

## **Semiannual Environmental Monitoring Report**

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**Grant No- 0582- BAN  
June 2019**

**Semi-annual Environmental Monitoring Report  
On  
Emergency Assistance Project**

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# Emergency Assistance Project

ADB Project 52174-001 | Grant 0582-BAN | TA 9546 BAN

## Environmental Monitoring Report

Second Semi-Annual Environmental Monitoring Report

### Reporting Period

January to June 2019

### Implementing Agency

Local Government Engineering Department (LGED)

Department of Public Health Engineering (DPHE)

**Ministry of Local Government, Rural Development and Cooperatives (MLGRDC)**

Roads and Highways Department (RHD)

**Ministry of Road Transport and Bridges**

Bangladesh Rural Electrification Board (BREB)

**Ministry of Power, Energy and Mineral Resources**

**July 2019**

## **BAN: EMERGENCY ASSISTANCE PROJECT**

### **Second Semi-annual Environmental Monitoring Report**

January to June 2019

July 2019

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## ABBREVIATIONS

ADB	Asian Development Bank
BCCSAP	Bangladesh Climate Change Strategy and Action Plan
BREB	Bangladesh Rural Electrification Board
DPHE	Department of Public Health Engineering
EAP	Emergency Assistance Project
EARF	Environmental Assessment and Review Framework
ECA	Environmental Conservation Act
ECC	Environmental Clearance Certificate
ECR	Environmental Conservation Rules
EIA	Environmental Impact Assessment
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ETP	Effluent Treatment Plant
GoB	Government of Bangladesh
H&S	Health and Safety
IEE	Initial Environmental Examination
LGED	Local Government Engineering Certificate
MPEMR	Ministry of Power, Energy and Mineral Resources
NFP	National Forest Policy
NOC	No Objection Certificate
RHD	Roads and Highways
RRRC	The Refugee Relief and Repatriation Commission
SPS	Safeguards Policy Statement
SSC	Site Clearance Certificate
ToR	Terms of Reference
UN	United Nations
US EPA	United States Environmental Protection Agency
WB	World Bank

## Executive Summary

1 This report is the Second Semi-annual Environmental Monitoring Report (hereinafter referred as EMR) of the ADB financed Emergency Assistance Project (ADB) in Bangladesh, which covers the period of January – June 2018. The report is produced to comply with the environmental scope stipulated in the sub-projects' Environmental Management Plans (EMPs) implemented by various Government Agencies/Departments under the project.

2 The Government of Bangladesh (GoB) requested Asian Development Bank (ADB) for grant support to provide basic infrastructure and essential services to displaced persons. Given the humanitarian need and heart-wrenching condition of the displaced persons, ADB is providing grant financing of \$100 million for the first phase of the project. ADB support will be focused, selective, and well-targeted in the areas of (i) road access to and within camps; (ii) water and sanitation; (iii) energy supply; and (iv) disaster risk mitigation. It will build on the support provided by GoB and complement support provided by the United Nations (UN) agencies, the World Bank (WB) and other agencies. With the principle of putting people first, the project will seek to ease the vulnerabilities and risk of hunger, disease, and disaster. The project is known as Emergency Assistance Project (Project No. 52174-001, Grant 0582-BAN).

3 ADB environmental safeguards objectives are: (i) to ensure the environmental soundness and sustainability of projects and (ii) to support the integration of environmental considerations into the project decision-making process. ADB environmental safeguards are triggered if a project is likely to have potential environmental risks and impacts.

4 The project has been categorized as B for environment under the ADB's Safeguards Policy Statement 2009 (SPS). Individual subprojects will be screened and classified, and based on the classification, and where required, environmental assessments will be undertaken and EMPs developed. Based on Schedule 1 of the ECR, subprojects are likely to require IEEs and EIAs.

5 Subprojects selected will not have significant environmental impacts. Environmental guidelines for subproject selection in Table 1 provide further guidance to avoid or minimize adverse impacts during the identification and finalization of subprojects.

**Table 1 Environmental Guideline for new subproject**

Component	Environmental Guidelines for Subproject Selection
Overall (Applicable to all Subprojects)	Comply with all applicable national and local laws, regulations, and standards.
	Comply with ADB's SPS.
	Avoid land acquisition and involuntary resettlement and have no impacts on indigenous peoples.
	Avoid protected areas and areas of historical/cultural value.
	Avoid building or setting-up construction camp sites along elephant migration routes
Transport Infrastructure	Do not build new* roads and avoid widening existing roads, as much as possible.
	Avoid hill cutting.
	Do not build new* bridges.
	Avoid cutting trees on the roadside and if any trees have to be removed, plant two new trees for every tree lost.
	Consult the relevant archaeological agency regarding archaeological potential subproject areas to ensure that these are located in areas where there is a low risk of chance finds.

6 The Department of Environment is responsible for environmental issues while forest issues are looked after Department of Forests. Over the years, the MoEF has adopted number of legal instrument in the form of Acts for the protection and conservation of the environment.



7 The important elements of ADB's resettlement policy statement (APS 2009) include the following:

- i. Compensation to replace lost assets, livelihood, and income;
- ii. Assistance for relocation, including provision of relocation sites with appropriate facilities and services; and
- iii. Assistance for rehabilitation to achieve at least the same level of well-being with the project as without it.

8 Refer to **Table 3** for the status of the respective component sub-projects with regard to compliance status to ADB's policy statement (APS 2009).

**Table 3 ADB Safeguards Policy Status**

ADB Safeguard Policy Statement	Contract Package Status				
	Cyclone Shelter Sub-project	Road Sub-project	Drainage/erosion Sub-project	Water Supply Sub-project	Others Sub-project
(i) Involuntary resettlement will be avoided whenever feasible.	complied	complied	complied	complied	complied
(ii) Where population displacement is unavoidable, it should be minimized.	No displacement	No displacement	No displacement	No displacement	No displacement
(iii) All lost assets acquired or affected will be compensated. Compensation is based on the principle of replacement cost.	NA	Matrix formulated	Matrix formulated	NA	NA
(iv) Each involuntary resettlement is conceived and executed as part of a development project or program. Affected persons need to be provided with sufficient resources to re-establish their livelihoods and homes with time-bound action in co-ordination with civil works.	NA	Provided in Compensation Matrix	Provided in Compensation Matrix	NA	NA
(v) Affected persons are to be fully informed and closely consulted.	complied	complied	complied	complied	complied
(vi) Affected persons are to be assisted to integrate economically and socially into host communities so that adverse impacts on the host communities are minimized and social harmony is promoted.	NA	NA	NA	NA	NA
(vii) The absence of a formal title to land is not a bar to ADB policy entitlements.	NA	NA	NA	NA	NA
(viii) Affected persons are to be identified and recorded as early as possible to establish their eligibility, through a census, which serves as a cut-off date, and prevents subsequent influx of encroachers.	NA	complied	complied	NA	NA
(ix) Particular attention will be paid to vulnerable groups including those without legal title to land or other assets; households headed by	NA	complied	complied	NA	NA

ADB Safeguard Policy Statement	Contract Package Status				
	Cyclone Shelter Sub-project	Road Sub-project	Drainage/erosion Sub-project	Water Supply Sub-project	Others Sub-project
women; the elderly or disabled; and indigenous groups. Assistance must be provided to help them improve their socio-economic status.					
(x) The full resettlement costs will be included in the presentation of project costs and benefits.	NA	NA	NA	NA	NA

9 To date 53 sub-projects have been finalized, instead of 60 sub-projects preliminarily identified in 2018. Of them BREB will implement 8 subprojects, DPHE will implement 20 subprojects, LGED will implement 22 subprojects and RHD will implement 3 subprojects. Of these subprojects 42 subprojects are identified as Category B according to ADB classification.

10 According to the ADP policy on environment, all the B category subprojects would require EMP and IEE reports before project implementation to ensure that the projects will be environmental viable and all the environmental laws, rules, restriction and policies of ADB and GoB are attained.

11 To date, 22 sub-projects have been awarded and 21 is at bid preparation stage. The summary status of the subprojects is given in Table 4.

**Table 4 Sub-project progress status of EAP (information up to 10 June 2019)**

Executive Agency	Total Package	Contact awarded	Invitation for Bid	Bid preparation stage	Financial Progress
BREB	8	5	1	2	60%
DPHE	20	9	3	8	20%
LGED	22	5	6	11	21%
RHD	3	3	0	0	97%
<b>Total</b>	<b>53</b>	<b>22</b>	<b>10</b>	<b>21</b>	<b>45%</b>

12 To date (June 2019) out of 37 B category projects according to ADB classification, 20 IEEs have been drafted with 27 EMPs and 5 ECoPs. Some EMPs and subsequent IEEs are due to either design revision or additional survey work. Table 9 represents the status of preparation of safeguards documents.

**Table 9 Summary Status of safeguards documents preparation for B category subprojects**

Agency	Total B Category project	IEE	EMP	ECoP
DPHE		9	10	4
LGED	20	7	13	1
RHD	02	2	2	0
REB	03	2	2	0
<b>Total</b>		<b>20</b>	<b>27</b>	<b>5</b>

13 To date 10 EMPs for DPHE, 13 EMPs for LGED, 2 EMPs for BREB and 2 EMPs for RHD have been prepared. Of 20 IEEs, 9 IEEs for DPHE, 7 IEEs for LGED, 2 IEEs for RHD and 2 IEEs for BREB have

been prepared. Details of subproject wise status of IEE and EMP preparation has been presented in **Table 10**.

14 During planning phase, a total 32 visits have been conducted by the Environmental specialists appointed by ADB. Besides, until date 138 environmental safeguards monitoring visits have been conducted at different times during the current cycle (2<sup>nd</sup> six months, Jan-Jun 2019) of monitoring period. See Table 11 for details break down. For each monitoring visit, one site visit report/compliance report has been submitted to the concerned EA and ADB and follow ups were tracked to observe corrective measures and desired progress.

**Table 11 Environmental Safeguards monitoring visit conducted during Jan-Jul 2019**

Site Visit During Planning Phase	Site Visit During Construction Phase				Total
	BREB	DPHE	LGED	RHD	
32*	25	31	40	42	170

\*this figure also includes the planning phase visits conducted during the first EMR period (Jul-Dec 2018)

15 Besides monitoring visits, onsite trainings and meetings with EAs were conducted during the current monitoring period. The site-based trainings were arranged by the environmental specialists to sensitize the contractors on implementing the environmental safeguards according to the EMPs and other contracts. A total 18 onsite trainings were arranged to date. Besides one regional workshop was organized by ADB in Cox's Bazar with all EAs and contractors to train them so that they can better implement the EMPs and get aware about the environmental concerns. Besides trainings, regular meetings with EAs were conducted on frequent basis to better coordinate with all the EAs. To date 58 meetings have been conducted. Alongside meetings with EAs, 5 more meetings with various organizations like UNHCR, SMEP and ISCG were attended to understand the current coordination status in Cox's bazar. Table 12 below represents the breakdown of meetings and onsite trainings arranged by the environmental specialists.

**Table 12 Environmental Safeguards trainings/meetings conducted during Jan-Jul 2019**

Onsite Training	Meeting with EAs					Training Workshop	Coordination meetings with various organizations
	BREB	DPHE	LGED	RHD	DFO	All EAs	
18	7	10	34	6	1	1	5

16 Besides regular onsite training conducted by the ADB Environmental Specialists to sensitize the workers health and safety issues as well as environmental safeguards, a regional training workshop was arranged by ADB on 28<sup>th</sup> April 2019 at Sayemon Beach Resort, Kolatoli, Cox's Bazar titled "Health, Safety and Environmental Safeguards". The training was arranged for Executive Agencies and Contractors on Field to sensitize them on health, safety and environmental safeguards issues and make them aware about the gaps in management in field.

17 The concluding observations are as follows:

- The Environmental Safeguards compliance performance of the EAs are improving slowly but steadily. The onsite training workshop, regular monitoring of ADB and Regional workshop to sensitize the EAs and contractors seems to have obvious impact in this regard.

- When same contractor is been awarded with more than one subproject, environmental compliance record appears to be poor.
- The implementing agencies need to consult the Environmental Safeguards consultants and ADB's safeguard division while proposing the project, before going into design. In this way, if the Safeguards division and Environmental Consultants checks the environmental and other related issues, the implementing agencies can go for designing and can save time by avoiding redesign issues
- The implementing agencies need to better coordinate with the DoE and Forest Department. It appears the level of coordination is week.

# 1 Introduction

## 1.1 BACKGROUND

18 This report is the Second Semi-annual Environmental Monitoring Report (hereinafter refereed as EMR) of the ADB financed Emergency Assistance Project (ADB) in Bangladesh, which covers the period of January – June 2018. The report is produced to comply with the environmental scope stipulated in the sub-projects' Environmental Management Plans (EMPs) implemented by various Government Agencies/Departments under the project.

19 This report is drafted by the Environmental Specialists working for Bangladesh Residence Mission (BRM) of ADB to ensure preparation of Environmental Impact Assessment documents for various subprojects to comply with ADB and Bangladesh Government's environmental rules and regulations as well as implementation of Environmental Mitigation Measures during the construction phase. Environmental issues also are anticipated in this report to be identified in advance for avoidance and to ensure timely completion of the project.

## 1.2 THE PROJECT

20 The Government of Bangladesh (GoB) requested Asian Development Bank (ADB) for grant support to provide basic infrastructure and essential services to displaced persons. Given the humanitarian need and heart-wrenching condition of the displaced persons, ADB is providing grant financing of \$100 million for the first phase of the project. ADB support will be focused, selective, and well-targeted in the areas of (i) road access to and within camps; (ii) water and sanitation; (iii) energy supply; and (iv) disaster risk mitigation. It will build on the support provided by GoB and complement support provided by the United Nations (UN) agencies, the World Bank (WB) and other agencies. With the principle of putting people first, the project will seek to ease the vulnerabilities and risk of hunger, disease, and disaster. The project is known as Emergency Assistance Project (Project No. 52174-001, Grant 0582-BAN).

21 The project will support the Government of Bangladesh in addressing the immediate and urgent needs of the displaced persons from Myanmar in Coxsbazar District, as identified by the United Nations (UN) in its Joint Response Plan (JRP) (displaced persons). The project will mainly support the improvement of water supply and sanitation, disaster risk management, sustainable energy supply, and access roads.

22 The impact of the project will be: Social recovery of affected communities accelerated in the sub-districts of Ukhyia and Teknaf. The outcome will be: Living conditions and resilience of affected communities improved. Four (04) outputs are expected from this project. They are:

- Output 01: Water supply and sanitation improved.
- Output 02: Disaster risk management strengthened
- Output 03: Energy sources provided
- Output 04: Access roads improved.

23 **Output 1: Water supply and sanitation improved.** This consists of providing the camp areas with (i) mobile water carriers for the distribution of treated water; (ii) community bathing facilities for women; (iii) mini piped water supply systems with a production tube well, distribution pipe network, and standpipe water

distribution points; (iv) an integrated waste management facility with collection system; and (v) small surface water treatment plants.

24 **Output 2: Disaster risk management strengthened.** This includes constructing in and around the camp areas (i) multipurpose cyclone shelters with emergency access roads, (ii) food distribution centers, (iii) hill slope protection and/or toe walls to resist landslides, and (iv) storm water drainage networks. The project will also provide lightning arresters and support the preparation of gender-sensitive disaster risk management plans with community-based disaster risk reduction approach.

25 **Output 3: Energy sources provided.** This includes providing the camp areas with (i) retained heat cookers; (ii) stand-alone solar powered street lights with solar photovoltaic panels, battery boxes, and mini grid-connected street lights; and (iii) access to electricity by augmenting substations, distribution lines, and transformers.

26 **Output 4: Access roads improved.** This consists of rehabilitating (i) rural roads to connect to food storage and distribution centers, field hospitals, primary health care centers, and primary education centers; (ii) emergency access roads to the camp areas; and (iii) existing access roads to and within the camps and drainage systems. The project also supports resurfacing the road from Cox's bazar to Teknaf, which is the main supply line.

27 The project will be implemented over 2.5 years, and the grant will close by 30 June 2021. As a condition for being selected, each subproject must have an implementation period that can be completed prior to the project closing date.

### 1.3 PURPOSE OF THE ENVIRONMENTAL SAFEGUARDS

28 ADB environmental safeguards objectives are: (i) to ensure the environmental soundness and sustainability of projects and (ii) to support the integration of environmental considerations into the project decision-making process. ADB environmental safeguards are triggered if a project is likely to have potential environmental risks and impacts.

