yearly	BWDB	M&E Consultant
Crop production	In the polder area	Compare the production with the baseline	3 (Three) cropping season	BWDB through a nationally recognized institution	M&E Consultant
Soil quality	In the polder area	Compare the soil quality with the baseline	Two (2) times of year (dry & wet season)	SRDI	Consultant

Parameter	Location	Means of Monitoring	Frequency	Responsible Agency	
				Implemented by	Supervised by
Habitat Condition	Khals	Observation	Four (4) times of year (dry & wet season)	Consultancy farm	DoF, BFRI, DDCS&PMSC and BWDB
Fish Migration		Catch Assessment Survey	Two (2) times of year (dry & wet season)	Consultancy farm	DoF, BFRI, DDCS&PMSC, M&E Consultants and BWDB
Fishing Activities and Stock susceptibility		Catch Assessment Survey	Two (2) times of year (dry & wet season)	Consultancy farm	DoF, BFRI, DDCS&PMSC and BWDB
Bagda/Golda Gher and Fish Farm	Polder Area	Farm Survey	Four (4) times of year (dry & wet season)	Consultancy farm	DoF, BFRI, DDCS&PMSC,M&E Consultants and BWDB

(Source: MRDI, 2011, LGED, 2011)

Table 10.3: Environmental Monitoring Plan during Construction and Operation of Afforestation

Parameter	Location	Means of Monitoring	Frequency	Responsible Agency	
				Implemented by	Supervised by
During Implementation					
Water Quality	Water bodies near nursery	Odor and chemical testing	Half yearly	Contractor through nationally recognized laboratory	DDCS&PMSC, M&E Consultants and BWDB
Plant species selection	Nursery	Visual inspection. Type and variety of plant species to be planted for turfing on the top of embankment and foreshore	Before plantation	Contractor	DDCS&PMSC, M&E Consultants and BWDB
Waste Management	Afforestation sites and Nursery	Visual inspection of collection, transportation and disposal of poly bags, debris and is deposited at designated site	Weekly	Contractor through nationally recognized institute	DDCS&PMSC, M&E Consultants and BWDB
During Operation and Management					
Erosion	Along Alignment	Visual Inspection presence of gullies or erosion	Yearly	BWDB	M&E Consultant
Survival and growth of coastal afforested saplings and turfed grasses	Proposed afforestation foreshore area and re-sectioned embankment	Survey and comparison with baseline environment	Yearly	Contractor through nationally recognized institute	DDCS&PMSC, M&E Consultants and BWDB

Parameter	Location	Means of Monitoring	Frequency	Responsible Agency	
				Implemented by	Supervised by
Faunal composition	Proposed afforestation foreshore area and along the re-sectioned embankment	Survey and comparison with baseline environment	Yearly	Contractor through nationally recognized institute	DDCS&PMSC, M&E Consultants and BWDB

10.6.1 Qualitative Spot Checking Indicators

667. Moreover, a rapid environmental monitoring will be carried out as per the following checklist in terms of visual judgment during field visit as a control of the implementation of the Environmental Mitigation plan. Table 10.4 can be followed during the construction phase.

Table 10.4: Spot Checking Indicator

Parameter	Visual Judgment			
	Poor	Moderate	Satisfactory	Comments
Workers' Safety (provision of PPE, safe drinking water, sanitation facility, first aid facility etc.)				
Hoisting of signboard for work				
Camp Site Management				
Plant Site Management				
Borrow Area Management				
Top Soil Prevention				
Waste Management				
Occupational Health and Safety				
Stockpiling of construction materials				
Reporting and Documentation				

10.7 Third Party Validation

694. BWDB will engage independent consultants to conduct a third party validation (TPV) of the EMP implementation on a yearly basis during the construction phase. During the TPV, the consultants will review the implementation and effectiveness of various EMP activities including mitigation measures, environmental monitoring, trainings, and documentation. The consultants will also identify gaps and non-compliances in EMP implementation and propose actions for their remediation.

10.8 Documentation, Record keeping and Reporting

10.8.1 Record Keeping

695. Proper arrangements are necessary for recording, disseminating and responding to information which emerges from the various environmental monitoring and management programs. They are also necessary for rendering the environmental management system

"auditable". However, the primary focus must remain on the pragmatic control of pollution, not the creation of complex bureaucratic procedures. BWDB will maintain database of the polder specific Environmental Impact and Monitoring information for keeping all type of monitoring record. The ESCU will assist BWDB for keeping those records initially. The trained BWDB staff will take the responsibility of record keeping and monitoring during operation phase.

10.8.2 Monitoring Records

Quantitative Physical Monitoring

696. The objective of quantitative physical monitoring is to ensure that the mitigation measures designed to prevent, reduce and where possible offset any significant adverse impacts on the environment are being implemented throughout the Project lifecycle. The DDCS&PMSC will regularly monitor and provide information to ESCU for updating the database. The DDCS&PMSC will provide the following information bi-weekly to ESCU, if not urgent.