29 The purpose of the Environmental Safeguards for the project are defined as:

- Assist in determining adequacy of cost for EMP implementation;
- Assist in addressing any concern related to IEEs and EMPs;
- Assist in summarizing IEEs, translating to language understood by local people and disclosure in public locations;
- Oversee implementation of EMP including environmental monitoring of contractors;
- Assist in implementing corrective actions when necessary to ensure no environmental impacts;
- Review monthly reports by contractors, assist PMU to submit environmental monitoring reports on regular basis;
- Assist in establishing the grievance mechanism for safeguards and addressing any grievances brought about through the GRM in a timely manner as per IEEs;
- Submit semi-annually environmental safeguards monitoring report to ADB via PMU;
- Be responsible for training the PMU/contractor safeguards officers on environmental awareness and management in accordance with both ADB and government requirements and implement the capacity building program for PMU and all staff involved in project implementation on (a) ADB SPS, (b) Government of Bangladesh national and local environmental laws and regulations, (c) core labor standards, (d) occupational health and safety monitoring given in the Social Safeguards Monitoring Report and (e) EMP implementation especially spoil

- management, working in congested areas, public relations and ongoing consultations, grievance redress, etc.; and
- Provide induction course for the training of contractors preparing them on EMP implementation.

30 A location map of the proposed subproject is presented in **Figure 1**.



**Figure 1 Location map of the proposed subproject**

## 2 Environmental responsibilities and institutional setup

### 2.1 INSTITUTIONAL SETUP AND IMPLEMENTATION ARRANGEMENTS

31 The project has been categorized as B for environment under the ADB's Safeguards Policy Statement 2009 (SPS). Individual subprojects will be screened and classified, and based on the classification, and where required, environmental assessments will be undertaken and EMPs developed. Based on Schedule 1 of the ECR, subprojects are likely to require IEEs and EIAs.

32 The Refugee Relief and Repatriation Commission (RRRC) is proposed to act as the coordinator on behalf the government to execute all interventions. RRRC and ADB will conduct regular coordination meetings involving all IAs, relevant stakeholders including deputy commissioner (DC), Cox's Bazar, other development partners and agencies. ADB plans to establish extended mission office in Cox's Bazar for close coordination, facilitation of sub-projects development and implementation. A steering committee comprising higher officials from relevant ministries coordinated by ERD will be formed to provide necessary guidance to expedite the sub-project development and implementation. The steering committee will have a safeguards focal person.

33 The Local Government Engineering Department (LGED), the Department of Public Health Engineering (DPHE), the Roads and Highways Department (RHD), and the Bangladesh Rural Electrification Board (BREB) will be the executing agencies and implementing agencies. responsible for project oversight and coordination. There will be a safeguards focal person in the EA/IA. The EA/IA will be assisted by PMCs. The EAs/IAs will form project implementation units (PIU). The PIUs will identify a focal person for environmental safeguards. The focal person will be assisted in the conduct of the environmental assessment, the development and implementation of EMPs, and compliance monitoring by project consultants. All the implementing agencies are currently implementing ADB projects under this institutional arrangement (further defined in Section VI). ADB also conducts safeguards training for project executing and implementing agencies. Thus, the government has sufficient capacity in implementing ADB requirements and strengthening of capacity, other than through the course of the consultant's work with local counterparts, is not required. ADB will continue to conduct capacity building programs during implementation.

34 The Project Organization established to ensure the requirements of all stakeholders are adequately addressed is shown in the following diagram (**Figure 2**).



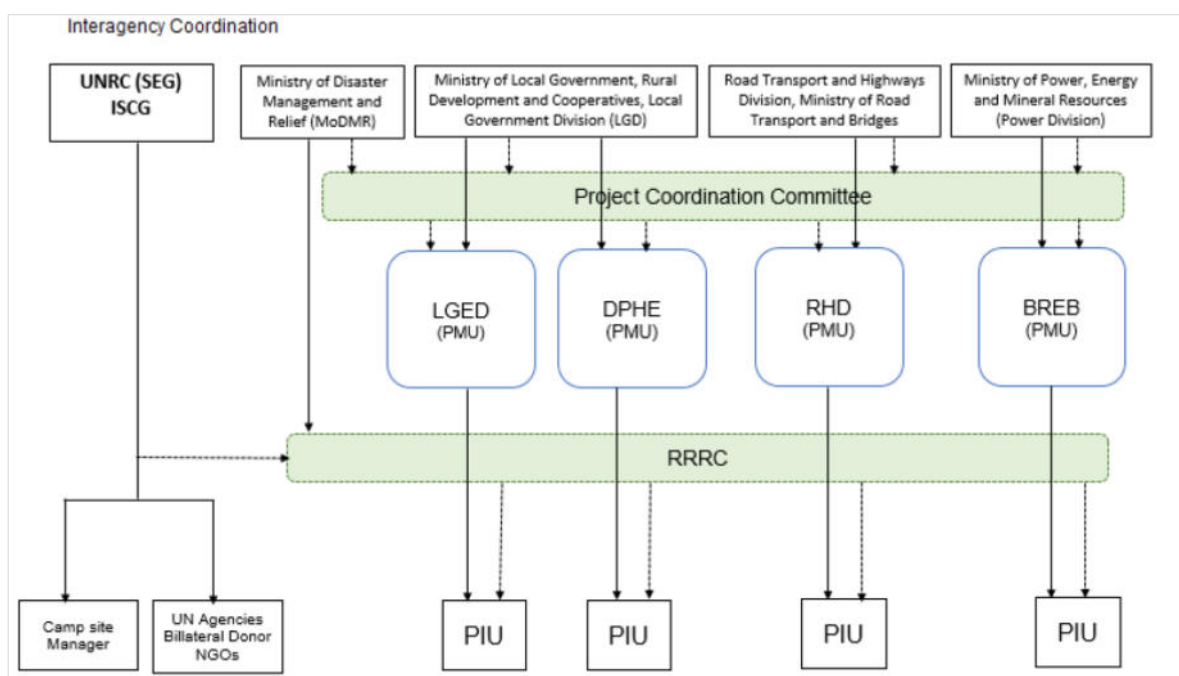


Figure 2 Project organization structure

## 2.2 RESPONSIBILITIES: ENVIRONMENTAL SAFEGUARDS

35 In compliance with ADB's Safeguard Policy Statement (2009), the project's safeguard categories are as follows:

36 **Environment (category B):** ADB formed subproject selection criteria to avoid significant adverse environmental impacts. An environmental assessment and review framework (EARF) has been prepared following ADB's Safeguards Policy Statement (2009) and government laws and regulations. ADB has disclosed the EARF on its website. Implementation arrangements build on the implementing agencies' experience from other ADB-financed projects, and the project team will help the implementing agencies gain adequate capacity to manage environmental impacts through consultant support. Initial environmental examinations and environmental management plans will be prepared consistent with the EARF and will be incorporated in bidding documents and contract documents to be implemented by contractors and monitored by the implementing agencies. Executing and/or implementing agencies will provide environmental report to the Bangladesh Resident Mission on a semiannual basis.

37 **Involuntary resettlement (category B):** ADB formed subproject selection criteria to avoid land acquisition and involuntary resettlement impacts and social risks. A resettlement framework has been prepared and disclosed, following ADB's Safeguards Policy Statement and government laws and regulations, to guide planning studies and detailed designs of subprojects. The project team will help the implementing agencies gain adequate capacity to prepare resettlement plans, if required, through consultant support. Consultations will be undertaken with stakeholders in project areas during implementation. Executing and/or implementing agencies will provide resettlement implementation report to the Bangladesh Resident Mission on a semiannual basis.

## 2.3 ENVIRONMENTAL CRITERIA FOR SUBPROJECT SELECTION

38 Subprojects selected will not have significant environmental impacts. Environmental guidelines for subproject selection in Table 1 provide further guidance to avoid or minimize adverse impacts during the identification and finalization of subprojects.

**Table 1 Environmental Guideline for new subproject**

Component	Environmental Guidelines for Subproject Selection
Overall (Applicable to all Subprojects)	Comply with all applicable national and local laws, regulations, and standards.
	Comply with ADB's SPS.
	Avoid land acquisition and involuntary resettlement and have no impacts on indigenous peoples.
	Avoid protected areas and areas of historical/cultural value.
	Avoid building or setting-up construction camp sites along elephant migration routes
Transport Infrastructure	Do not build new* roads and avoid widening existing roads, as much as possible.
	Avoid hill cutting.
	Do not build new* bridges.
	Avoid cutting trees on the roadside and if any trees have to be removed, plant two new trees for every tree lost.
	Consult the relevant archaeological agency regarding archaeological potential subproject areas to ensure that these are located in areas where there is a low risk of chance finds.

## 3 Monitoring Framework and environmental compliance

### 3.1 MONITORING FRAMEWORK

Impact the Project is Aligned with Social recovery of displaced persons in Teknaf and Ukhia camps accelerated (Defined by the project)			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
<b>Outcome</b> Living conditions and resilience of displaced persons improved	<b>By 2021</b> <ol style="list-style-type: none"> <li>Reported cases of waterborne diseases decreased by 20%.</li> <li>Occurrence of landslides and flooding in project area during average monsoon months reduced by 50%.</li> <li>At least 90% of households in project area connected to electricity.</li> <li>Average travel time to transport relief goods and services to campsites reduced by 50%.</li> </ol>	<ol style="list-style-type: none"> <li>Project beneficiary survey, executing agency reports</li> </ol>	Crisis and influx of displaced persons extend beyond the project life and exceed projected demand for services.
<b>Outputs</b> 1. Water supply and sanitation improved	<b>By 2020</b> <ol style="list-style-type: none"> <li>5 mobile water carriers for the distribution of potable water to the camps provided (2018 baseline: 0)</li> <li>600 community bathing facilities for women constructed and maintained, of which 10%–20% of women are employed and involved (2018 baseline: 0)</li> <li>40 mini piped water supply systems with production tube wells constructed (2018 baseline: 0)</li> <li>5 integrated waste management facilities constructed, and a collection system established (2018 baseline: 0)</li> <li>2 small surface water treatment plants constructed or expanded (2018 baseline: 0)</li> </ol>	1a–e. Periodic project progress reports prepared by the executing agency	Extreme climate events disrupt or delay execution of works.

2. Disaster risk management strengthened	<p>2a. 10 multipurpose cyclone shelters constructed with sex- disaggregated toilets and designated space for women, including pregnant women and lactating mothers (2018 baseline: 0)</p> <p>2b. 20 semi permanent food distribution centers constructed and employed 10%–20% of women in the community (2018 baseline: 0)</p> <p>2c. 5 km of hill slope protection and/or toe walls constructed (2018 baseline: 0)</p> <p>2d. 5 km storm water drainage network constructed (2018 baseline: 0)</p> <p>2e. 200 lightning arresters installed (2018 baseline: 0)</p> <p>2f. Gender-sensitive disaster risk management plans, adopting community-based disaster risk reduction approach, prepared and implemented (2018 baseline: not applicable)</p>	2a–f. Periodic project progress reports prepared by the executing agency	
3. Energy sources provided	<p>3a. A 33/11 kV, 10 MVA substation constructed; and Cox's bazar-Teknaf grid augmented</p> <p>3b. A 50 km, ≤11 kV new distribution line constructed with 5 MVA distribution transformers installed (2018 baseline: 0)</p> <p>3c. 2,000 new mini grid-connected street lights and 4,000 new stand- alone solar LED lights with built-in solar PV panels and battery banks installed (2018 baseline: 62 grid- connected street lights and 2,495 solar PV street lights inside the camps)</p> <p>3d. 70,000 retained heat cookers provided (2018 baseline: 0)</p> <p>3e. 50 solar PV micro-grid systems installed at Balukhali, Kutupalong, Noyapara, Leda, and Shamlapur camps (2018 baseline: 0)</p>	3a–e. Periodic project progress reports prepared by the executing agency	
4. Access roads improved	<p>4a. 30 km of internal roads and stairs (where required) with drainage facilities constructed (2018 baseline: 0)</p> <p>4b. 30 km of rural roads to connect to food storage centers, food distribution centers, field hospitals, primary health care centers, cyclone shelters, and primary education centers reconstructed and rehabilitated (2018 baseline: 0)</p> <p>4c. 50 km of the road from Coxsbazar to Teknaf resurfaced, including the improvement of critical sections (market areas and culverts) (2018 baseline: 0)</p> <p>4d. 10%–20% of women employment in the construction and rehabilitation of access roads achieved (2018 baseline: 0)</p>	4a–d. Periodic project progress reports prepared by the executing agency	

**Key Activities with Milestones**

1. Water supply and sanitation improved

- 1.1 Identify and appraise subprojects, as required (by Q3 2018)
- 1.2 Recruit consultants (by Q3 2018)
- 1.3 Prepare bid documents and commence bidding (by Q3 2018)
- 2. Disaster risk management strengthened
- 2.1 Identify and appraise subprojects, as required (by Q3 2018)
- 2.2 Recruit consultants (by Q3 2018)
- 2.3 Prepare bid documents and commence bidding (by Q3 2018)
- 2.4 Complete disaster risk capacity building for implementing agencies and key stakeholders (Q4 2018)
- 3. Energy sources provided
- 3.1 Identify and appraise subprojects, as required (by Q3 2018)
- 3.2 Recruit consultants (by Q3 2018)
- 3.3 Prepare bid documents and commence bidding (by Q3 2018)
- 4. Access roads improved
- 4.1 Identify and appraise subprojects, as required (by Q3 2018)
- 4.2 Recruit consultants (by Q4 2018)
- 4.3 Prepare bid documents and commence bidding (by Q3 2018)

## 3.2 COMPLIANCE WITH ENVIRONMENTAL RELATED PROJECT COVENANTS

### 3.2.1 National Covenant

39 The National Environmental Policy (NEP) was adopted in 1992 and is now under revision. It embraces different sectors related to agriculture, forest, power, health, transport, housing etc. The central theme of policy is to ensure protection and improvement in environment. The policy supports sustainable development and long-term use of natural resources. The National Environment Policy contains policy statements and strategic options with regard to population and land-use management, management and utilization of natural resources and other socio-economic sectors, as well as the necessary arrangements for the implementation of the policy.

40 The main Ministry, Department, Institutions and Boards responsible for development of policy, framing regulation, developing projects, monitoring and approval of issues related to environment protection and conservation are presented in this section. The Department of Environment (DoE) was established in 1977 under the Environment Pollution Control Ordinance, 1977. During 1987-89, Forestry was a Division of Agriculture Ministry with a Secretary to Government in charge of the Forestry Division. With the formation of the new Ministry of Environment and Forests, in 1989, both the departments were transferred to this new Ministry.

41 The DoE has been placed under the MoEFCC as its technical wing and is statutorily responsible for the implementation of the Environment Conservation Act, 1995. Besides these two departments, MoEFCC controls the Bangladesh Forest Industries Development Corporation (BFIDC), Bangladesh Forest Research Institute (BFRI) and Bangladesh National Herbarium (BNH).

42 The Ministry of Environment and Forests and Climate Change (MoEFCC) prepare the environmental policies. MoEF has also formulated regulation toward clearance of projects from environmental angles based on environmental impact assessment report.

43 The Department of Environment is responsible for environmental issues while forest issues are looked after Department of Forests. Over the years, the MoEF has adopted number of legal instrument in the form of Acts for the protection and conservation of the environment. **Table 2** summarizes the Environmental Legislation applicable to the sub-projects.