- Sampling points;
- Dates and times of sample collection;
- Test results;
- Control limits;
- "Action limits" (circa 80 percent of the control limits) at which steps must be taken to prevent the impending breach of the control limit; and
- Any breaches of the control limits, including explanations if available.

697. The monitoring data would be continually processed as it is received, so as to avoid a buildup of unprocessed data.

General Site Inspections and Monitoring

698. A Site Inspection Checklist for recording the findings of the general site condition surveys would be developed by the respective contractors, on the basis of the Environmental Mitigation Plan described in Chapter 6 and Table 6.11, during the construction phase. The Site Inspection Checklist would be supported by sketches, as necessary.

10.8.3 Information Sources

699. A complete and up-to-date file of all relevant sources of information should be maintained by the ESCU of PMU. This file would be readily accessible and include, as a minimum, copies of the following documents:

- Current environmental permits and consents;
- Action to fulfill the requirement of annual site clearance for polder area
- All relevant national regulations, international guidelines and codes of practice;
- Manufacturers' MSDSs for all hazardous substances used on the plant;
- Manufacturers' operating manuals for all the environmental monitoring equipment;
- Current calibration certificates for all the equipment that requires calibration by an external organization; and
- The latest version of this Environmental Management and Monitoring Plan.

10.8. 4 Non-Compliance Report

700. Any breaches of the acceptable standards specified, would be reported to the PMU using a standard form, i.e. a Non-Compliance Report (NCR).

701. A copy of each completed NCR would be held on file by DDCS&PMSC, to be replaced by the reply copy when it is received. A record of corrective actions would also be made and tracked to their completion.

10.8.5 Monthly Internal Reports by DDCS&PMSC

702. The DDCS&PMSC will prepare a monthly report for issue to the ESCU of PMU. These reports will summarize the following:

- Progress in implementation of EMP;
- Findings of the monitoring programs, with emphasis on any breaches of the control standards, action levels or standards of general site management;
- Any emerging issues where information or data collected is Very goodly different from the baseline data reported in the Environmental Assessment;
- Outstanding NCRs;
- Summary of any complaints by external bodies and actions taken / to be taken; and
- Relevant changes or possible changes in legislation, regulations and international practices.

10.8.6 Bi-annual Progress Report by BWDB

703. ESCU of BWDB will prepare the Bi-annual progress report on environmental management and will submit to the World Bank for review during construction phase. The progress report will summarize the information presented in Article 10.6.

10.8.6.1 EMP complianceEnvironmental Audit Report & Third Party Monitoring Report

704. It is expected that BWDB will conduct annual environmental audits. In addition, the environmental audit will be carried out before the mid-term evaluation and before project closing. All Environmental Audit Report will be shared with Bank. Environmental monitoring will be conducted during the project.

Third Party Monitoring

705. The Third Party Monitoring consultants will monitor the quality of environmental compliance and will share their findings with the World Bank.

Donor Agency/WB Monitoring

706. The Donor Agency/WB will also monitor from time to time the quality of environmental compliance as part of their regular implementation support missions.

10.9 Contractual arrangements for EMP implementation

707. A fixed Budget will be assigned for EMP implementation. The contractors may need orientation on the requirement of the EMP in the pre-bidding meeting. The contractor needs to submit a Construction Environmental Action Plan (CEAP) based on the EIA including the EMP in line with the construction schedule and guideline. The CEAP needs to be reviewed by the supervision consultant and cleared by BWDB and World Bank.

10.9.1 Guideline to Incorporate Environmental Management in Bid Document & Preparation of EAP

- Prepare cost estimates, to be incorporated in Bid Documents.
- The EMP along with the good environmental construction guidelines to be incorporated in the bid document's work requirements.
- Preparation of work requirement (addendum/corrigendum to polder & hydraulic structure construction/afforestation) and
- Corrigendum / Addendum to polder/embankment specification, if any, as special provisions to be incorporated in bid document.
- Penalty clauses for not complying with EMP requirements to be incorporated. Indicative penalty clauses proposed in the CEIP-I are presented below (Addendum to Clause 17.2 Contractor's Care of the Works of FIDIC).
- The contractor has to follow all traffic safety measures as defined in the technical specification. Damage shall be levied at the rate Tk. 3000/- per day per location for non – conformity of traffic safety measures as per the decision of the engineer.
- The contractor has to follow all environmental mitigation measures as defined in the technical specification read along with the Environmental Management Plan for the specific CEIP activities. Damage shall be levied at the rate Tk. 3000/- per day per location for nonconformity of Environmental Management Plan measures as per the decision of the BWDB Engineer.
- The contractor has to ensure that prior to every monsoon season, during the construction period; all the temporary and permanent cross drainage structures are free from debris as defined in the Technical Specifications read along with the Environmental Management Plan. Damage shall be levied at the rate of Tk.3000/- per day per location for non-conformity as per the decision of the Engineer.
- The contractor has to ensure that sufficient numbers and good quality Personnel Protective Equipment (PPE), should be provide to staff and labor all time as defined in the labor codes read along with the EMP. Damage shall be levied at the rate of Tk. 1000/- per day for non-conformity as per the decision of the Engineer.

10.9.2 Guideline for Compensation and Contingency Plan during Project Period

708. Compensation becomes necessary when project impacts cannot be mitigated satisfactorily. This can be paid in cash or kind and the emphasis should be on ensuring fairness and causing minimum inconvenience to the affected party. The most common cause of compensation payment is displacement of people and loss of productive land due to land acquisition, tree cutting, or property damage. Such impacts can rarely be fully compensated. The compensation should be given as per provision of the Resettlement Action Framework. Any disputes over the compensation should be handles by the Grievance Redress Committee.

709. In addition to the compensation, water management projects should also have a contingency plan to deal with emergencies and accidents. Such incidences encompass a whole range of situations from personal injury during operation of a machine to breaching of an embankment. Therefore, BWDB would prepare for the following emergency situations:

- Embankment failure during a flood – keep sufficient numbers of sand bags in reserve.
- Bank caving/erosion – keep sufficient numbers of concrete blocks and sand bags in reserve.
- Have an emergency evacuation plan for the people in the line of danger.

10.10 EMP Implementation Cost

710.The estimated costs for the environmental management and monitoring activities are set in Table 10.5.

Table 10.5: Tentative Cost Estimates for Environmental Management and Monitoring*

Sl. No	Description of EMP activities	BDT	In Thousand $
1.	Crop compensation to the indirect loser/ land owner/ share croppers of construction sites /damage to dredge spoils	75715.00	946.44
2.	Soil quality monitoring including N,P,K, S, Zn, salinity, organic Matter, pH etc. during preconstruction, construction and post construction period 6 samples in polder 47/2 = 6 samplesx3 times @ Tk.5,000	90000.00	1125.00
3.	Habitat Observation for four (4) times of year (dry & wet season).	50000.00	625.00
4.	Construction of fish sanctuary in perennial khals	50000.00	625.00
5.	Catch Assessment Survey for two (2) times of a year (dry & wet season).	142500.00	1781.25
6.	Farm Survey for four (4) times of year (dry & wet season).	60000.00	750.00
7.	Awareness program on plant and wild life conservation.	96000.00	1200.00
8.	Consultancy services cost for supervision and monitoring of EMP	276440.00	3455.50
9.	Training to the farmers with field demonstration regarding IPM and ICM.	80000.00	1000.00
10.	Awareness building up to local community for conservation of threatened fish species.	40000.00	500.00
11.	Training to the fisherman/pond owner with field demonstration regarding pond culture.	40000.00	500.00
12.	Release fish fry in the khals inside the Polder after completion of construction works.	37500.00	468.75
13	Air and noise quality monitoring and analysis.	200000.00	2500.00
14	Solid and liquid waste disposal arrangement.	60000.00	750.00
15	Capacity building and training to the WMOs regarding gate operation, post project monitoring	900000.00	11250.00
16	Consultancy services cost for river bank erosion monitoring	1200000.00	15000.00
17	Training to the Contractors regarding environmental management	100000.00	1250.00
18	Training of Environmental awareness of local population	80000.00	1000.00
19	Updating EMP as per requirement.	100000.00	1250.00
20	Construction of alternative or bypass channels at each construction sites.	1061053.00	13263.16
21	Materials for net pen culture (at least 25 households in each word/council of a Union).	324000.00	4050.00
22	Conservation and stocking of threatened fish species (at least 3 spots).	120000.00	1500.00
23	Conserve threatened animals	300000.00	3750.00

Sl. No	Description of EMP activities	BDT	In Thousand $
24	Campaigning and providing training on improved culture practices as well as the rice cum golda farming.	200000.00	2500.00
25	Emergency budget allocation for closing breach points of embankments and repairing the damage of structure	1200000.00	15000.00
26	Surface and ground Water quality monitoring cost (testing for Turbidity, pH, DO, BOD, Salinity etc. + test of As, e etc. for HTWs at workers' camp site) 6 samples in polder-47/2 during pre-construction, construction and post-construction periods + water quality analysis of HTWs of 10 workers' camp= (Tk.4,000x6x3) + (Tk.700X10)	79000.00	987.50
27	Additional Tree Plantation at HH and other grounds to compensate the tree cutting (planting 3 trees for cutting 1tree) @ Tk.50 each tree including the cost of sapling, gabion and nursing etc. (19,834 nos. of trees)	991700.00	12396.25
28	Water sprinkling at re-sectioned/newly constructed embankments (@ Tk.3,000 per km (of embankment 17.49 km)	51750.00	646.88
29	WMOs monitoring cost	120000.00	1500.00
Total cost of EMP		**8125658**	**101570.73**

Note: 1 $= 80 BDT

10.11 EMP Updating

711. The study infers that the EMP has been developed assessing the impacts of interventions on the basis of baseline and prediction information. But monitoring has to be carried out to collect information on the impacts at actuality resulted due to construction of interventions. Furthermore, actual information due to implementation of the EMP measures need to be collected for updating the EMP to make the development more environmental friendly as because EMP is not an one time plan rather it is a plan which needs updating continuously.