**Table 2 Summary of Environmental Legislations Applicable to the Proposed Project**

No.	Environmental Legislation / Act	Objective	Relevance to the Project	Responsible Institution
1	National Environmental Policy, 1992	Ensure that development components do not pollute the environment or degrade resources. It sets out the basic framework for environmental action together with a set of broad sectoral action guidelines.	Restriction on operations which can not be initiated in ecological critical areas  Regulation on vehicles emitting smoke which is harmful to the environment  Follow standards on quality of air, water, noise and soil  Sets limits for discharging and emitting waste	Ministry of Environment and Forests, and Climate Change
2	National Environmental Management Action Plan (NEMAP), 1995	An action plan to identify key environmental issues affecting Bangladesh, identifies actions for reducing the rate of environmental degradation and improve quality of life.	Sectoral agencies to coordinate with MoEFCC in preparing environmental guidelines	Ministry of Environment and Forests, and Climate Change
3	Environment Court Act, 2000 and subsequent amendments in 2003	Establishment of Environment Court for trial of an offence or for compensation under environmental law, such as environment pollution.	Option to affected persons for grievances related to environment safeguards.	Ministry of Environment and Forests, and Climate Change
4	The Forest Act (1927) and Forest (Amendment) Act (2000)	An act to control trespassing, illegal resource extraction and provide a framework for the forestry revenue collection system;	Requires clearances for any project within forest areas and clearances for any felling, extraction, and transport of forest produce.	Department of Forests
5	National Forest Policy (1994)	To conserve existing forests and bring about 20% of the country's land area under the Forestation Programme and increase reserved forests by 10% per year until 2015	Incorporate tree planting in the subproject  Clearance for any felling, extraction, and transport of forest produce	Department of Forests
6	The Bangladesh Wildlife (Conservation & Security) Act, 2012	To conserve and protect wildlife in Bangladesh including designation of protected areas. Protection of wildlife is provided with lists of species with four schedules: first, second, third and fourth schedule. The fourth schedule species have the highest level of protection.	Consultation and necessary permits required if the project will pass through the wildlife sanctuaries and other protected areas.	Department of Forests
7	National Safe Drinking Water Supply and Sanitation Policy of 1998	Ensures access to safe water and sanitation services at an affordable cost	Pourashavas and water sanitation authorities will take actions to prevent wastage of water. They will take necessary steps to increase public awareness to prevent misuse of water  Pourashavas shall be responsible for solid waste collection, disposal and their management	Ministry of Local Government, Rural Development, and Cooperatives

No.	Environmental Legislation / Act	Objective	Relevance to the Project	Responsible Institution
8	National Water Act 2013	Ensures Bangladesh water sources are free from any type of pollution. Pollution from water in urban outfalls and reservoirs, e.g. lakes, canals, ponds and ditches may result in amenity losses, fisheries depletion, health problems and fish and aquatic species contamination.	Secure clearance certificate on water resource development subprojects	Ministry of Water Resources
9	Wetland Protection Act 2000	Advocates protection against degradation and resuscitation of natural water-bodies such as lakes, ponds, beels <sup>1</sup> , khals, tanks, etc. affected by man-made interventions or other causes. Prevents the filling of publicly-owned water bodies and depressions in urban areas for preservation of the natural aquifers and environment. Prevents unplanned construction on riverbanks and indiscriminate clearance of vegetation on newly accreted land.	In case of diversion of water from Naf river, detailed assessment will be done	Ministry of Water Resources
10	Bangladesh Labor Law, 2006	It is a comprehensive law covering labour issues such as: conditions of service and employment, youth employment, benefits including maternal benefits, compensation for injuries, trade unions and industrial relations, disputes, participation of workers in company's profits, regulation of safety of dock workers, penalty procedures, administration and inspection.  This Act pertains to the occupational rights and safety of factory workers and the provision of a comfortable environment for working. It also includes rules on registration of labourers, misconduct rules, income and benefits, health and fire safety, factory plan	Compliance to provisions on employment standards, occupational health and safety, welfare and social protection, labor relations and social dialogue, and enforcement.  Prohibition of employment of children and adolescents.	Ministry of Labor and Employment
11	Bangladesh Labor Rules, 2015	Includes rules on registration of laborers, misconduct rules, income and benefits, health and fire safety, factory plan	Contractors to implement occupational health and safety measures  Contractor will be liable for compensation for work-related injuries	Department of Labor
12	The Pourashava Act 2009 / Ordinance issued for the amendment of local government (municipality) ordinance, 2009 and 2010; The Pourashava Ordinance, 1977;	Provides guidance for subproject integrated community and workers health and hygiene at the construction and operation and maintenance stages of the project	Coordinate with pourashava committees on disaster management measures, water and sanitation and waste management	Local Authorities

<sup>1</sup> A beel is a billabong or a lake-like wetland with static water (as opposed to moving water in rivers and canals - typically called khaals), in the Ganges - Brahmaputra flood plains of the Eastern Indian states of West Bengal, and Assam and in the country of Bangladesh.

No.	Environmental Legislation / Act	Objective	Relevance to the Project	Responsible Institution
	Municipal Administration Ordinance, 1960			
13	Bangladesh Climate Change Strategy and Action Plan of 2009	Enhances the capacity of government ministries, civil society and private sector to meet the challenges of climate change	Integrate adaptation measures for buildings in consideration of extreme climatic events	Ministry of Environment, Forests and Climate Change
14	Building Construction (Amendment) Act and Building Construction Rules, Bangladesh National Building Code	Regulates technical details of building construction and to maintain standards of building construction	Follow specifications to ensure structural integrity of buildings	Ministry of Housing and Public Works
15	Electricity Act, 1910 and Electricity Rules 1937	Requires compensation for any damage, detriment or inconvenience caused by the project; Requires precautionary measures in laying down electricity supply lines near or where any metallic substance or line crosses to avoid electrocution	Secure permission to supply energy and lay down or place electricity supply lines for the conveyance and transmission of electricity from respective authorities prior to any works  Give full compensation for any damage, detriment or inconvenience caused by him or by anyone employed by him  Take precautions in laying down electricity supply lines near or where any metallic substance or line crosses in order to avoid electrocution	Ministry of Power, Energy and Mineral Resources
16	The National Energy Policy (1996 and Updated 2004)	Ensures environmentally sound sustainable energy development programs causing minimum damage to the environment, to encourage public and private sector participation in the development and management of the energy sector and to bring the entire country under electrification.	Public and private sector participation in the development and management of the energy subprojects.  Provides guidelines for renewable energy subprojects	Ministry of Power, Energy and Mineral Resources
17	Standing Order on Disaster, 1999 (Updated 2010)	Enhances capacity at all tiers of government administrative and social structures for coping with and recovering from disasters	Geographical information system (GIS) technology will be applied at the planning stage to select location of cyclone shelter considering habitation, communication facilities, distance from the nearest cyclone center, etc  Advice from the concerned District Committee should be obtained prior to final decision	Ministry of Disaster Management and Relief
18	National Disaster Management Act of 2012	Establishes a framework for managing disasters in a comprehensive way.	Setting-up emergency response procedures	Ministry of Disaster and Relief



### 3.2.2 ADB Safeguards policy statement

44 The important elements of ADB's resettlement policy statement (APS 2009) include the following:

- iv. Compensation to replace lost assets, livelihood, and income;
- v. Assistance for relocation, including provision of relocation sites with appropriate facilities and services; and
- vi. Assistance for rehabilitation to achieve at least the same level of well-being with the project as without it.

45 For any ADB operation requiring involuntary resettlement, resettlement planning is an integral part of project design, to be dealt with from the earliest stages of the project cycle, taking into account the following basic principles:

- i. Involuntary resettlement will be avoided whenever feasible.
- ii. Where population displacement is unavoidable, it should be minimized.
- iii. All lost assets acquired or affected will be compensated. Compensation is based on the principle of replacement cost.
- iv. Each involuntary resettlement is conceived and executed as part of a development project or program. Affected persons need to be provided with sufficient resources to re-establish their livelihoods and homes with time-bound action in co-ordination with civil works.
- v. Affected persons are to be fully informed and closely consulted.
- vi. Affected persons are to be assisted to integrate economically and socially into host communities so that adverse impacts on the host communities are minimized and social harmony is promoted.
- vii. The absence of a formal title to land is not a bar to ADB policy entitlements.
- viii. Affected persons are to be identified and recorded as early as possible to establish their eligibility, through a census which serves as a cut-off date, and prevents subsequent influx of encroachers.
- ix. Particular attention will be paid to vulnerable groups including those without legal title to land or other assets; households headed by women; the elderly or disabled; and indigenous groups. Assistance must be provided to help them improve their socio-economic status.
- x. The full resettlement costs will be included in the presentation of project costs and benefits.

### 3.2.3 SPS (2009) compliance status

46 Refer to **Table 3** for the status of the respective component sub-projects with regard to compliance status to ADB's policy statement (APS 2009).

**Table 3 ADB Safeguards Policy compliance Status for the EAP subprojects**

ADB Safeguard Policy Statement	Contract Package Status				
	Cyclone Shelter Sub-project	Road Sub-project	Drainage/erosion Sub-project	Water Supply Sub-project	Others Sub-project
(i) Involuntary resettlement will be avoided whenever feasible.	complied	complied	complied	complied	complied
(ii) Where population displacement is unavoidable, it should be minimized.	No displacement	No displacement	No displacement	No displacement	No displacement

ADB Safeguard Policy Statement	Contract Package Status				
	Cyclone Shelter Sub-project	Road Sub-project	Drainage/erosion Sub-project	Water Supply Sub-project	Others Sub-project
(iii) All lost assets acquired or affected will be compensated. Compensation is based on the principle of replacement cost.	NA	Matrix formulated	Matrix formulated	NA	NA
(iv) Each involuntary resettlement is conceived and executed as part of a development project or program. Affected persons need to be provided with sufficient resources to re-establish their livelihoods and homes with time-bound action in co-ordination with civil works.	NA	Provided in Compensation Matrix	Provided in Compensation Matrix	NA	NA
(v) Affected persons are to be fully informed and closely consulted.	complied	complied	complied	complied	complied
(vi) Affected persons are to be assisted to integrate economically and socially into host communities so that adverse impacts on the host communities are minimized and social harmony is promoted.	NA	NA	NA	NA	NA
(vii) The absence of a formal title to land is not a bar to ADB policy entitlements.	NA	NA	NA	NA	NA
(viii) Affected persons are to be identified and recorded as early as possible to establish their eligibility, through a census, which serves as a cut-off date, and prevents subsequent influx of encroachers.	NA	complied	complied	NA	NA
(ix) Particular attention will be paid to vulnerable groups including those without legal title to land or other assets; households headed by women; the elderly or disabled; and indigenous groups. Assistance must be provided to help them improve their socio-economic status.	NA	complied	complied	NA	NA
(x) The full resettlement costs will be included in the presentation of project costs and benefits.	NA	NA	NA	NA	NA

## 4 Status of ongoing contract packages

### 4.1 PROJECT STATUS

47 To date 53 sub-projects have been finalized, instead of 60 sub-projects preliminarily identified in 2018. Of them BREB will implement 8 subprojects, DPHE will implement 20 subprojects, LGED will implement 22 subprojects and RHD will implement 3 subprojects. Of these subprojects 42 subprojects are identified as Category B according to ADB classification.

48 According to the ADP policy on environment, all the B category subprojects would require EMP and IEE reports before project implementation to ensure that the projects will be environmental viable and all the environmental laws, rules, restriction and policies of ADB and GoB are attained.

49 To date, 22 sub-projects have been awarded and 21 is at bid preparation stage. The summary status of the subprojects is given in **Table 4**.

**Table 4 Sub-project progress status of EAP (information up to 10 June 2019)**

Executive Agency	Total Package	Contact awarded	Invitation for Bid	Bid preparation stage	Financial Progress
BREB	8	5	1	2	60%
DPHE	20	9	3	8	20%
LGED	22	5	6	11	21%
RHD	3	3	0	0	97%
<b>Total</b>	<b>53</b>	<b>22</b>	<b>10</b>	<b>21</b>	<b>45%</b>

50 A comparative analysis of contract awards in the first six month (July- December 2018) and second six-month (January – June 2019) has been given in **Table 5**. In the first six month 7 contracts were awarded while in the second six month 15 contracts were awarded.

**Table 5 Comparative analysis of contract awards in first and second six month**

Executive Agency	Total Package	Contact awarded in first six month (2018)	Contract awarded in second six month (2019)	Total Contract awarded
BREB	8	4	1	5
DPHE	20	1	8	9
LGED	22	0	5	5
RHD	3	2	1	3
<b>Total</b>	<b>53</b>	<b>7</b>	<b>15</b>	<b>22</b>

51 The list of sub-projects that have been awarded to date are presented in **Table 6**.

**Table 6 List of subprojects been awarded to date and their progress status**

SL no.	Component	Package No.	Description	Progress to date	Award date
<b>BREB</b>					
1	Disaster Risk management	EAP/BREB/G1	Supply and installation of 200 nos. lightening arresters along the access	a) All 200 lightening arresters completed b) Progress 100%	2-Dec-18

SL no.	Component	Package No.	Description	Progress to date	Award date
			roads from Palongkhali to Kutupalong camp, and all other camps.		
2	Energy	EAP/BREB/G2A	Supply, installation and Operation & Maintenance of 2,000 Nos. Solar PV Powered LED Street Lights	a) All 2,000 street lights completed 26-Nov-18 b) Progress 100%	26-Nov-2018
3	Energy	EAP/BREB/G2B	Supply and installation of 2,000 nos. solar powered 20-watt LED street lights, in all camps	a) Contract signed b) Finalization of site selection is in progress in coordination with IOM and UNHCR	30-Apr-19
4	Energy	EAP/BREB/W1A	Design, Supply, Installation, Testing & Commissioning of 33/11kV, 10/14MVA Electrical Sub-station (Turn-key)	a) 100% land development completed b) 20% construction work completed	24-Dec-18
5	Energy	EAP/BREB/W2	Design, Supply and Construction of 50 KM, 11KV and Below Lines in the Camp Areas of Displaced Personnel and Other Areas at Ukhiya and Teknaf (Turnkey)	1050 poles has been erected	10-Dec-18
<b>DPHE</b>					
6	Water and Sanitation	EAP/DPHE/G1	Supply of 7 no. Water Carriers for Emergency Water supply including operation and maintenance for 2 years in Cox's Bazar, Ukhiya and Teknaf	100% physical progress is expected by June 2019	15-Jan-19
7	Water and Sanitation	EAP/DPHE/W1	Construction and operation of mini piped water	65% physical progress achieved by 30 May 2019	24-Jan-19
8	Water and Sanitation	EAP/DPHE/W2	Construction and operation of mini piped water supply system (10 schemes): Package 2	25% physical progress achieved by 30-05-2019	6-Mar-19
9	Water and Sanitation	EAP/DPHE/W3	Construction and operation of mini piped water supply system (10 schemes): Package 3	Contract was signed on 24 March, 2019. Expected completion of physical works by September 19, followed by 18 months operation and maintenance.	24-Mar-19
10	Water and Sanitation	EAP/DPHE/W4	Construction and operation of mini piped water supply system (10 schemes): Package 4	10% physical progress achieved by 30 May 2019	23-Apr-19
11	Water and Sanitation	EAP/DPHE/W5	Construction and operation of mini piped water supply system (5 schemes): Package 5	10% physical progress achieved by 30 May 2019	23-Apr-19
12	Water and Sanitation	EAP/DPHE/W13	Construction of Community Bathing Facilities (100 units), Group -1	100% physical progress achieved by 30-05-2019	27-Dec-18
13	Water and Sanitation	EAP/DPHE/W14	Construction of Community Bathing Facilities (200 units), Group -2	100% physical progress achieved by 30-05-2019	15-Mar-19
14	Water and Sanitation	EAP/DPHE/W15	Construction of Community Bathing Facilities (200 units), Group -3	20% physical progress achieved by 02-06-2019	23-Apr-19
<b>LGED</b>					
15	Disaster Risk Management	EAP/LGED/OCB-N/W6	Construction of 4 nos. school cum cyclone shelter for affected people, 3 story LGED Prototype, in Ukhiya	15% physical progress achieved by 02 June 2019	13-Feb-19
16	Disaster Risk	EAP/LGED/OCB-N/W8	Construction of 3 nos. school cum cyclone shelter for affected people, 3 story LGED Prototype, in Ukhiya	15% physical progress achieved by 20 June 2019	13-Feb-19
17	Disaster Risk	EAP/LGED/OCB-N/W9	Construction of 3 nos. School cum cyclone shelter for affected people, 3 story LGED Prototype, in Teknaf	10% physical progress achieved by 02 June 2019	20-Feb-19

SL no.	Component	Package No.	Description	Progress to date	Award date
18	Disaster Risk	EAP/LGED/OCB-N/W19	"Construction of Semi-Permanent Food Distribution Centers and loading /unloading yard in Ukhiya and Teknaf	15% physical progress achieved by 02-06-2019	19-Feb-19
19	Disaster Risk	EAP/LGED/CON/1	Design, Monitoring and Supervision consulting services through ICT for LGED component, Cox's Bazar	Contract signed on 24 January 2019	24-Jan-19
<b>RHD</b>					
20	Roads	EAP/RHD/W1	Rehabilitation of National Highway from Link Road (Cox's Bazar) (Chainage 381+494) to Ukhiya (Chainage- 406+494)	Widening of road completed 5.2 km out of 25 km; Base casting completed 4 out of 10; Toe wall completed 500 meters out of 1000 meters; 3 box culverts completed out of 11	27-Dec-18
21	Roads	EAP/RHD/W2	Rehabilitation of National Highway from Ukhiya (Chainage 406+494) to Unchiprang (Chainage-431+494)	<ul style="list-style-type: none"> <li>□ Widening of road completed 4 km out of 25 Km</li> <li>□ Base casting completed 2 out of 10</li> <li>□ Toe wall completed 400 meters out of 1000 meters</li> <li>□ 6 box culverts completed out of 12</li> </ul>	27-Dec-18
22	Roads	EAP/RHD/C ON/1	Design, Monitoring and supervision consulting services for RHD component , Cox's bazar	Contract to be signed by 02 May 2019 and contractor fielded as per TOR	30-Apr-19

52 The list of sub-projects that are under bid preparation is presented in the **Table 7** below.

**Table 7 List of subprojects been under bid preparation stage awarded to date**

SL no.	Component	Package No.	Description	Progress to date	Award date
<b>BREB</b>					
1	Energy	EAP/BREB/G6	Supply and Installation 2000 units of BREB street lights (including flood lights and photocell lights) inside the camps Balukhali, Leda and Noapara	As per discussion with ISCG and RRRC, this package will be cancelled. The saving for this package and procurement saving from other packages may reallocate for another new procurement ( Nano grid for household) as per demand.	30-Nov-19
2	Energy	EAP/BREB/W1B	Augmentation of Cox's Bazaar Transmission Grid Network to strengthen 33/11KV Sub-Station (10/14MVA, Turnkey)	<ul style="list-style-type: none"> <li>a) MOU has been signed</li> <li>b) Bid document is under process</li> <li>c) BREB is expected to submit BID documents to BRM by 30-05-2019</li> </ul>	31-Jul-19 Possible delay expected
<b>DPHE</b>					
3	Water and sanitation	EAP/DPHE/G2	Supply and operation of waste management equipment/vehicle for two years for Camps in Ukhiya	IFB publication is expected by 21-06-2019	30-Jul-19
4	Water and sanitation	EAP/DPHE/G3	Supply and operation of waste management equipment/vehicle for two years for camps in Teknaf	IFB publication is expected by 21-06-2019	30-Jul-19
5	Water and sanitation	EAP/DPHE/W9A	Construction and operation of 2 Integrated waste management	IFB publication is expected by 15-06-2019	30-Jul-19

SL no.	Component	Package No.	Description	Progress to date	Award date
			and resource recovery facilities with collection system at the outskirts of Kutupalong Balukhali Megacamp, Ukhiya Group-2		
6	Water and sanitation	EAP/DPHE/W9B	Construction and operation of Integrated waste management (Kutupalong Balukhali) Group-3	a) Site selection and design in progress b) IFB publication is expected by 15-06-2019	30-Aug-19
7	Water and sanitation	EAP/DPHE/W11	Construction of Surface Water Treatment Plant for supporting water supply at Cox's Bazar city and surrounding areas	Municipality is expected to finalize land acquisition by 30-06-2019	30-Dec-19
8	Water and sanitation	EAP/DPHE/W12A	Construction of surface water reservoir based piped water system (Nayapara, Teknaf)	a) Pre-feasibility completed by NUHCR b) IFB publication is expected by 31-07-2019	30-Aug-19
9	Water and sanitation	EAP/DPHE/W12B	Construction of piped water systems (Unchiprang/ Shamlapur)	Expected date of IFB publication is 12-06-2019	30-Jun-19
10	Water and sanitation	EAP/DPHE/W18	Construction of piped water supply with surface water reservoirs, treatment plant and other and associated facilities at Ukhiya	Expected date of IFB publication is 03-09-2019	30-Nov-19
<b>LGED</b>					
11	Disaster Risk management	EAP/LGED/OCB-N/W10	Hill Slope Protection Works inside the Kutupalong Balukhali Mega Camp, Ukhiya Group -1	survey works is going on. IFB expected in July 2019.	15-Sep-19
12	Disaster Risk management	EAP/LGED/OCB-N/W11	Hill Slope Protection Works inside the Kutupalong Balukhali Inside Mega Camp Ukhiya Group -2	survey works is going on. IFB expected in July 2019.	15-Sep-19
13	Disaster Risk management	EAP/LGED/OCB-N/W12	Hill Slope Protection Works inside the Kutupalong Balukhali Inside Mega Camp Ukhiya Group -3	survey works is going on. IFB expected in July 2019.	30-Sep-19
14	Disaster Risk management	EAP/LGED/OCB-N/W13	Hill Slope Protection Works inside the Kutupalong Inside Mega Camp Ukhiya Group -4	survey works is going on. IFB expected in July 2019.	30-Sep-19
15	Disaster Risk management	EAP/LGED/OCB-N/W14	Hill Slope Protection Inside Mega Camp Ukhiya Group -5	survey works is going on. IFB expected in August 2019.	30-Oct-19
16	Disaster Risk management	EAP/LGED/OCB-N/W15	Hill Slope Protection Works inside the Kutupalong Balukhali Mega Camp, Ukhiya Group -6	survey works is going on. IFB expected in August 2019.	30-Oct-19
17	Disaster Risk management	EAP/LGED/OCB-N/W16	Hill Slope Protection Works inside the Kutupalong Balukhali Inside Mega Camp Ukhiya Group -7	survey works is going on. IFB expected in September 2019.	15-Nov-19
18	Disaster Risk management	EAP/LGED/OCB-N/W17	Hill Slope Protection Works inside the Kutupalong Balukhali Inside Mega Camp Ukhiya Group -8	survey works is going on. IFB expected in September 2019.	15-Nov-19
19	Disaster Risk management	EAP/LGED/OCB-N/W18	Hill Slope Protection Works inside the Kutupalong Inside Mega Camp Ukhiya Group -9	survey works is going on. IFB expected in September 2019.	1-Dec-19

SL no.	Component	Package No.	Description	Progress to date	Award date
20	Disaster Risk management	EAP/LGED/OCB-N/W20	Construction of Storm Water Drainage Network inside camps and evacuating water outside camps, 2 groups in Ukhiya	Bid documents are under preparation	30-Sep-19
21	Disaster Risk management	EAP/LGED/OCB-N/W21	Construction of Storm Water Drainage Network inside camps and evacuating water outside camps: 1 group in Teknaf	Survey work is going on. IFB expected in July 2019.	30-Sep-19

53 The list of sub-projects that are Invited for Bidding (IFB) process is presented in the **Table 8** below.

**Table 8 List of subprojects at IFB stage awarded to date and their possible award date**

SL no.	Component	Package No.	Description	Progress to date	Award date
<b>BREB</b>					
1	Energy	EAP/BREB/G5	Supply, Installation Testing commissioning of 50 nos. solar nano-grid for household electricity supply within the camp (150 household per cluster: to cater 7,500 HH) at Balukhali mega camp	a) Contract is expected to be signed sometimes in June 2019 b) 25 sites for nano-grid finalized	30-May-19
<b>DPHE</b>					
2	Water and Sanitation	EAP/DPHE/G4	Supply and operation of 4 no. drilling rigs	Contract is expected to be awarded by 15-06-2019	30-May-19
3	Water and Sanitation	EAP/DPHE/W10	Construction and operation of Integrated waste management system (Shamlapur, Teknaf) Group-1	Expected date of contract is 10 June 2019	30-May-19
4	Water and Sanitation	EAP/DPHE/CON/1	Design, Monitoring and Supervision consulting services of DPHE component, Cox's Bazar	Submission -1 [S-1] has been submitted to ADB on 07.04.19 for review. Expected date of RFP is end of April, 2019.	30-Jul-19
<b>LGED</b>					
5	Roads	EAP/LGED/OCB-N/W1A	Construction of 7.5 km Internal Roads and Stairs with Drainage Facilities Inside the camps in Ukhiya, Group 1	BER in progress	30-Jun-19
6	Roads	EAP/LGED/OCB-N/W1B	Construction of 7.5 km Internal Roads and Stairs with Drainage Facilities Inside the camps. in Ukhiya, Group 2	Re-rendering is under process due to some technical reasons	15-Jun-19
7	Roads	EAP/LGED/OCB-N/W2A	Construction of 7.5 km Internal Roads and Stairs with Drainage Facilities Inside the camps. in Ukhiya -Group 3	BER in progress	30-Jun-19
8	Roads	EAP/LGED/OCB-N/W2B	Construction of 7.5 km Internal Roads and Stairs with Drainage Facilities Inside the camps in Teknaf Group 4	BER in progress	30-Jun-19
9	Roads	EAP/LGED/OCB-N/W3	Improvement of 1.5 km existing Folia Para road connecting Highway to U-B Road Ukhiya+ Upgradation of 5.5 km existing N.I. Chowdhury Road Connecting Marine Drive to U-B road.	BER in progress	30-Jun-19
10	Roads	EAP/LGED/OCB-N/W5	Upgradation of existing 8.8 km link road connecting Cox's Bazar-Teknaf and Marine Drive Highways, Ukhiya	NOA issued on 26-05-2019	15-Jun-19

## 4.2 CONTRACT REQUIREMENTS (ENVIRONMENT)

54 The following documents, relating to the identified environmental safeguards, form part of the Contract Package and are part of the monitoring requirements in ascertaining the degree of compliance:

- a. Initial Environmental Examination (IEE)
- b. Environmental Management Plan (EMP); and

55 In addition to the foregoing, the Contractor is to provide the Project Manager with a written notice of any unanticipated environmental risks or impacts that arise during construction, implementation or operation of the Plant or Works, which were not considered in the IEE's and the EMP's.

56 **The general anticipated impacts for all subprojects and their mitigation measures are summarized in later paragraphs for reference of the later chapters which discuss the environmental safeguard compliance in relation to the requirements set by subproject specific EMPs.**

### 4.2.1 Air Quality

57 During construction period the impact on air quality is mainly due to the material movement. However, air quality over a small area is affected, though, not in significant levels. There is an increase in the dust levels all along the haul roads, the borrow areas and dumping areas is expected. The emissions from the construction machinery are the source of ambient air pollution during the actual construction. Continuous use of generators, bulldozers, rollers, crane, trucks etc. give rise to the ambient levels.

58 The general mitigation measures are as follows:

- In order to curb the increased fugitive dust emissions in the area due to vehicular movement and raw material transport, provisions should be made for sprinkling of water on the haul roads in the area. Sprinkling of water should be carried out at least once a day on a regular basis during the entire construction period. Special attention should be given to all the haul roads passing through residential areas in the region. Daily inspection at haul roads and at construction site should be carried out to ensure removal of construction debris to the landfill sites.
- Covered trucks shall be used for transportation of materials prone to fugitive dust emissions. Additionally, materials which may collect on the horizontal surfaces of these trucks during loading should be removed before transportation.
- Idling of delivery trucks or other equipment should not be permitted when not in active use.
- The emission levels from diesel vehicles being used should be checked on monthly basis and brought to the required levels of emission standards.
- Proper care should be taken for storage of furnace oil, diesel, petrol etc.
- Work schedule and the operation time of construction machinery should be suitably modified to exercise a control on ambient air quality standards.
- To ensure the efficacy of the mitigation measures suggested, air quality monitoring shall be carried out as per environmental monitoring plan;
- As soon as the construction activity is over the surplus earth should be utilized to fill up the low-lying areas, if any.



#### 4.2.2 Noise Quality

59 Noise quality is also important for the construction phase. During the construction phase, there would be an increase in ambient noise levels due to construction machinery operation and movement of construction vehicles.

60 The following mitigation measures may be adopted:

- Construction yard shall be established at least 200 m away from any residential area. This will allow the noise to attenuate.
- Special acoustic enclosures should be provided for individual noise generating equipment. Enclosures may be provided by way of noise shields, which can, be either brick masonry structure or any other physical barrier which is effective in adequate attenuation of noise levels. A 3 m structure made up of brick and mud with internal plastering and of non-reflecting surface will be very effective in this regard.
- Noise measurement should be conducted during construction to assess the prevailing noise levels. Earplugs should be provided to those workers who will be working very close to noise generating construction machinery.
- The exposure of workers to high noise levels especially, near the construction site needs to be minimized during construction period. This could be achieved by: Job rotation, Protective devices, and Noise barriers. Stationery construction equipment should not be located near human habitation in particular schools, hospitals and institutions.
- Noise levels from loading and unloading can be reduced by usage of various types of cranes and by placing materials on sand or on the beds of sandy bags.
- Use of noisy construction equipment should not be permitted during night hours near residential areas or sensitive areas.

#### 4.2.3 Disposal of Construction Spoil and Debris

61 During construction about 15% of gravel, sand, bricks and cement is left as construction spoils. It is advocated that construction spoils shall be disposed off at a site, as approved by the local authority. The Contractor shall prepare a spoils management plan, which shall include the following:

- i. Spoils Information: Materials Type; Potential Contamination; Expected Volume and Sources; Spoil Classification
- ii. Spoils Management: Transportation of Spoil; Storage of Spoil; Contamination of Spoil; Approved Reuse and/or Disposal Sites
- iii. Records of Reuse and/or Disposal

#### 4.2.4 Surface Water and Groundwater Contamination

62 Use of toxic materials such as solvents and vehicle maintenance fluid (oil, coolant) and diesel fuel may contaminate surface and groundwater if these are disposed of directly into the ground or washed into the streams. Human waste from construction workers may also contaminate surface water and groundwater if there are no adequate sanitary facilities.

63 The following mitigation measures can be adopted:

- All earthworks must to be conducted during dry season/dry spell to maximum extent possible to avoid the difficult working conditions that prevail during monsoon season such as problems from runoff.
- Prioritize re-use of excess spoils and materials in construction activities. If spoils will be disposed, consult with Local Authority on designated disposal areas.
- Ensure diverting storm water flow during construction shall not lead to inundation and other nuisances in low-lying areas.
- Monitor water quality according to the environmental management plan.
- Garbage disposal service to be provided, Concrete refuse reused or disposed of without habitat loss;
- All other effluents not to be disposed of directly into natural waters, but via settling basins to allow suspended sediment to settle out.
- Workforce camps will be located away from water resources. All practical measures such as provision of septic tanks, garbage bags, and other sanitation facilities will be implemented at the construction camps to prevent the wastewater and solid wastes from entering well and groundwater recharge areas.
- Wells used for drinking will be tested quarterly to ensure potability. The wells will be designated during labour camp establishment.
- Take all precautions to minimize the wastage of water in the construction activities. In this case there is no waterbody nearby. However, it needs to be noted that, no temporary or long-term waterlogging during the construction should be allowed.

#### 4.2.5 Occupational and Health and Safety Risks

64 Occupational hazards may arise if not properly managed (risk of fall and electrocution, etc). Increase in dust may cause health problems to workers. Insufficient supply and improper use of personal protective equipment (PPE) and lack of safety procedures may cause injuries or fatal accidents. For safety there will be a need to interrupt electricity supply to existing businesses while new poles, conductors and other installations are put in place. This needs to be done in a phased manner allowing small sections of lines to be reconnected to the network, keeping down time to a minimum for existing users. Close contact with persons afflicted with diseases and lack of sanitation in workers camps may also pose health risks. Outbreaks of diseases like diphtheria and measles can be avoided by observing proper sanitation facilities and observing good personal hygiene habits.

65 The following generic measures suggested are as followed;

- Comply with requirements of Government of Bangladesh Labour Law of 2006 (amended in 2013) and all applicable laws and standards on workers' health and safety (H&S).
- Ensure that all site personnel have a basic level of environmental awareness training. If necessary, the environmental management specialist and/or a translator shall be called to the sites to further explain aspects of environmental or social behavior that are unclear.
- Produce and implement a site H&S plan which include measures as: (i) excluding the public from worksites; (ii) ensuring all workers are provided with and required to use personal protective equipment (reflectorized vests, footwear, gloves, goggles and masks) at all times; (iii) providing H&S training for all site personnel; (iv) documenting procedures to be followed for all site activities; and (v) maintaining accident reports and records.
- Arrange for readily available first aid unit including an adequate supply of sterilized dressing materials and appliances

- Maintain necessary living accommodation and ancillary facilities in functional and hygienic manner in work camps. Ensure (i) uncontaminated water for drinking, cooking and washing, (ii) clean eating areas where workers are not exposed to hazardous or noxious substances; and (iii) sanitation facilities are available at all times.
- Provide medical insurance coverage for workers;
- Provide H&S orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;
- Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted;
- Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas;
- Ensure moving equipment is outfitted with audible back-up alarms;
- Mark and provide sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate; and - Disallow worker exposure to noise level greater than 85 dBA for a duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively.

#### 4.2.6 Community Health and Safety Hazards

66 Community hazards may arise during construction (dust, air quality, noise, electrocution etc.). Traffic accidents and vehicle collision with pedestrians during material and waste transportation may occur if no proper signages are placed.

67 The following Generic Measures are suggested:

- Contractor's activities and movement of staff will be restricted to designated construction areas.
- Locations of hot-mix plants, batching plants and crushers (if these establishments are being set up exclusively for the subproject) shall be located at least 100 m away from the nearest dwelling preferably in the downwind direction.
- Consult with the Local Authority on the designated areas for stockpiling of, soils, gravel, and other construction materials.
- If the contractor chooses to locate the work camp/storage area on private land, he must get prior permission from the environment management specialist and landowner.
- Use small mechanical excavators to attain faster excavation progress. For rock and concrete breaking, use non-explosive blasting chemicals, silent rock cracking chemicals, and concrete breaking chemicals.
- Under no circumstances may open areas or the surrounding bushes be used as a toilet facility.
- Recycling and the provision of separate waste receptacles for different types of waste shall be encouraged.
- A general regard for the social and ecological well-being of the site and adjacent areas is expected of the site staff. Workers need to be made aware of the following general rules:
  - (i) no alcohol/drugs on site; (ii) prevent excessive noise; (iii) construction staff are to make use of the facilities provided for them, as opposed to ad hoc alternatives (e.g. fires for cooking, the use of surrounding bushes as a toilet facility); (iv) no fires

permitted on site except if needed for the construction works; (v) trespassing on private/commercial properties adjoining the site is forbidden; (vi) other than pre-approved security staff, no workers shall be permitted to live on the construction site; and (vii) no worker may be forced to do work that is potentially dangerous or that he/she is not trained to do.