10.12 Grievance Redress Mechanism

712. BWDB will establish a Grievance Redress Mechanism (GRM) as a means to ensure social accountability and to answer to queries and address complaints and grievances about any irregularities in application of the guidelines adopted in this EMF for assessment and mitigation of social and environmental impacts. Based on consensus, the procedure will help to resolve issues/conflicts amicably and quickly, saving the aggrieved persons from having to resort to expensive, time-consuming legal action. The procedure will however not pre-empt a persons right to go to the courts of law.

10.12.1 Grievance Redress Focal Points

713. A Grievance Redress Committee (GRC) at local level will be formed for each Union with union level representation to ensure easy accessibility by the project affected persons and communities. This local GRC will be the local focal points of the project GRM. The GRM sets out the information and communications strategy to ensure that PAPs and communities are fully informed about their rights to offer suggestions and make complaints. All grievances received through the GRM process will primarily be forwarded to the GRCs. The Secretariat for each GRC will be at the office of the Executive Engineer. If any grievance is not resolved at GRC, the

aggrieved person may request the convener of GRC to forward the case to the Project Director at PMU. The GRC will officially forward the cases with their comments to the Project Director. Hearing of petitions with GRCs will be held at the Convener's office or at Union Parishad/Ward Councilor's office as agreed by the committee members. The membership of the GRCs will ensure proper presentation of complaints and grievances as well as impartial hearings and investigations, and transparent resolutions.

Membership of GRC

1. Executive Engineer (BWDB Division Office) : Convener
2. Representative of the RP Implementing NGO : Member-Secretary
3. Local UP Chairman /Ward Councillor : Member
4. Teacher from Local Educational Institution (nominated by Upazila Administration) :Member
5. Representative from Local Women's Group :Member
6. Representative from the PAP Group :Member

714. Members of the GRCs will be nominated by the Executive Engineer at division level and approved by the Project Director, PMU, BWDB, Dhaka.

10.12.2 Grievance Resolution Process

715. All complaints will be received at the GRCs facilitated by the implementing agency. The aggrieved persons may opt to make complaints directly to the Project Director or Secretary of the MoWR or even to the court of law for resolution. The Member Secretary will review and sort the cases in terms of nature of grievance, urgency of resolution, and schedule hearings in consultation with the Convener. All cases will be heard within four weeks from the date of receiving the complaints.

716. If the resolution attempt at the local level fails, the GRC will refer the complaint with the minutes of the hearings to the Project Director at PMU for further review. The Project Director will assign the ESCU at PMU for review the grievance cases and assist Project Director in making decision. The ESCU will review the case records and pay field visits for cross examining and consult the GRC members and aggrieved persons, if required. If a decision at this level is again found unacceptable by the aggrieved person(s), BWDB can refer the case to the MoWR with the minutes of the hearings at local and headquarters levels. At the ministry level, decisions on unresolved cases, if any, will be made in no more than four weeks by an official designated by the Secretary, MoWR. A decision agreed with the aggrieved person(s) at any level of hearing will be binding upon BWDB. The GRM Process is shown in Figure 10.3.

717. To ensure that grievance redress decisions are made in formal hearings and in a transparent manner, the Convener will apply the following guidelines:

- Reject a grievance redress application with any recommendations written on it by a GRC member or others such as politicians and other influential persons.
- Remove a recommendation by any person that may separately accompany the grievance redress application.
- Disqualify a GRC member who has made a recommendation on the application separately before the formal hearing:

- A GRC member when is removed, appoint another person is to be appointed in consultation with the Project Director.

The Convener will also ensure strict adherence to the impact mitigation policies and guidelines adopted in this SMRPF and the mitigation standards, such as compensation rates established through market price surveys.