- Interested and affected parties need to be made aware of the existence of the complaints book and the methods of communication available to them. The contractor must address queries and complaints by: (i) documenting details of such communications; (ii) submitting these for inclusion in complaints register; (iii) bringing issues to the environment management specialist's attention immediately; and (iv) taking remedial action as per environment management specialist's instruction.
- The contractor shall immediately take the necessary remedial action on any complaint/grievance received by him and forward the details of the grievance along with the action taken to the environment management specialist within 48 hours of receipt of such complaint/grievance.
- Create traffic regulation and diversion zones during construction work. The proposed site is on the main road, and it is expected that heavy vehicle movements can cause traffic nuisance. Therefore, traffic regulation and diversion will be important to avoid traffic nuisance.

#### **4.2.7 Soil erosion**

68 Clearing topsoil in proposed widening areas can lead to loss of nutrient and erosion particularly along the hill cut slopes and dust from unprotected storage sites. The erosion risk at hill cut slopes is possible. Gully erosion along the exposed track slope during rainy season may cause localized sedimentation congestions.

69 The following measures are suggested:

- Topsoil storage areas must be protected during the dry season, wind erosion—by covering.
- Rapid revegetation and use of hydro-seeding and jute erosion protection mats should be applied in areas where erosion is noted during the regular monthly inspections.

#### **4.2.8 Topography and landscape change**

70 Visual intrusion from large piles of bridge/culverts materials and ballast obstructing views and excavation along the edge of the alignment leaving large unsafe holes is possible.

71 The following measures are suggested:

- Material stockpiles will be removed as soon as work is completed and the area re-landscaped. Same applies to borrow areas.

#### **4.2.9 Post-construction clean-up**

72 Damage due to debris, spoils, excess construction materials.

73 The following general mitigation measures are suggested:

- Remove all spoils wreckage, rubbish, or temporary structures (such as buildings, shelters, and latrines) which are no longer required;

- All excavated roads shall be reinstated to original condition;
- All disrupted utilities restored;
- All affected structures rehabilitated/compensated;
- The area that previously housed the construction camp is to be checked for spills of substances such as oil, paint, etc. and these shall be cleaned up;
- All hardened surfaces within the construction camp area shall be ripped;
- All imported materials removed, and the area shall be top soiled and regressed using guidelines set out in the re-vegetation specification that forms part of this document;
- The contractor must arrange the cancellation of all temporary services;
- Request PIU to report in writing that worksites and camps have been vacated and restored to pre-project conditions before acceptance of work.

#### **4.2.10 Submission of EMP implementation Report:**

74 Unsatisfactory compliance to EMP.

75 The following mitigation measures are suggested:

- Appointment of Supervisor to ensure EMP implementation;
- Timely submission of monitoring reports including pictures.

### **4.3 FINANCING AGREEMENT**

76 Financial cost provision for the Contractor to complete all the required Environmental mitigation and monitoring requirements is given in the EMP cost stipulated with the subproject specific EMPs, along with the stipulated frequency and extent of sample monitoring, in accordance with the respective Environmental Management and Monitoring Plan, of the particular contract package.

## 5 Environmental Status

### 5.1 STATE OF ENVIRONMENTAL SAFEGUARDS DOCUMENTS

77 To date (June 2019) out of 37 B category projects according to ADB classification, 20 IEEs have been drafted with 27 EMPs and 5 ECoPs. Some EMPs and subsequent IEEs are due to either design revision or additional survey work. **Table 9** represents the status of preparation of safeguards documents.

**Table 9 Summary Status of safeguards documents preparation for B category subprojects**

Agency	Total B Category project	IEE	EMP	ECoP
DPHE		9	10	4
LGED	20	7	13	1
RHD	02	2	2	0
REB	03	2	2	0
Total		20	27	5

78 To date 10 EMPs for DPHE, 13 EMPs for LGED, 2 EMPs for BREB and 2 EMPs for RHD have been prepared. Of 20 IEEs, 9 IEEs for DPHE, 7 IEEs for LGED, 2 IEEs for RHD and 2 IEEs for BREB have been prepared. Details of subproject wise status of IEE and EMP preparation has been presented in **Table 10**.

**Table 10 Subproject wise status of preparation of safeguards documents**

SI No.	Package No.	Category	EMP	IEE	ECoP
<b>BREB</b>					
01	EAP/BREB/G1	C			
02	EAP/BREB/G2A	C			
03	EAP/BREB/G2B	C			
04	EAP/BREB/W1A	B	Done	Done and disclosed	
05	EAP/BREB/W2	B	Done	Done and disclosed	
06	EAP/BREB/G6	C			
07	EAP/BREB/W1B	B	Yet to do. Final design and nature of the subproject has not been identified yet.		
08	EAP/BREB/G5	C			
Total B category		03	02	02	00
<b>DPHE</b>					
01	EAP/DPHE/G1	C			Done
02	EAP/DPHE/W1	B	Indicative EMP done. Final version will be come out after final design of distribution pipeline.	IEE prepared, but revision needed, see EMP status.	
03	EAP/DPHE/W2	B	Indicative EMP done. Final version will be come out after final design of distribution pipeline.	IEE prepared, but revision needed, see EMP status.	

SI No.	Package No.	Category	EMP	IEE	ECOP
04	EAP/DPHE/W3	B	Indicative EMP done. Final version will be come out after final design of distribution pipeline.	IEE prepared, but revision needed, see EMP status.	
05	EAP/DPHE/W4	B	Indicative EMP done. Final version will be come out after final design of distribution pipeline.	IEE prepared, but revision needed, see EMP status.	
06	EAP/DPHE/W5	B	Indicative EMP done. Final version will be come out after final design of distribution pipeline.	IEE prepared, but revision needed, see EMP status.	
07	EAP/DPHE/W13	C			Done
08	EAP/DPHE/W14	C			Done
09	EAP/DPHE/W15	C			Done
10	EAP/DPHE/G2	C			
11	EAP/DPHE/G3	C			
12	EAP/DPHE/W9A	B	Done	IEE done, yet to disclose	
13	EAP/DPHE/W9B	B	Indicative EMP done. Final version will come out after final design.	IEE prepared, but revision needed, see EMP status.	
14	EAP/DPHE/W11	B	Yet to do. Location and design has not been finalized yet.		
15	EAP/DPHE/W12A	B	Indicative EMP done. Final version will come out after final design.	IEE is under preparation	
16	EAP/DPHE/W12B	B	Indicative EMP done. Final version will be come out after final design of distribution pipeline.	IEE prepared, but revision needed, see EMP status.	
17	EAP/DPHE/W18	B	Yet to do. Location and design has not been finalized yet.		
18	EAP/DPHE/G4	C			
19	EAP/DPHE/W10	B	Done	IEE done, yet to disclose	
20	EAP/DPHE/CON/1				
Total B category		12	10	09	04
<b>LGED</b>					
01	EAP/LGED/OCB-N/W6	B	Done	Done and disclosed	
02	EAP/LGED/OCB-N/W8	B	Done	Done and disclosed	
03	EAP/LGED/OCB-N/W9	B	Done	Done and disclosed	
04	EAP/LGED/OCB-N/W19	C			Done
05	EAP/LGED/CON/1				
06	EAP/LGED/OCB-N/W10	B	Yet to do. Design has not been finalized yet		
07	EAP/LGED/OCB-N/W11	B	Yet to do. Design has not been finalized yet		
08	EAP/LGED/OCB-N/W12	B	Yet to do. Design has not been finalized yet		
09	EAP/LGED/OCB-N/W13	B	Yet to do. Design has not been finalized yet		
10	EAP/LGED/OCB-N/W14	B	Yet to do. Design has not been finalized yet		
11	EAP/LGED/OCB-N/W15	B	Yet to do. Design has not been finalized yet		
12	EAP/LGED/OCB-N/W16	B	Yet to do. Design has not been finalized yet		
13	EAP/LGED/OCB-N/W17	B	Yet to do. Design has not been finalized yet		

SI No.	Package No.	Category	EMP	IEE	ECoP
14	EAP/LGED/OCB-N/W18	B	Yet to do. Design has not been finalized yet		
15	EAP/LGED/OCB-N/W20	B	Indicative EMP done. Final version will come out after final design.		
16	EAP/LGED/OCB-N/W21	B	Indicative EMP done. Final version will come out after final design.		
17	EAP/LGED/OCB-N/W1A	B	EMP prepared, but revision needed since design and alignment change is expected.	IEE prepared, but revision needed, see EMP status	
18	EAP/LGED/OCB-N/W1B	B	EMP prepared, but revision needed since design and alignment change is expected.	IEE prepared, but revision needed, see EMP status	
19	EAP/LGED/OCB-N/W2A	B	EMP prepared, but revision needed since design and alignment change is expected.	IEE prepared, revision needed, see EMP status	
20	EAP/LGED/OCB-N/W2B	B	EMP prepared, but revision needed since design and alignment change is expected.		
21	EAP/LGED/OCB-N/W3	B	EMP done (4 <sup>th</sup> revision due to design and alignment changes)	IEE done, yet to disclose	
22	EAP/LGED/OCB-N/W5	B	EMP done (5 <sup>th</sup> revision due to design and alignment changes)		
Total B category		20	13	07	01
<b>RHD</b>					
01	EAP/RHD/W1	B	Done	Done and disclosed	
02	EAP/RHD/W2	B	Done	Done and disclosed	
03	EAP/RHD/C ON/1				
Total B category		02	02	02	
<b>Grand Total (B category)</b>		<b>37</b>			

## 5.2 ENVIRONMENTAL SAFEGUARDS MONITORING

79 An environmental assessment, using ADB's Rapid Environmental Assessment (REA) checklist for urban development, was conducted and the results of the assessment demonstrated that the subprojects will not cause significant adverse impacts. The proposed infrastructure development programme is classified as Environmental Category B as per the ADB's SPS 2009, as no significant impacts are envisioned. The related initial environmental examination (IEE) reports has been prepared in accordance with ADB SPS 2009 requirements for environment category B projects and provide mitigation and monitoring measures, for no envisaged significant impacts, as a result of implementing the subprojects.

80 The environmental mitigation measures, as stipulated in the respective EMP's and in the obtained environmental permit, are monitored during the implementation programme. In order to monitor the respective EMP's, two environmental specialists from ADB and one environmental specialist from each executive agency are working as a team with the support of ADB safeguards team.

81 There are no indigenous people present in the subproject areas and so no impact on Indigenous peoples (IPs). These subprojects are hence categorized as Category C for Indigenous People. Therefore, no Indigenous Peoples Development Plan (IPDP) is required for this sub-project.

82 The environmental mitigation measures, as stipulated in respective EMP's for the currently active civil works contract packages, are monitored as part of this EMR-02.



## 5.2.1 Monitoring visits

83 During planning phase, a total 32 visits have been conducted by the Environmental specialists appointed by ADB. Besides, until date 138 environmental safeguards monitoring visits have been conducted at different times during the current cycle (2<sup>nd</sup> six months, Jan-Jun 2019) of monitoring period. See **Table 11** for details break down. Also see photographs of monitoring visits in **Figure 3**. **Figure 4** presents some photographs of planning visits also. For each monitoring visit, one site visit report/compliance report has been submitted to the concerned EA and ADB and follow ups were tracked to observe corrective measures and desired progress.

**Table 11 Environmental Safeguards monitoring visit conducted during Jan-Jul 2019**

Site Visit During Planning Phase	Site Visit During Construction Phase				Total
	BREB	DPHE	LGED	RHD	
32*	25	31	40	42	170

\*this figure also includes the planning phase visits conducted during the first EMR period (Jul-Dec 2018)



**Figure 4 Monitoring visit to DPHE minipiped water supply site (left) and BREB G1 (right)**



**Figure 3 Planning visit to LGED's upcoming Drainage network package**

84 Besides monitoring visits, onsite trainings and meetings with EAs were conducted during the current monitoring period. The site-based trainings were arranged by the environmental specialists to sensitize the contractors on implementing the environmental safeguards according to the EMPs and other contracts. A total 18 onsite trainings were arranged to date. Besides one regional workshop was organized by ADB in Cox's Bazar with all EAs and contractors to train them so that they can better implement the EMPs and get aware about the environmental concerns. Besides trainings, regular meetings with EAs were conducted on frequent basis to better coordinate with all the EAs. To date 58 meetings have been conducted. Alongside meetings with EAs, 5 more meetings with various organizations like UNHCR, SMEP and ISCG were attended to understand the current coordination status in Cox's bazar. **Table 12** below represents the breakdown of meetings and onsite trainings arranged by the environmental specialists.

**Table 12 Environmental Safeguards trainings/meetings conducted during Jan-Jul 2019**

Onsite Training	Meeting with EAs					Training Workshop	Coordination meetings with various organizations
	BREB	DPHE	LGED	RHD	DFO	All EAs	
18	7	10	34	6	1	1	5

85 Details of the monitoring visits are given in **Table 13** below. Photographs of onsite trainings are in **Figure 5**.





Figure 5 Onsite trainings conducted during monitoring visits

**Table 13 Environmental monitoring visits and trainings conducted during Jan-Jul 2019**

Date	DPHE							LGED				RHD		BREB			
	W1	W2	W3	W4	W13	W14	W15	W8	W6	W9	W19	W1	W2	W1A-Sub	W2-Line	G1-LA	G2A-SSL
8/1/2019																	
6/2/2019																	
11/2/2019																	
13/2/2019								Training									
26/2/2019	Training											Training					
28/2/2019					Training												Training
2/3/2019												Training					
13/3/2019													Training				
21/3/2019																	
2/4/2019												Training					
10/4/2019																	
17/4/2019													Training				
23/4/2019																	
30/4/2019																	
2/5/2019																	
5/5/2019																	
8/5/2019		Training									Training						
20/05/2019									Training					Training			
27/05/2019										Training							
29/05/2019																	
15/06/2019																	
16/06/2019																	
17/06/2019																	
26/06/2019			Training				Training					Training					
30/06/2019													Training				

Legend	Visit
	Training

## 5.3 TRAINING AND AWARENESS

86 Besides regular onsite training conducted by the ADB Environmental Specialists to sensitize the workers health and safety issues as well as environmental safeguards, a regional training workshop was arranged by ADB on 28<sup>th</sup> April 2019 at Sayemon Beach Resort, Kolatoli, Cox's Bazar titled "Health, Safety and Environmental Safeguards". The training was arranged for Executive Agencies and Contractors on Field to sensitize them on health, safety and environmental safeguards issues and make them aware about the gaps in management in field.

87 The specific objectives were:

- Aware the EAs and contractors on ADB SPS 2009 and Government of Bangladesh rules and regulations on health, safety and environment that this project has to abide by;
- Inform the EAs and contractor about gaps in managing health, safety and environmental safeguards issues in field and equip them with possible solutions to overcome those gaps;
- Aware the EAs and contractors about sensitivity of local environment and communities of the project area; and
- Provide a guideline to the EAs and Contractors on field about the DOs and DON'Ts.

88 The workshop gathers around 34 participants from Cox's Bazar and surrounding areas who are involved in implementing the EAP. The participants came from mainly two backgrounds: contractors and their representatives and representatives from EAs, who are mainly engineers and consultants employed by the EAs. Along with participants, representatives from the Refugee Relief and Repatriation Commissioner (RRRC), representatives from ADB and EAs were present in the inauguration session.

89 The training workshop was divided into two main sessions: Inauguration session and training session. The training was moderated by Dr. Farhat Jahan Chowdhury, Senior Project Officer (Environment), ADB. Training sessions were conducted by Dr. Chowdhury, Mr. Shahid Zaman (Environmental Specialist, ADB) and Mr. Kushal Roy (Environmental Specialist, ADB).

90 The program is given in the following **Table 14**. Photos of the workshop are presented in **Figure 6**.

**Table 14 Structure of the regional training workshop arranged by ADB in Cox's Bazar**

Sl. No.	Time	Topics	Resource Person(s)
1	9.30 am - 10.00 am	Registration	
2	10.00 am - 10.15 am	Welcome and Opening Remarks	Md. Shamsud Douza, additional RRRC
3	10.15 am - 10.45 am	Orientation and objectives of the training Requirement of ADB Environmental Safeguards	Farhat J. Chowdhury
Tea Break (15 Mins)			
4	11.00 am - 1.00 pm	Occupational Health & Safety	Shahid Zaman
		Community Health & Safety and Wildlife	Kushal Roy
		Good Construction Management Practices	Shahid Zaman and Kushal Roy
		Environmental Monitoring and Reporting	Farhat J. Chowdhury
5	1.00 pm - 01.30 pm	Q & A	Participants
6	01.30 pm - 2.30 pm	Closing with lunch	





Figure 6 Participants and guests of inaugural session

## 5.4 ENVIRONMENTAL ISSUES OF THE CURRENT PROJECT

91 Until date a few numbers of environmental issues have ben encountered or identified to be affecting project design. **Table 5** represents the environmental issues, recommendations and measures taken. **Table 6** later represents the civil works and other issues, recommendation and measures taken.

92 Summary of Key Issues Identified are:

- Lack of proper PPEs.
- Lack of proper solid waste management system.
- No site has the H&S professional except RHD and DPHE/W2.
- Consideration of community health and safety is minimal.
- Ponding due to excavation is common which is causing trouble in locality.
- No site has proper emergency procedure except DPHE/W2.
- Environmental quality monitoring is pending to date.

93 **Figure 7** later represents some currents safeguards photographs from various sites taken during field visits.

**Table 15 Environmental Status of the subproject, issues and recommendation**

Package	Monitoring visits	Trainings conducted	Major issues identified during first monitoring period (Jul-Dec 18)	Issues addressed during 2 <sup>nd</sup> monitoring period (Jan-Jun 19)	New Issues identified during 2 <sup>nd</sup> monitoring period (Jan-Jun 19)	Comments
DPHE W1	17	1	<ul style="list-style-type: none"> <li>Absence of workplace and camp boundary.</li> <li>Burrow pits left open and causing troubles for local children playing around.</li> <li>Bentonite clay from the sedimentation pond is disposed on the access to the household located adjacent to the KRC01.</li> <li>Oil spilled from the generators discharged to the drains which may cause environmental pollution.</li> <li>Drainage congestion is occurred due to excavation for pipeline.</li> <li>Aggregates are stockpiled without cover; thus, dust was generated from the stockpile.</li> <li>Road/site was found severely dusty.</li> <li>Labors were observed to work without protection.</li> <li>Unauthorized access is observed in the site.</li> <li>Safety signboard is absent in the site.</li> <li>No first aid box is available at the site.</li> <li>No fire protection was found.</li> <li>No tool box meeting was conducted at site to educate the labors.</li> <li>Environmental monitoring (air, water, noise etc.) prior commencing the construction activity has not been done yet to establish the baseline.</li> </ul>	<ul style="list-style-type: none"> <li>PPEs are partially implemented.</li> <li>Boundary fencing partially implemented at KRC and camp 13.</li> <li>Site safety signs are placed.</li> <li>Dust suppression measures taken.</li> <li>Stockpile cover partially implemented.</li> <li>Site order book is maintained.</li> <li>Oil spilled from the generator is absorbed using sand.</li> </ul>	<ul style="list-style-type: none"> <li>PPEs are not fully implemented.</li> <li>Waste management is still absent in the site.</li> <li>Drainage congestion is occurred due to excavation of pipeline.</li> <li>Emergency procedure is not followed at site.</li> <li>Toolbox meeting is still not being held at any site.</li> <li>Environmental quality monitoring (air, water, noise etc.) for both pre-construction as well as construction phase has not been done yet.</li> </ul>	Contractor needs more focused training on OHS, waste management and pollution control.

Package	Monitoring visits	Trainings conducted	Major issues identified during first monitoring period (Jul-Dec 18)	Issues addressed during 2 <sup>nd</sup> monitoring period (Jan-Jun 19)	New Issues identified during 2 <sup>nd</sup> monitoring period (Jan-Jun 19)	Comments
DPHE W2	4	1	<ul style="list-style-type: none"> <li>No waste management facility in the site for both construction and domestic wastes.</li> <li>Oil spilled from the generators discharged to the drains which may cause environmental pollution.</li> <li>Site order book was maintained at the site.</li> <li>Site safety signs are absent in the site.</li> <li>PPEs are partially implemented.</li> <li>No first aid box is available at the site.</li> <li>No fire protection was found.</li> <li>Labor accommodation facility was temporary and unable to support during rain.</li> <li>Emergency procedure was not followed at site.</li> <li>No tool box meeting was conducted at site to educate the workers.</li> <li>Environmental monitoring (air, water, noise etc.) prior commencing the construction activity has not been done yet to establish the baseline.</li> </ul>	<ul style="list-style-type: none"> <li>Garbage bins were kept at site to manage the wastes.</li> <li>Oil spilled from the generator was absorbed using sand.</li> <li>PPEs were fully implemented except safety harness.</li> <li>Site safety signs are placed.</li> <li>Tool box meeting is conducted regularly.</li> <li>First aid box is readily available at the site.</li> <li>Emergency procedure is followed at the site.</li> </ul>	<ul style="list-style-type: none"> <li>Labor accommodation facility is still not improved.</li> <li>Environmental quality monitoring (air, water, noise etc.) for both pre-construction as well as construction phase has not been done yet.</li> </ul>	Onsite training seems to be working
DPHE W3	1	1	<ul style="list-style-type: none"> <li>Construction is recently commenced.</li> <li>No waste management facility in the site for both construction and domestic wastes.</li> <li>Site order book was maintained at the site.</li> <li>Site safety signs are absent in the site.</li> <li>PPEs are partially implemented.</li> <li>No first aid box is available at the site.</li> <li>No fire protection was found.</li> <li>Emergency procedure was not followed at site.</li> <li>No tool box meeting was conducted at site to educate the workers.</li> <li>Environmental monitoring (air, water, noise etc.) prior commencing the construction activity has not been done yet to establish the baseline.</li> </ul>	Not enough time to analyze the issues.		Contractor needs more focused training on OHS, waste management and pollution control



Package	Monitoring visits	Trainings conducted	Major issues identified during first monitoring period (Jul-Dec 18)	Issues addressed during 2 <sup>nd</sup> monitoring period (Jan-Jun 19)	New Issues identified during 2 <sup>nd</sup> monitoring period (Jan-Jun 19)	Comments
DPHE W4	1	0	<ul style="list-style-type: none"><li>Recently commenced.</li><li>No waste management facility in the site for both construction and domestic wastes.</li><li>Drainage congestion was occurred due to discharging of waste water from the test well.</li><li>Site order book was maintained at the site.</li><li>Site safety signs are absent in the site.</li><li>Labors were observed to work without protection.</li><li>No first aid box is available at the site.</li><li>No fire protection was found.</li><li>Tool box meeting is not conducted at site to educate the workers.</li><li>Emergency procedure is not followed at site.</li><li>Environmental monitoring (air, water, noise etc.) prior commencing the construction activity has not been done yet to establish the baseline.</li></ul>	Not enough time to analyze the issues.		Contractor needs more focused training on OHS, waste management and pollution control
DPHE W13	4	1	<ul style="list-style-type: none"><li>Absence of workplace and camp boundary</li><li>Burrow pits left open and there is a potential of accidents</li><li>Labors were observed to work without protection.</li></ul>	<ul style="list-style-type: none"><li>Site boundary implemented.</li><li>Burrow pits were demarcated and proper signs were placed</li><li>PPEs are partially implemented.</li></ul>	<ul style="list-style-type: none"><li>Construction is completed.</li><li>Site reinstatement needs to be finished immediately.</li></ul>	Onsite training seems to be working.
DPHE W14	3	0	<ul style="list-style-type: none"><li>Recently commenced</li><li>PPEs were absent</li><li>Proper site boundary and road sign were absent</li></ul>	<ul style="list-style-type: none"><li>Environmental code of practices has been suggested.</li><li>PPEs are partially implemented</li><li>Site safety signs are placed.</li></ul>	<ul style="list-style-type: none"><li>Construction is completed.</li><li>Site reinstatement needs to be finished immediately.</li></ul>	
DPHE W15	1	1	<ul style="list-style-type: none"><li>Construction is recently commenced.</li><li>No waste management facility in the site.</li><li>PPEs were not fully implemented.</li><li>Protection for working at height is absent.</li><li>Proper safety signs were absent at the site.</li><li>No first aid box is available at the site.</li><li>Emergency procedure is not followed at site.</li></ul>	Not enough time to analyze the issues.		Contractor needs more focused training on OHS, waste management and pollution control
Total DPHE	31	5				

Package	Monitoring visits	Trainings conducted	Major issues identified during first monitoring period (Jul-Dec 18)	Issues addressed during 2 <sup>nd</sup> monitoring period (Jan-Jun 19)	New Issues identified during 2 <sup>nd</sup> monitoring period (Jan-Jun 19)	Comments
LGED W8	15	1	<ul style="list-style-type: none"> <li>• Solid waste has been found to be thrown outside of the labor shed and inside the camp area, which is unacceptable.</li> <li>• About 20 trees were removed.</li> <li>• Due to absence of housekeeping, construction wastes were scattered around the work site.</li> <li>• The lack of dedicated storage area for drums containing oil/admixture has been noticed and there is an immense possibility of underground water contamination by the oil storage on the open soil area.</li> <li>• High level of noise was generated due to operation of generator and piling activity in the site.</li> <li>• Community people was affected due to dumping of excess earth spoils.</li> <li>• Construction wastes create obstacle to the student's access to the school.</li> <li>• No H&amp;S plan was prepared for site.</li> <li>• Safety signboard is absent at the site.</li> <li>• PPEs are yet to be properly implemented.</li> <li>• No first aid box is available at the site.</li> <li>• No fire protection was found.</li> <li>• National labor standard was not followed in the work site.</li> <li>• Tool box meeting is not conducted at site to educate the workers.</li> </ul>	<ul style="list-style-type: none"> <li>• Verbal agreements of highest noise generation after school time has been settled between the school committee and contractor.</li> <li>• A designated place for storage of drums are being located, yet to be fully in operation.</li> <li>• Housekeeping partially addressed.</li> <li>• PPEs partially addressed.</li> <li>• Site safety signs are placed.</li> <li>• First aid box is readily available at the site.</li> <li>• Buffer strip is kept between the construction site and the community house.</li> </ul>	<ul style="list-style-type: none"> <li>• Waste management problems has been persisting.</li> <li>• Obstacle on the access to the school is still not removed yet.</li> <li>• PPEs are not fully implemented.</li> <li>• Emergency procedure is not followed at site.</li> <li>• National labor standard is still not followed.</li> </ul>	Contractor needs more focused training on OHS, waste management and pollution control
LGED W6	6	1	<ul style="list-style-type: none"> <li>• Bentonite clay from the sedimentation pond is disposed to the drains.</li> <li>• About 22 trees were removed.</li> <li>• No waste management facility in the site for both construction and domestic wastes.</li> <li>• High level of noise was generated due to operation of generator and piling activity in the site.</li> <li>• Work area boundary demarcation, signage placement etc. ongoing.</li> <li>• Construction works disrupt the water supply to the school premise.</li> <li>• PPEs were not implemented properly.</li> </ul>	<ul style="list-style-type: none"> <li>• PPEs partially addressed.</li> <li>• Site safety signboards are placed.</li> <li>• Housekeeping partially addressed.</li> <li>• First aid box is readily available at the site.</li> <li>• Verbal agreements of highest noise generation after school time has been settled between the school committee and contractor.</li> </ul>	<ul style="list-style-type: none"> <li>• Proper management of waste water is not fully addressed.</li> <li>• Waste management is still absent in the site.</li> <li>• PPEs are not fully implemented.</li> <li>• Emergency procedure is not followed.</li> <li>• Tool box meeting is still not conducted.</li> </ul>	Contractor needs more focused training on OHS, waste management and pollution control

Package	Monitoring visits	Trainings conducted	Major issues identified during first monitoring period (Jul-Dec 18)	Issues addressed during 2 <sup>nd</sup> monitoring period (Jan-Jun 19)	New Issues identified during 2 <sup>nd</sup> monitoring period (Jan-Jun 19)	Comments
			<ul style="list-style-type: none"> <li>PPEs are yet to be properly implemented.</li> <li>No first aid box is available at the site.</li> <li>No fire protection was found.</li> <li>National labor standard was not followed in the work site.</li> <li>Tool box meeting is not conducted at site to educate the workers.</li> </ul>	<ul style="list-style-type: none"> <li>Water supply system is returned to service.</li> </ul>		
LGED W9	4	1	<ul style="list-style-type: none"> <li>Bentonite clay from the sedimentation pond is disposed to the drains.</li> <li>No waste management facility in the site for both construction and domestic wastes.</li> <li>High level of noise was generated due to operation of generator and piling activity in the site.</li> <li>Drainage congestion was occurred in the active working area.</li> <li>Work area boundary demarcation, signage placement etc. ongoing.</li> <li>School buildings are used for the labor shed.</li> <li>PPEs are yet to be properly implemented.</li> <li>No first aid box is available at the site.</li> <li>No fire protection was found.</li> <li>National labor standard was not followed in the work site.</li> <li>Tool box meeting is not conducted at site to educate the workers.</li> </ul>	<ul style="list-style-type: none"> <li>Verbal agreements of highest noise generation after school time has been settled between the school committee and contractor.</li> <li>Construction site is being developed to prevent drainage congestion.</li> <li>Housekeeping is partially implemented.</li> <li>Site safety signboards are placed.</li> <li>PPEs partially addressed.</li> <li>First aid box is readily available at the site.</li> </ul>	<ul style="list-style-type: none"> <li>Waste management is still absent in the site.</li> <li>PPEs are yet to be properly implemented.</li> <li>Emergency procedure is not followed.</li> <li>National labor standard was not followed in the work site.</li> <li>Labor shed is still not relocated from the school building.</li> <li>Tool box meeting is still not conducted.</li> </ul>	Contractor needs more focused training on OHS, waste management and pollution control
LGED W19	15	1	<ul style="list-style-type: none"> <li>Contractor used the cow dung as compaction material in the borehole instead of bentonite during drilling the well which may contaminate the drinking water source.</li> <li>Dust was being generated from the small cement concrete mixing plant where the plant operator found to work without mask which can cause serious health impact due to fine particles.</li> <li>Contractor stockpiled the construction materials such as aggregates, sands etc. on the army road outside of the boundary fence which impede the traffic movement.</li> <li>PPEs are yet to be properly implemented.</li> </ul>	<ul style="list-style-type: none"> <li>Dust suppression measures are taken.</li> <li>Stockpiles have been covered as instructed</li> <li>Housekeeping is partially implemented.</li> <li>Site safety signboards are placed.</li> <li>PPEs partially addressed.</li> <li>First aid box is readily available at the site.</li> </ul>	<ul style="list-style-type: none"> <li>Proper waste management yet to be implemented.</li> <li>PPEs are yet to be properly implemented.</li> <li>Emergency procedure is not followed.</li> <li>National labor standard was not followed in the work site.</li> <li>Tool box meeting is still not conducted.</li> </ul>	Contractor needs to be forced to devise a waste management plan and implement through a H&S professional

Package	Monitoring visits	Trainings conducted	Major issues identified during first monitoring period (Jul-Dec 18)	Issues addressed during 2 <sup>nd</sup> monitoring period (Jan-Jun 19)	New Issues identified during 2 <sup>nd</sup> monitoring period (Jan-Jun 19)	Comments
			<ul style="list-style-type: none"> <li>No first aid box is available at the site.</li> <li>No fire protection was found.</li> <li>National labor standard was not followed in the work site.</li> <li>Tool box meeting is not conducted at site to educate the workers.</li> <li>Due to absence of housekeeping, construction wastes were scattered around the work site.</li> </ul>			
<b>Total LGED</b>	<b>40</b>	<b>4</b>				
<b>RHD W1</b>	19	4	<ul style="list-style-type: none"> <li>Contractor's CEMP is yet to be prepared.</li> <li>No EHS expert has been mobilized.</li> <li>Water spray needs to be more frequent since dust pollution is evident at camp site and locals are complaining</li> <li>Throwing solid waste to the nearby agricultural field in the camp site.</li> <li>Waste oil and oil barrels are kept together and empty barrels are dumped nearby location.</li> <li>RHD marked 468 matured trees for cutting.</li> <li>IEE needs to be updated accordingly with a tree plantation plan.</li> <li>No proper site demarcation and fencing along road side might provoke potential accident.</li> <li>Safety signboard is absent at the camp site.</li> <li>PPEs are yet to be properly implemented.</li> <li>No first aid box is available at the site.</li> <li>No fire protection was found.</li> <li>Proper lighting is absent during night shift at the site.</li> <li>Tool box meeting is not conducted at site to educate the workers.</li> <li>National labor standard was not followed in the work site.</li> </ul>	<ul style="list-style-type: none"> <li>EHS expert is appointed.</li> <li>CEMP is under preparation.</li> <li>Frequency of water spray has been increased (from twice daily to thrice daily).</li> <li>Waste oil and empty barrels have been categorized and stored in a separate room for later safe disposal.</li> <li>IEE is being updated including tree replantation program. Tree cutting is being started.</li> <li>PPEs are partially implemented.</li> <li>Road safety measures are partially addressed.</li> <li>Site demarcation and fencing partially applied.</li> <li>Fire protection is preserved in the site.</li> <li>First aid box is readily available at the site.</li> </ul>	<ul style="list-style-type: none"> <li>PPEs are yet to be properly implemented.</li> <li>Proper waste management yet to be implemented.</li> <li>Drainage congestion is being occurred in the excavated trenches.</li> <li>National labor standard was not followed in the work site.</li> <li>Tool box meeting is still not conducted.</li> <li>Emergency procedure is not followed.</li> <li>Quarterly environmental quality monitoring (air, water, noise etc.) has not been done yet.</li> </ul>	Contractor needs more focused training on OHS, waste management and pollution control