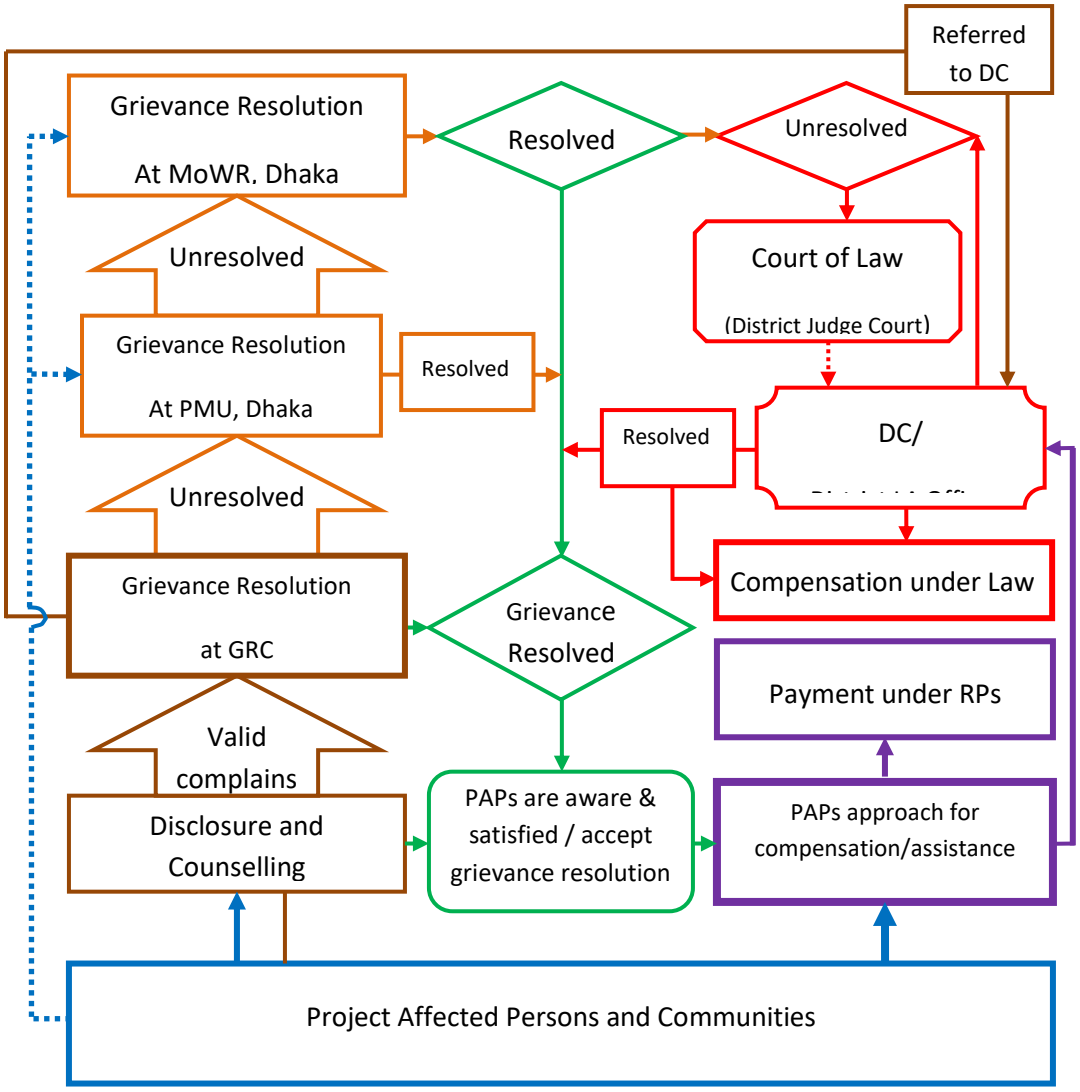

Figure 10.3: GRM Process flow Chart

10.12.3 GRM Disclosure, Documentation and Monitoring

718.The affected persons and their communities will be informed of the project's grievance redress mechanism in open meetings at important locations and in PAP group meetings. Bangla translations of the EMF and the GRM in the form of information brochures will be distributed among the project affected persons. The PAPs will also be briefed about the scope of the GRC, the procedure for lodging grievances cases and the procedure of grievance resolution at the project level.

719. To ensure impartiality and transparency, hearings on complaints will remain open to the public. The GRCs will record the details of the complaints and their resolution in a register,

including intake details, resolution process and the closing procedures. BWDB will maintain the following three Grievance Registers:

Intake Register: (1) Case number, (2) Date of receipt, (3) Name of complainant, (4) Gender, (5) Father or husband, (6) Complete address, (7) Main grievance regarding social (loss of land/property or entitlements) or environmental, (8) Complainants' story and expectation with evidence, and (8) Previous records of similar grievances.

Resolution Register: (1) Serial no., (2) Case no.,(3) Name of complainant, (4) Complainant's story and expectation, (5) Date of hearing, (6) Date of field investigation (if any), (7) Results of hearing and field investigation, (8) Decision of GRC, (9) Progress (pending, solved), and (10) Agreements or commitments.

Closing Register: (1) Serial no., (2) Case no., (3) Name of complainant, (4) Decisions and response to complainants, (5) Mode and medium of communication, (6) Date of closing, (7) Confirmation of complainants' satisfaction, and (8) Management actions to avoid recurrence.

720. Grievance resolution will be a continuous process in RP implementation. The PMU and SMOs will keep records of all resolved and unresolved complaints and grievances (one file for each case record) and make them available for review as and when asked for by WB and any other interested persons/entities. The PMU will also prepare periodic reports on the grievance resolution process and publish these on the BWDB website. The format of SMF may be used for periodic grievance reporting.