Package	Monitoring visits	Trainings conducted	Major issues identified during first monitoring period (Jul-Dec 18)	Issues addressed during 2 <sup>nd</sup> monitoring period (Jan-Jun 19)	New Issues identified during 2 <sup>nd</sup> monitoring period (Jan-Jun 19)	Comments
RHD W2	23	3	<ul style="list-style-type: none"> <li>Camp is well organized with a training/meeting hall and sanitation facilities</li> <li>RHD marked 468 matured trees for cutting. IEE needs to be updated accordingly with a tree plantation plan</li> <li>Proper PPEs are not implemented.</li> <li>No proper site demarcation and fencing along road side might provoke potential accident</li> <li>Dumping of solid waste is not properly managed. A designated place needs to be identified for dumping and a mechanism needs to be identified for later cleaning</li> <li>Contractor's CEMP is yet to be prepared</li> <li>No EHS expert has been mobilized</li> <li>Proper security for the construction equipment is absent.</li> <li>No first aid box is available at the site.</li> <li>No fire protection was found.</li> <li>National labor standard was not followed in the work site.</li> <li>Tool box meeting is not conducted at site to educate the workers.</li> </ul>	<ul style="list-style-type: none"> <li>EHS expert is appointed.</li> <li>CEMP is under preparation.</li> <li>IEE is being updated including tree replantation program. Tree cutting is being started.</li> <li>PPEs are partially implemented.</li> <li>Site has been demarcated and fenced.</li> <li>Safety signboards need to be properly placed at the site.</li> <li>Dust suppression measures taken.</li> <li>Road safety measures are partially addressed.</li> <li>First aid box is readily available at the site.</li> </ul>	<ul style="list-style-type: none"> <li>PPEs needs to be fully implemented.</li> <li>Proper waste management yet to be implemented.</li> <li>Drainage congestion is being occurred in the excavated trenches.</li> <li>Tool box meeting is still not conducted.</li> <li>Emergency procedure is not followed.</li> <li>Quarterly environmental quality monitoring (air, water, noise etc.) has not been done yet.</li> </ul>	Contractor needs more focused training on OHS, waste management and pollution control
<b>Total RHD</b>	<b>42</b>	<b>7</b>				
W1A Sub	10	1	<ul style="list-style-type: none"> <li>Total 20 trees have been cut at the site.</li> <li>Deep excavation created ponding at nearby site. Complaints have been made by a PAP who is suffering with his agricultural land and homestead being damaged due to ponding.</li> <li>Wastewater is discharged to the cultivated land from the site which causes soil pollution and might decrease the crop production.</li> <li>Silt laden wastewater discharged into the nearby waterbody.</li> <li>No waste management facility in the site.</li> <li>Safety signboard is absent at the camp site.</li> <li>Proper PPEs are not implemented.</li> <li>Electrical outlets were found in the active work site without any protection.</li> <li>No fire protection was found in the site.</li> <li>No first aid box is available at the site.</li> </ul>	<ul style="list-style-type: none"> <li>Embankment along the water body has been constructed.</li> <li>PPEs are partially implemented.</li> <li>First aid box is readily available at the site.</li> </ul>	<ul style="list-style-type: none"> <li>Silt laden wastewater discharged into the nearby waterbody and agricultural land.</li> <li>No waste management facility in the site.</li> <li>PPEs are yet to be properly implemented.</li> <li>Site safety signs are yet to be placed.</li> <li>Tool box meeting is still not conducted.</li> <li>Emergency procedure is not followed.</li> </ul>	Contractor needs more focused training on OHS, waste management and pollution control

Package	Monitoring visits	Trainings conducted	Major issues identified during first monitoring period (Jul-Dec 18)	Issues addressed during 2 <sup>nd</sup> monitoring period (Jan-Jun 19)	New Issues identified during 2 <sup>nd</sup> monitoring period (Jan-Jun 19)	Comments
			<ul style="list-style-type: none"> <li>No site order book is maintained at the construction site.</li> <li>Tool box meeting is not conducted at site to educate the workers.</li> </ul>			
<b>W2 Line</b>	4	0	<ul style="list-style-type: none"> <li>No major issues are found</li> </ul>			
<b>G1-LA</b>	5	0	<ul style="list-style-type: none"> <li>Burrow pits left open and causing trouble for locals</li> <li>PPEs were absent.</li> <li>Excavated earth materials were left open.</li> </ul>	<ul style="list-style-type: none"> <li>Burrow pits were covered.</li> <li>PPEs were fully implemented.</li> <li>Excavated earth materials were under fencing.</li> </ul>	<ul style="list-style-type: none"> <li>Construction is completed.</li> <li>Site reinstatement needs to be finished immediately.</li> </ul>	
<b>G2A-SSL</b>	6	1	<ul style="list-style-type: none"> <li>Worksite was not confined.</li> <li>Burrowing created unsafe hole on ground having potential for physical injury.</li> <li>PPEs were not supplied to the workers.</li> <li>Excavated earth materials were left open, thus accident was occurred.</li> </ul>	<ul style="list-style-type: none"> <li>Site demarcation and confinement was partially done.</li> <li>PPEs are yet to be fully implemented.</li> <li>Unsafe holes were covered.</li> </ul>	<ul style="list-style-type: none"> <li>Construction is completed.</li> <li>Site reinstatement needs to be finished immediately.</li> </ul>	Onsite training seems to be working.
<b>Total BREB</b>	<b>25</b>	<b>2</b>				
<b>Grand total</b>	<b>138</b>	<b>18</b>				





**Figure 7 Safeguards status at various sites. Most of them found as partially to fully satisfactory**

## 6 Performance Indicators

94 This section presents some site-based performance indicators for observe the performance of all running subprojects at a glance. The performance indicators are based on field observations from each subproject. While the Health and Safety (H&S) performances indicators are presented in **Table 16** a and performance indicators in **Table 17**, some photographs of site visits where information collection through onsite training with workers were done are presented in **Figure 8**.



Figure 8 Training and information collection from various subprojects



**Table 16 H&S Performance indicators of all subprojects**

Environmental Safeguards Questions	DPHE				LGED			RHD		BREB			
	W1	W2	W13	W14	W8	W6	W19	W1	W2	W1A-Sub	W2-Line	G1-LA	G2A-SSL
<b>1. Sensitive receptors adjacent to the site? (i.e. residential, schools/learning center, health care center, daycare...)</b>	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
<b>2. Are the workers aware of the EMP?</b>	N	N	N	N	N	N	N	N	N	N	N	N	N
<b>3. Occupational Health and Safety:</b>													
3.1 Is there a designated person responsible for ensuring safe working practices? Are the workers aware?	N	N	N	N	N	N	N	Y	Y	N	N	N	N
3.2 Have the workers received appropriate OHS training to perform their jobs? How often are they briefed on OHS requirements? *	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
3.3 Do the workers use personal protective equipment (PPE - hats, glasses, boots etc.)? **	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
3.4 Are working areas clear of slipping and tripping hazards?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
3.5 Are health and safety warning and information signs visible and understandable to workers?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
3.6 Are there any hazardous materials? Are they stored and handled appropriately?	N	N	N	N	N	N	N	N	N	N	N	N	N
3.7 Are worker s exposed to risks from working at height? If yes, are the workers using harnesses (fall protection equipment)?	Y/ N	Y/ N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
3.8 Are workers exposed to risk from confined spaces? (i.e. storage areas for hazardous materials)	N	N	N	N	N	N	N	N	N	N	N	N	N
3.9 Is there a record of occupational injuries and diseases?	N	N	N	N	N	N	N	N	N	N	N	N	N
3.10 Do workers receive health checks?	N	N	N	N	N	N	N	N	N	N	N	N	N
3.11 What medical facilities are made available for the workers?	***	***	***	***	***	***	***	***	***	***	***	***	***
<b>Labor Camps:</b>													
3.12 What toilet and washing facilities are provided?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
3.13 Do workers have access to clean drinking water?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
3.14 Is the workers accommodation provided by the contractor?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
<b>Emergency Procedures:</b>													
3.15 What procedures are in place in case of an injury on site?	N	N	N	N	N	N	N	N	N	N	N	N	N
3.16 Is there a first aid kit available on site?	N	Y	N	N	Y	N	Y	Y	Y	Y	Y	N	N
3.17 What procedures are in place for chlorine leak, oil spills?	N	N	N	N	N	N	N	N	N	N	N	N	N
3.18 Is firefighting equipment available on site? Is servicing up to date?	N	N	N	N	N	N	N	N	N	N	N	N	N
<b>4. Grievance Redress Mechanism (GRM):</b>													
4.1 Are the names and contact information posted for possible complaints?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
4.2 Is there a log book available on site?	N	Y	N	N	N	N	N	Y	Y	N	N	N	N

Environmental Safeguards Questions	DPHE				LGED			RHD		BREB			
	W1	W2	W13	W14	W8	W6	W19	W1	W2	W1A-Sub	W2-Line	G1-LA	G2A-SSL
<b>5. House Keeping:</b> 5.1 Did you observe examples of poor housekeeping? (i.e. empty containers scattered, stagnation of water from improper disposal of solid waste?)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

\*H&S has been briefed by the ADB consultants on site

\*\*PPEs are partially used in all site

\*\*\* Only First Aid boxes are available on site

\*\*\*\* Y = Yes; N = No

**Table 17 Mitigation Effectiveness rating for all subprojects (deduced from consultants' observation). See below note for scoring system adopted**

SI No.	Package No.	Q1 (Jul – Sep 18)	Q2 (Oct – Dec 18)	Q3 (Jan – Mar 19)	Q4 (Apr – Jun 19)	Overall Score
<b>BREB</b>						
01	EAP/BREB/G1		1	4	5	3.3
02	EAP/BREB/G2A		1	3	4	2.6
03	EAP/BREB/G2B					
04	EAP/BREB/W1A		1	2	3	2
05	EAP/BREB/W2		3	3	3	3
06	EAP/BREB/G6					
07	EAP/BREB/W1B					
08	EAP/BREB/G5					
<b>DPHE</b>						
01	EAP/DPHE/G1					
02	EAP/DPHE/W1			2	3	2.5
03	EAP/DPHE/W2			3	4	3.5
04	EAP/DPHE/W3				3	3
05	EAP/DPHE/W4				2	2
06	EAP/DPHE/W5					
07	EAP/DPHE/W13		2	3	4	3
08	EAP/DPHE/W14			2	4	3
09	EAP/DPHE/W15				2	2
10	EAP/DPHE/G2					

SI No.	Package No.	Q1 (Jul – Sep 18)	Q2 (Oct – Dec 18)	Q3 (Jan – Mar 19)	Q4 (Apr – Jun 19)	Overall Score
11	EAP/DPHE/G3					
12	EAP/DPHE/W9A					
13	EAP/DPHE/W9B					
14	EAP/DPHE/W11					
15	EAP/DPHE/W12A					
16	EAP/DPHE/W12B					
17	EAP/DPHE/W18					
18	EAP/DPHE/G4					
19	EAP/DPHE/W10					
20	EAP/DPHE/CON/1					
<b>LGED</b>						
01	EAP/LGED/OCB-N/W6		1	2	4	2.3
02	EAP/LGED/OCB-N/W8		1	3	4	2.6
03	EAP/LGED/OCB-N/W9			1	2	2.5
04	EAP/LGED/OCB-N/W19		1	3	3	2.3
05	EAP/LGED/CON/1					
06	EAP/LGED/OCB-N/W10					
07	EAP/LGED/OCB-N/W11					
08	EAP/LGED/OCB-N/W12					
09	EAP/LGED/OCB-N/W13					
10	EAP/LGED/OCB-N/W14					
11	EAP/LGED/OCB-N/W15					
12	EAP/LGED/OCB-N/W16					
13	EAP/LGED/OCB-N/W17					
14	EAP/LGED/OCB-N/W18					
15	EAP/LGED/OCB-N/W20					
16	EAP/LGED/OCB-N/W21					
17	EAP/LGED/OCB-N/W1A					
18	EAP/LGED/OCB-N/W1B					
19	EAP/LGED/OCB-N/W2A					
20	EAP/LGED/OCB-N/W2B					
21	EAP/LGED/OCB-N/W3					

SI No.	Package No.	Q1 (Jul – Sep 18)	Q2 (Oct – Dec 18)	Q3 (Jan – Mar 19)	Q4 (Apr – Jun 19)	Overall Score
22	EAP/LGED/OCB-N/W5					
<b>RHD</b>						
01	EAP/RHD/W1		2	3	4	3
02	EAP/RHD/W2		2	3	4	3
03	EAP/RHD/CON/1					
Note: Mitigation Effectiveness Rating Criteria						
1		2		3		5
Very poor (take very few measures)		Poor (take few measures)		Medium (take several measures)		Good (take main measures)
						very good (meet all requirements)

## 7 Concluding observations

95 Current environmental conditions of few proposed subprojects are presented through some site photographs in **Annex I** of this report. **Appendix II** represents some Environmental Compliance Reports produced from site visit that are shared with the EAs and ADB for tracking and action.

96 The concluding observations are as follows:

- The Environmental Safeguards compliance performance of the EAs are improving slowly but steadily. The onsite training workshop, regular monitoring of ADB and Regional workshop to sensitize the EAs and contractors seems to have obvious impact in this regard.
- When same contractor is been awarded with more than one subproject, environmental compliance record appears to be poor.
- **Recurring observation:** The implementing agencies need to consult the Environmental Safeguards consultants and ADB's safeguard division while proposing the project, before going into design. In this way, if the Safeguards division and Environmental Consultants checks the environmental and other related issues, the implementing agencies can go for designing and can save time by avoiding redesign issues
- **Recurring observation:** The implementing agencies need to better coordinate with the DoE and Forest Department. It appears the level of coordination is week.