10.13 Capacity Building

721. Since the effectiveness of the Environmental Assessment & implementation depends considerably on the understanding and preparedness of their Engineers and in particular their Environmental Team (Consisting of Contracto, Environmental specialist, Consultant environmental specialist and ESCU of BWDB). It is important that the project authority makes effort to sensitize the Engineers and Environmental Team on management of environmental issues, provides guidance, and encourages them to build requisite capacities. Table 10.6 provides a summary of various aspects of the environmental and social trainings to be conducted at the construction site. PMU may revise the plan during the Project implementation as required.

722. During the O&M phase of the Project, these trainings will continue to be conducted by BWDB staff for all relevant O&M personnel and community.

Table 10.6: Environmental Training

Contents	Participants	Responsibility	Schedule
General environmental and socioeconomic awareness; Environmental and social sensitivity of the project area; Key findings of the EIA; Mitigation measures; EMP; Social and cultural values of the area.	Selected BWDB; PMU and DDCS&PMSC staff	DDCS&PMSC & ESCU	Prior to the start of the Project activities (To be repeated as needed.)
General environmental and socioeconomic awareness; Environmental and social sensitivity of the project area; Mitigation measures;	PMU; DDCS&PMSC; selected contractors' crew	DDCS&PMSC & ESCU	Prior to the start of the field activities. (To be repeated as needed.)

Contents	Participants	Responsibility	Schedule
Community issues; Awareness of transmissible diseases Social and cultural values.			
EMP; Waste disposal; HSE	Construction crew	Contractors	Prior to the start of the construction activities. (To be repeated as needed.)
Road/waterway safety; Defensive driving/sailing; Waste disposal; Cultural values and social sensitivity.	Drivers; boat/launch crew	Contractors	Before and during the field operations. (To be repeated as needed.)
Camp operation; Waste disposal; HSE Natural resource conservation; Housekeeping.	Camp staff	Contractors	Before and during the field operations. (To be repeated as needed.)
Restoration requirements; Waste disposal.	BWDB core unit, Restoration teams	Contractors	Before the start of the restoration activities.
Strengthening of water management organizations(i.e. WMGs, WMAs and WMF) and beneficiaries organizations	Member of water management organizations(i.e. WMGs, WMAs and WMF) and beneficiaries organizations	BWDB, ESCU, Contractor	Before and during construction activities

723. Capacity building training programs should be undertaken in the following area:

- Training of the management level officials of BWDB, BWDB environmental compliance personnel on the overall environmental concerns and responsibilities for implementing EMP;
- Recruitment of new professionals with background on environment, if required and provide necessary training ;
- Organizing workshop, seminar, with stakeholders on the environmental concerns of CEIP ;
- Special training program for the contractors and workers on the EMP and their responsibilities, who will actually be involved in the construction of the project interventions. The Contractors will be provided guideline for preparation of Environmental Action Plan in line with the construction work plan;
- Training of the WMOs on successful operation of hydraulic structures; and
- Training on structured format in reporting for all stages of implementation and those of relevant agencies who are involved in EMP implementation.

724.The training programs should be arranged before implementation of the interventions in the Polder area. A Detail plan can be made by the proposed ESCU of BWDB.

Annexure 6: Consultation meeting in CEIP-1

Amongst the five components of The CEIP-1; one component is related to safeguard (Component B– Implementation of Social Action and Environment Management Plans). Hence Public Disclosures/Consultation Meeting with Project Beneficiary (**PB**)/project affected person (**PAP**) is a regular practice in CEIP-1. Different Environment, Social and community rights are discussed in these consultation meeting. The beneficiaries are being directly advantaged through consultation meeting/public disclosure. They are able to come in contact with project authorities and donor agencies. They seek to get such kind of scope during implementation the polder works. Different consultation meetings Tabulated below fulfill the different demand of Project Beneficiary in different locations of CEIP-1.

Title of consultation/ Disclosure	Responsible team	Polder	Date	Outcome
Open disclosure with community	CEIP-1 Env. team	35/1	January 6, 2020	The community inspired to involve in forestation and water management activity
Consultation with WMO members	CEIP-1 Env. team	32	January 16, 2020	The WMO provided cooperation in closure work
Consultation with PAP	CEIP-1 Env. team & WB	35/1	January 22, 2020	Community provide their concern to sustain the emergency work at Bogi area
Open disclosure with community	CEIP-1 Env. team	32	February 17, 2020	People stayed in safe area while final closing day of Nalian closure
Public consultation with WMO	CEIP-1 Env. team	35/1	March 6, 2020	WMO felt interest to involve in water management activity
Public consultation with community	CEIP-1 Env. team	35/1	March 6, 2020	The community inspired to form WMO
Open disclosure with community	CEIP-1 Env. team	41/1	March 11, 2020	The community become alert about Covid-19 pandemic
To check the effects of constructed toilets at nearest community	CEIP-1 Env. team	40/2	March 12, 2020	The community did not feel any disturbance from constructed toilets
Public consultation to be tackled the Super cyclone Amphan	CEIP-1 Env. team	35/1	May 16, 2020	The community become alert about Super cyclone Amphan and follow Govt. instructions
Public consultation to be tackled the Super cyclone Amphan	CEIP-1 Env. team	32	May 18, 2020	The community inspired and made free the area for embankment

				construction
Consultation with DoF personnel of Bagerhat	CEIP-1 Env. team & NGO	35/1, 35/3	June 2, 2020	Finalized the beneficiaries lists for social forestation
Consultation with DoF personnel of Khulna	CEIP-1 Env. team & NGO	32, 33	June 3, 2020	Finalized the beneficiaries lists for social forestation
Consultation with Social forest group	CEIP-1 Env. team & NGO	33	June 3, 2020	Confirmed the right nursing of embankment forestation

Some images on consultation meeting/public disclosure

Fig. 1: Public disclosure to tackle super cyclone Amphan at P-32, Package-1

Fig. 2: Public disclosure to tackle super cyclone Amphan at P-35/1, Package-1

Fig. 3: Public Disclosure for WMG activity in Polder-35/1, Package-1

Fig. 4: Meeting conducted with ACF, DoF, Bagerhat, Package 1

Fig. 5: Public consultation for social forestry in P-33, Package-1

Fig. 6: Safety talking with worker about Covid-19 in Polder-41/1, Package-2

Annexure 7: Status of Implementation of the action plan of third Annual Environmental Audit

SI	Proposed Actions	Status	Remarks
1	Contractors of both Packages should follow the findings and recommendations of this audit.	Being followed	Continuous
2	The DDCS&PMS Consultants and PMU should consider the recommendations for the upcoming Package 03 where applicable.	To be followed	New phase may cascade the learning
3	The audit report should be shared with the Contractors, Consultants, relevant sub-Consultants, and PMU staff.	Done	-
4	The EHS monitoring registers those have been maintained in the worksites should also track the compliance with their status with dates. Maintaining a table would be an effective tool to give an impression on compliance and non-compliance. It is also recommended that MPR of DDCS&PMS Consultant include the compliance and non-compliance status.	Done	This has been practiced and this need be continued
5	Most of the latrines being used by the workers at work site were found to be unhygienic, with no water seals and some of them found close to nearby water bodies. It is highly recommended that both the Contractors ensure hygienic latrines for the workers, ensure water seal with each of them and it should be also ensured that latrines are not installed within 10-meter range with nearby water bodies or drinking water sources.	Done	Still there is scope of further improvement as many of the latrines found not hygienic yet which is reflected in section of Polder-specific findings.
6	Along with other Polders, it is recommended that the Contractor of Package 02 concentrate on complying EHS issues at Polder 47/2 and 48 for which the audit found poor EHS practices.	Done	
7	Contractor of the Package 02 is recommended to prepare Polder wise monthly report on EHS training with dates, number of participants and name of topics and preserve the reports.	Done	-
8	The Contractor 02 was found keeping good records on toolbox talk which has not been followed by the Contractor of Package 01. It is recommended that the Contractor of Package 01 follow this practice and they can also follow the simple format that has been adopted by the Contractor of Package 02.	Done	Both contractors are following this.

SI	Proposed Actions	Status	Remarks
9	The Contractor of Package 02 should carry out the testing with defined frequencies for all the required environmental parameters and should preserve the testing results.	Done	Followed and should carry out every year
10	It is recommended that the Contractor of Package 02 carry out environmental monitoring by the Bi-monthly environmental inspection Checklist and submit the report to DDSC & PMS Consultants twice a month. This practice has been carried out by the Contractor of Package 01 regularly.	Done	Both the Contractors submitting the Bi-monthly environmental monitoring checklist (filled) as report twice in a month.
11	Contractor's EAPs and C-ESMPs should be improved continuously as those are living documents. The monitoring frequencies spelled out in the EAPs and C-ESMPs should be consistent with the monitoring frequencies defined with the CEIP-1's EMPs.	Done	
12	A Water Quality Assurance Plan (WQAP) for drinking water supplied for the workers should be developed and implemented which was also recommended by second Annual Environmental Audit. The WQAP plan will define the quality monitoring frequency, system and protocols with response in case of the water quality found not within applicable standards.	Done	
13	The team recommends that the environmental monitoring testing should be done by the both contractors for noise, air, water and soil by defining the sites to be followed by the same location over the project duration to see the impacts/ changes.	Done	Contractors are taking samples at the same locations that was provided by the DDCS&PMS Consultant (same locations for every year)
14	The twice-monthly inspection should cover all the types of works as it was observed to emphasize less on some of the sites like borrow pits, excavation and re-excavation of the canal.	Done	-
15	The practice of using PPE should be enhanced.	Improved	Package 02 should improve more
16	The forklift and CC plant Safety Procedure Manual should be in place in the relevant worksites of Package 02. This practice has been adopted by the Contractor of Package 01.	Done	-
17	The PMU with the help of DDSC & PMSC need to identify the issues and stakeholders/ agencies need to take part to implement the EMP, enhance coordination and sign MoU with them.	Done	To be continued