### Reporting Information:

Revision	Description	Originator	Reporting contribution
00	Second Semi-annual Environmental Monitoring Report (January – June 2019)	Kushal Roy	Shahid Zaman Kushal Roy

## 8 Appendix I: Site photographs

### 1. BREB/G1: Lightening Arresters



### 2. BREB/G2A: Solar PV Powered LED Street Lights





### 3. BREB/W1A: 33/11kV Electrical Sub-station



### 4. BREB/W2: 50 KM Distribution Line



### 5. DPHE/W1, W2, W3 and W4: Mini-pipe Water Supply System





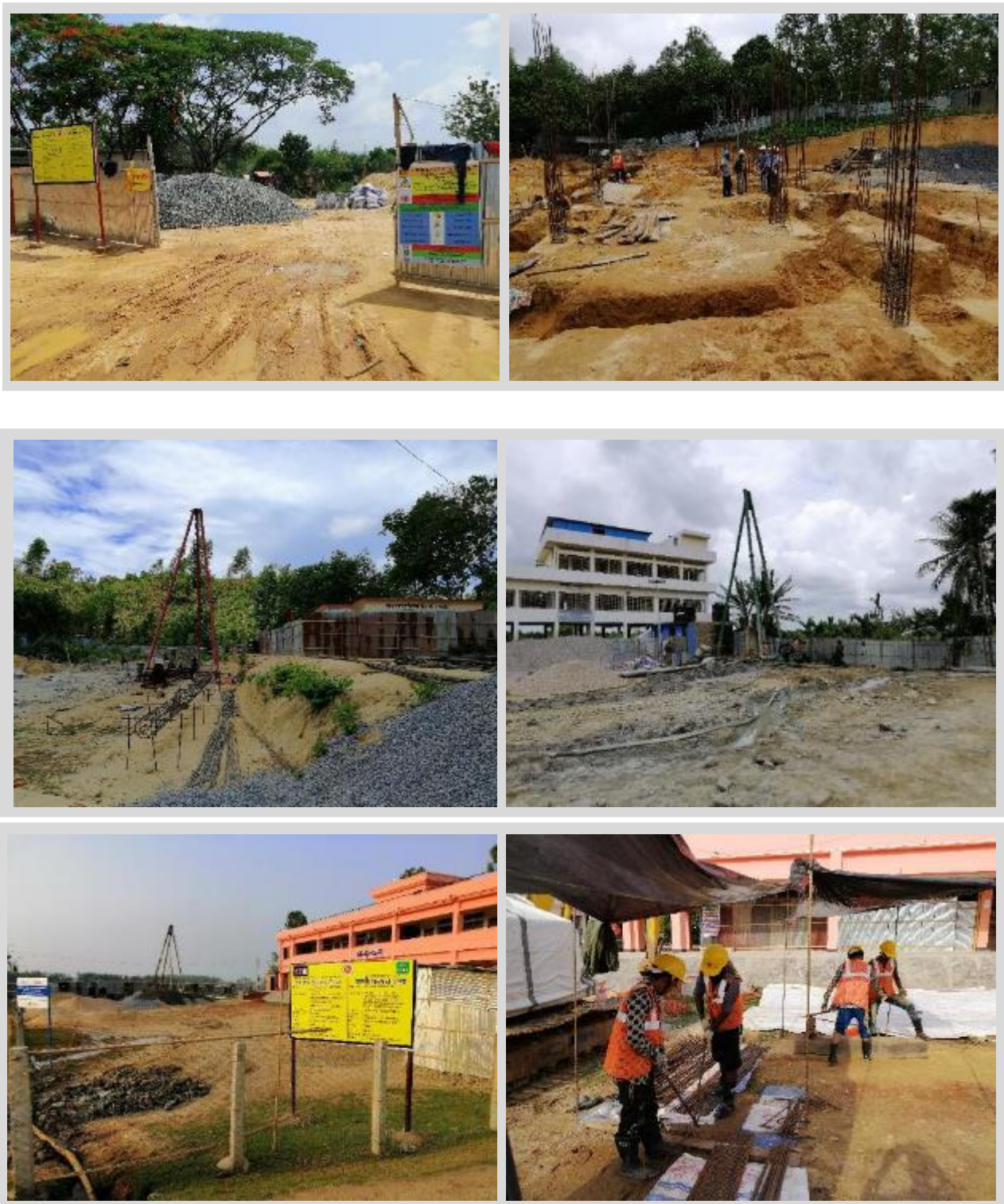


## 6. DPHE/W13, W14 and W15: Bathing Facility





## 7. LGED/W6, W8 and W9: Cyclone shelters





## 8. LGED/W19: Semi-Permanent Food Distribution Centers



## 9. RHD/W1: Rehabilitation of National Highway from Link Road (Cox's Bazar) to Ukhia



## 10. RHD/W2: Rehabilitation of National Highway from Ukhia to Unchiprang





## 11. EHS Training Program for EAs, Consultant and Contractor





## 9 Appendix II: Sample Compliance Audit Reports

### AUDIT FINDINGS (EAP/LGED/W8) March 10, 2019

The findings from the site audits and action items required to mitigate non-conformances, where required, are provided in the sub-sections below:

#### A. Site Office (Access, Materials Storage, Waste Management, spill prevention, fire prevention, staff conduct etc.)

EMP Reference and Amendment	Audit find	Audit score	Action proposed	Photograph
Permissions need to be obtained from the existing School Authorities prior construction works.  EMP Reference 1.2	Evidence of verbal communication with the school authority was found, however no NOC was present at site	3	The NOC from the school authority should be kept at site all the time.	Photograph not required
Site preparation including tree cutting and levelling started  Excavator mobilized  EMP Reference: 2.5, 2.7	Site clearance involved felling of 8 matured trees  Proper PPEs were not found at site, stockpiles were left open and the site was found dusty  Sign posts and area demarcation was not found at site  The proposed cyclone shelter is located on the elevated land where the school toilets were located which are being demolished due to site clearance. Currently there is no sanitation facility for 350 students including female students. As a result, students are going to the nearby household to use the toilet.	2	As per suggestion of the EMP trees needs to replanted during the construction starts and maintain steady growth until the liability period expires  The workers need to wear the protective wears all the time.  Water spray needs to be frequent to avoid dust in the school area. Since people live nearby house, the approach road also needs to be water sprayed twice daily.  The area needs to be marked with signposts and protective fencing so that school going children	 Plate 01: Total 08 matured trees were felled during site levelling


EMP Reference and Amendment	Audit find	Audit score	Action proposed	Photograph
			<p>nearby cannot enter into site. The area is also a playing ground for local children. Therefore, site safety marker and fencing need to be immediately employed</p> <p>Contractor should build sanitation facility immediately for the students.</p> <p>Plantation should take place immediately after site demarcation according to EMP Reference 2.5. EMP has been amended according to the current condition.</p>	 <p>Plate 02: Proper PPEs were not found at site</p>  <p>Plate 03: Stockpiles were left open and site was quite dusty</p>

EMP Reference and Amendment	Audit find	Audit score	Action proposed	Photograph
				 <p>Plate 04: Children were found to play in the excavated area which may lead to injury. No demarkation or site safety marker was found</p>


EMP Reference and Amendment	Audit find	Audit score	Action proposed	Photograph
				 <p>Plate 05: The only toilet of the school was demolished and now not usable for the school children</p>



## B. Air pollution and dust management

EMP Reference and Amendment	Audit find	Audit Score	Action proposed	Photograph
<p>Burrow areas need to be marked properly so that workers may identify even in the dark. If after construction, burrow areas stay open, the areas need to be filled with local sand/silt and then revegetated with local bushes so that they can prevent erosion.</p> <p>EMP Reference 2.1</p>	<p>Site demarcation was not found, site levelling activities encroached to the school building compound. Children are playing on the compound who might get hurt due to some unsafe holes. The site was found quite dusty, water spray was absent.</p>	2	<p>Site needs to be demarcated properly so that school children do not enter the area and hurt themselves</p> <p>Water spray must be done twice daily, if requires more frequent during school time so that school children do not suffer from dust induced allergy and other discomfort.</p>	 <p>Plate 06: Unsafe holes within the school compound and dust around the school was found</p>


### C. Soil erosion and storm water management



EMP Reference and Amendment	Audit find	Audit Score	Action proposed	Photograph
<p>During Construction: create silt barriers to prevent sudden runoff of eroded materials during rains, keep an eye for certain rains and continuously maintain the silt barrier</p> <p>EMP Reference Table 3</p>	<p>The coming month of March may surprise with couple of showers. The site is located at the edge of a hilly area and is prone to certain erosion-laden runoff downstream towards foothill local community if any shower occurs. But no silt barrier has been installed to date.</p>	2	<p>Installation of silt barriers is necessary before the rainy season comes</p>	 <p>Plate 07: No silt barrier was found at the edge of the site</p>



## AUDIT FINDINGS (EAP/RHD/W2) March 4, 2019

The findings from the site audits and action items required to mitigate non-conformances, where required, are provided in the sub-sections below:



### A. Site Office (Access, Materials Storage, Waste Management, spill prevention, fire prevention, staff conduct etc.)


EMP Reference and Amendment	Audit find	Audit score	Action proposed	Photograph
<b>[Amendment] Permissions need to be obtained from the existing Authorities prior construction works.</b>  EMP Reference 1.4	The contractor is using RHD's facilities in Balukhali as Camp area. The camp area is, therefore, well established with designated conference room, toilet facilities, site office, vehicle garage and stockpile area	5	None at the moment	
<b>[Amendment] Site office, labor camp needs to be established with health and safety facilities installed for worker as well as local communities</b>  EMP reference 2.13	<p>Site just started the set-up process. Temporary site office cum labour shed was found</p> <p>Excavator mobilized</p> <p>Toilet and water sources are about to be established.</p> <p>Construction materials were found to be stockpiled in open with no protective measure</p> <p>Plastic Oil/fuel barrels were found in open in scattered way</p> <p>Signboards with project description were under preparation</p> <p>Proper PPEs were not found in site. Workers are working without protection.</p>	4	<ul style="list-style-type: none"> <li>Plastic oil/fuel barrels need to be kept at a safe place and empty barrels need to be kept at a place for safe disposal</li> <li>Drinking water source needs to be examined to see if it is safe for drinking purposes.</li> <li>Proper PPEs need to be provided at site by force. Any occurrence will trigger H&amp;S issue that might make a bad impression of the project.</li> <li>Stock pile areas were found dusty. Water spray is needed intermittently to suppress dust at the stockpile area</li> </ul>	 <p>Plate 01: Temporary Site office and labor camp was in place</p>

EMP Reference and Amendment	Audit find	Audit score	Action proposed	Photograph
				 <p>Plate 02: Construction materials were left open and unsafe</p>  <p>Plate 03: Oil and fuel barrels were found scattered in open</p>

EMP Reference and Amendment	Audit find	Audit score	Action proposed	Photograph
				 <p>Plate 04: Separate toilets were under construction</p>
		4		 <p>Plate 05: Proper PPEs were not found at site</p>





EMP Reference and Amendment	Audit find	Audit score	Action proposed	Photograph
				 <p>Plate 06: Signborads with project information were under preparation</p>
<ul style="list-style-type: none"> <li>Watering access road, especially in the dry season</li> </ul> <p>EMP Reference 2.2</p>	The access road to the site office and stockpile area was found to be water sprayed twice a day. However, locals are complaining that the road still gets dusty during mid-day.	4	Suggested water spray 3 time daily	 <p>Plate 07: Dust supression measures needs to be more frequent</p>



EMP Reference and Amendment	Audit find	Audit score	Action proposed	Photograph
				 <p>Plate 08: Locals demand more frequent water spray measures</p>





## B. Air pollution and dust management

EMP Reference and Amendment	Audit find	Audit Score	Action proposed	Photograph
<ul style="list-style-type: none"> <li>Watering access road, especially in the dry season</li> <li>Using cover sheets on trucks for the transportation of soil</li> <li>Periodic maintenance and management of all the construction machinery and vehicles, [amendment] spray water on stock material to avoid dusty environment. The existing road is already broken and severely dusty due to heavy vehicle movement</li> <li>[amendment] Use plastic cover/or similar cover to restrict dust from spreading</li> </ul> <p>EMP Reference 2.2</p>	<p>Dust cover/ stockpile cover was not found. Road/site was found severely dusty.</p> <p>Vehicle for water carrying was found. However, regular water spray was not found.</p>	2	<p>Site needs to be demarcated properly so that school children do not enter the area and hurt themselves</p>	 <p>Plate 09: Dust cover were not found</p>  <p>Plate 10: Water carrying vehicle was found on site, however regular water spray was not found</p>


## C. Soil erosion and storm water management

EMP Reference and Amendment	Audit find	Audit Score	Action proposed	Photograph
<ul style="list-style-type: none"> <li>Ensure all earthworks are done according to design and specifications;</li> <li>Wastes, effluents and other contaminant materials at camp/work sites to be stored, handled, transported and disposed in planned manners;</li> <li>Garbage disposal service to be provided, Concrete refuse reused or disposed of without habitat loss;</li> <li>All other effluents not to be disposed of directly into natural waters, but via settling basins to allow suspended sediment to settle out.</li> <li>Install silt protection curtain</li> <li>Monitoring water quality in the water bodies regularly</li> </ul> <p>EMP Reference 2.3</p>	<p>No silt barrier was found. There is an agricultural land right next to the site. The excavated material is also being stockpiled on this agricultural land which might lead into sedimentation if it rains.</p>	2	<p>This March will show couple of showers in the country. Already a moisture laden air (meteorologically known as Jui 4) is moving across the country. It is possible it will shower next week. Therefore, installation of silt barriers is necessary before the rainy season comes.</p> <p>Stockpiling excavated materials on the nearby agricultural land needs to be avoided.</p>	 <p>Plate 11: No silt barrier was found at the edge of the site</p>  <p>Plate 12: Excavated materials were dumped into agricultural land nearby</p>



## D. Worker Health and Safety


EMP Reference and Amendment	Audit find	Audit Score	Action proposed	Photograph
<ul style="list-style-type: none"> <li>Ensure that all site personnel have a basic level of environmental awareness training. If necessary, the environmental management specialist and/or a translator shall be called to the sites to further explain aspects of environmental or social behavior that are unclear.</li> <li>Produce and implement a site H&amp;S plan which include measures as: (i) excluding the public from worksites; (ii) ensuring all workers are provided with and required to use personal protective equipment (reflectorized vests, footwear, gloves, goggles and masks) at all times; (iii) providing H&amp;S training for all site personnel; (iv) documenting procedures to be followed for all site activities; and (v) maintaining accident reports and records.</li> <li>Arrange for readily available first aid unit including an adequate supply of sterilized dressing materials and appliances</li> </ul> <p>EMP Reference 2.13</p>	<p>Implementation of PPEs for all workers were found to be partial</p> <p>Proper signages of site safety was found only at one end</p>	3	<ul style="list-style-type: none"> <li>Proper PPEs needs to be impeded at site by force. Any occurrence will trigger H&amp;S issue that might make a bad impression of the project.</li> <li>Proper signages needs to be displayed at both ends</li> </ul>	 <p>Plate 13: Full-fledged proper PPEs were not found</p>  <p>Plate 14: Site safety posted/signboards were not found at both ends</p>




EMP Reference and Amendment	Audit find	Audit Score	Action proposed	Photograph
<ul style="list-style-type: none"> <li>• Conduct separate waste collection, promote recycling and reuse.</li> <li>• Appropriate disposal of non-recyclable waste according to rules</li> <li>• Hazardous waste should be treated under the related regulation</li> </ul> <p>EMP reference 2.15</p>	Solid waste was found to be thrown into the agricultural land	3	<ul style="list-style-type: none"> <li>• Throwing solid waste into agricultural land is strictly prohibited. A designated area for solid waste dumping has been recommended. A idea on local solid waste management process has been conveyed to the contractor</li> </ul>	 <p>Plate 15: Solid waste was found to be thrown into nearby agricultural land</p>

## E. Emerging Issues (for both packages: EAP/RHD/W1 and EAP/RHD/W2)

EMP Reference and Amendment	Audit find	Audit Score	Action proposed	Photograph
<p>According to the IEE report, no tree cutting is expected due to the improvement of the road. “No tree cutting is expected due to the improvement of the road. However, some saplings within the RoW of proposed alignment, and workers camp setting areas will be felled and removed during pre-construction period resulting in very minimal ecological and economic loss”.</p> <p>IEE/EMP Reference 1.1</p>	<p>The Arboriculture Circle of RHD has marked more than 400 trees along the project road from Cox’s Bazar to Unchiprang. During site visit it was observed that significant number of trees have been cut for instance about 25 trees have been cut from 50m road section which was located near Nijerpara Primary School. Trees has been stolen by the local people mentioned by RHD representative.</p>	NA	<ul style="list-style-type: none"> <li>RHD should update the IEE report as per design regarding tree felling issue and also take immediate action against illegal tree cutting.</li> </ul>	 <p>Plate 16: RHD marked about 400 trees for felling</p>  <p>Plate 17: RHD contractor is already in process of felling trees</p>
<ul style="list-style-type: none"> <li>Visual intrusion will be due to large piles of embankment materials obstructing views.</li> </ul>	<p>Contractor have excavated the road side and left open without any protection except red flag which is not visible at night. As a result, road</p>	NA	<ul style="list-style-type: none"> <li>Excavated tranches should be filled as soon as possible, otherwise, confined by the safety tape along the tranches.</li> </ul>	

EMP Reference and Amendment	Audit find	Audit Score	Action proposed	Photograph
<ul style="list-style-type: none"> <li>Excavation along the edge of the alignment will leave large unsafe holes.</li> </ul> <p>EMP Reference CP 02 2.1</p>	<p>accident might occur at any moment especially at night. Few accidents were reported by the local people since the children were fallen in the excavated tranches. At several locations in the package 1, the access to the household as well as mosque has been impeded since no support is provided on the excavated tranches, complained by the local inhabitants who lives nearby the road side. Appropriate disposal of non-recyclable waste according to rules</p> <p>EMP reference</p>		<ul style="list-style-type: none"> <li>Proper access should be ensured to the nearby household as well as sensitive infrastructures.</li> </ul>	 <p>Plate 18: Excavation along the alignment has left unsafe hole, there is no demarcation or warning sign</p>  <p>Plate 19: Access to several houses has been blocked due to excavation works</p>

EMP Reference and Amendment	Audit find	Audit Score	Action proposed	Photograph
	No utility services such as electric poles and fiber cables have not been removed prior starting construction activity, since fiber cables were observed to split due to construction activity.	NA	<ul style="list-style-type: none"> <li>RHD should inform the respective authorities to relocate the utility services as soon as possible.</li> </ul>	 <p>Plate 20: Utility services were not removed</p>