SI	Proposed Actions	Status	Remarks
18	Both contractors of CEIP-1 are recommended to arrange exchange visit for learning and scale up of practices for improvement environmental compliance in their Packages.	Done	Due in 2020 due to Covid-19 out break
19	Some of the recommendations and findings of last year's audit still remain relevant and the audit recommends to follow those along with the findings of this audit.	Done	-

Annexure 8: Role of EHS Officers

The Role of Chinese and Local EHS officer of the contractor are depicted as follows

EHS persons	**:**	**Chinese EHS Manager**
Educational Qualification	**:**	Higher Degree/ Post Diploma
Area of Specialization	**:**	Environmental Science/ Health Safety/ Disaster Management/ Environmental Health/ Coastal Environment/ Environmental Education/Environmental Science/Environmental Changes/Environmental Conservation/ Environmental Development
Experiences	**:**	At least 5-7 years in relevant field. Special courses on EIA will be added an extra expertise.
Key roles	**:**	• Site set up as per Environmental consequences. • Preparation of EHS document as per guide line of EIA/EMP. • Updated the EHS documents as per instructions of designated Environmentalist of the Project/Donor part. • Preparation of Safety procedures and circulated accordingly. • Site monitoring and discussed with Project Management part. • Make planning accordingly findings/observations of Project authority. • Make Emergency plan and implemented accordingly. • Identify risk area and seeking required mitigation measures. • Preparation of Monitoring Check list and filled accordingly. • Preparation of Safety Signboard and assured the placing. • Liaison with traffic management team. • Liaison with Health Safety team/Local Disaster Management authority. • Environmental Monitoring. • Conducting training for local EHS officer and supervisors. • Reserve the EHS legal documents. • Checking the fortnightly filled inspection check list. • Monitoring the Tool-box/Safety training.

EHS persons	**:**	**Local EHS Officer**
Educational Qualification	**:**	Diploma/Equivalent course

Area of Specialization	:	Science/Technical/Applied / Advanced Background
Experiences	:	At least 2 -3 years in relevant field. Working in Construction farm may be counted as special expertise.
Key roles	:	• Assist Chinese EHS manager. • Assured the frequent/enough practices for PPE uses in project site. • Assured the efficient waste management system in construction sites/camp. • Environmental data collection/sampling. • Conduction regular tool-box talking. • Conducting periodic safety training for the workers. • Liaison with local community. • Regular checking the signage board. • Assured the pure drinking water facilities. • Assured the FAF for project staff and workers. • Ensured proper sanitation. • Records Keeping. Maintaining the EHS documents.

Annexure 9: Status of Implementation of the WB Aid memoire action plan

The following key actions were mutually agreed with the CEIP-I PMU during the Implementation Support Review August 16-20, 2020:

Sl	Actions	Agreed time line as per August 16-20, 2020	Update Status as on November 8, 2020
47	Prepare Emergency Preparedness Plan (EPP) by taking the suggested COVID-19 measures	October 31, 2020	Prepared and expected to be shared with the WB by December, 2020
48	Submission of Bi-annual report	October 31, 2020	Already prepared and expected to be shared with the WB by December, 2020
49	EIA for Polder 15, 16, 17/1, 17/2, 24 and 34/3 under W-03 to be finalized in accordance to the comments provided for Polder 14	November 30, 2020	EIA for Polder 15 and 16 are ready for sharing. Remaining are expected to be shared with WB by December 31, 2020
50	Conduct Environmental sampling/testing in Packages-1 & 2 for the year of 2020	Continuous	Expected to be conducted by December 31, 2020
51	4th Annual Environmental Audit Report (Revised version) for the year of 2019 to be finalized	October 15, 2020	Already prepared and expected to be shared with the WB by December, 2020
52	Prepare action plan for the 4th Annual Environmental Audit Report	October 31, 2020	Expected to be shared with WB by December 15, 2020
53	Revise the "Grievance Collection Box" report and ensure the number of boxes are increased relocated in less visible places as suggested.	October 31, 2020.	Expected to be ensured in construction sites by December 31, 2020

54	PMU should implement the GRM and record the grievances and share the status in the MPR.	Monthly	Will be included in the monthly report of December, 2020 and then continued
55	Contractor of package 2 to complete construction of the pedestrian at the camp site for polder 41/1	September 30, 2020	**Already completed (Photos attached)**
56	Implementation of IPM/IPSNM practices at farmer's field.	September 30, 2020	Expected to be implemented at field by December 31, 2020
57	Conduct the monthly EHS committee meetings and share the minutes with the Bank team	Monthly	Expected for regular meeting from December, 2020
58	Implement the recommendation of the COVID Emergency plan and the follow the guidance and clauses for contractors	October 31, 2020	Being followed in works sites of Packages 1 and 2

Plate 1. Safe pedestrian made at Polder 41/1