

## **Environmental Monitoring Report**

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**Project No. 52174-001**  
**Semi-annual Report (July-December 2021)**  
**February 2022**

**Bangladesh: Emergency Assistance Project**

Prepared by the Local Government Engineering Department and Department of Public Health Engineering, Government of Bangladesh for the Asian Development Bank.

This semi-annual environmental monitoring report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

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# Emergency Assistance Project

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

## Environmental Monitoring Report

Seventh Semi-Annual Environmental Monitoring Report

### Reporting Period

July to December 2021

### 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**

**February 2022**

## **BAN: EMERGENCY ASSISTANCE PROJECT**

### **Seventh Semi-Annual Environmental Monitoring Report**

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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
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
USEPA	United States Environmental Protection Agency
WB	World Bank

## Executive Summary

1. This report is the Seventh Semi-Annual Environmental Monitoring Report (hereinafter referred to as EMR) of the ADB financed Emergency Assistance Project (ADB) in Bangladesh, which covers the period of July – December 2021. 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) on 7 May 2018 for grant support to provide basic infrastructure and essential services to displaced Myanmar nationals. 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's support is 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 builds 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 seeks 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 are screened and classified, and based on the classification, and where required, environmental assessments are undertaken and EMPs developed. Based on Schedule 1 of the ECR, subprojects are likely to require IEEs and EIAs.
5. Subprojects selected are not likely to have significant environmental impacts. Environmental guidelines for subproject selection in Table 2 provide further guidance to avoid or minimize adverse impacts during the identification and finalization of subprojects.
6. The Department of Environment is responsible for environmental issues while forest issues are looked after Department of Forests. Over the years, the MoEFCC 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 4 for the status of the respective component subprojects with regard to compliance status to ADB's policy statement (APS 2009).
9. To date 49 subprojects have been finalized, instead of 60 subprojects preliminarily identified in 2018. Out of these 49 subprojects, BREB implements eight subprojects, DPHE implements 21 subprojects,



LGED implements 17 subprojects while RHD implements three subprojects. In terms of categorization, 31 subprojects were category B based on SPS 2009.

10. According to SPS 2009, category A projects are required to prepare EIA, category B projects and/or subprojects were required to prepare IEEs. Given that the subprojects under the EAP were identified after the approval of the Grant, an EARF was prepared and agreed between the government and ADB. The EARF was disclosed to ADB website in June 2018.

11. However, out of the 49 subprojects contracts awarded, 26 packages have already been completed. The summary status of the subprojects is given in Table 11.

12. Till December 2021, out of 31 B category projects according to ADB classification, 31 IEEs (including 7 indicative IEE) have been drafted with 31 EMPs and 8 ECoPs. Some EMPs and subsequent IEEs are due, require some additional works to be done. Table 14 represents the status of preparation of safeguards documents.

13. Of 31 IEEs, 13 IEEs for DPHE, 14 IEEs for LGED, 2 IEEs for RHD and 2 IEEs for BREB have been prepared to date. The only EIA for DPHE has been prepared and approved from the DOE.

14. A total of 34 environmental safeguards monitoring visits have been conducted at different times during reported period (July - December 2021). The summary status of monitoring visit is given in Table 15. Besides monitoring visits, onsite trainings and meetings with contractors and EAs were conducted during the current monitoring period. The site-based trainings were arranged to sensitize the contractors on implementing the environmental safeguards according to the EMPs and other contracts. A total of 5 onsite trainings were impart during July to December 2021 where total 90 participants were attended. A brief lecture has been given to the participants majorly focused on: occupational health and safety including PPEs, safety signage, housekeeping, waste management, management of hazardous materials, emergency procedures. Moreover, explained about the standard procedure for COVID-19 such as appropriate PPEs, entry protocol to the worksite, hand washing protocol, discourage gathering at site and maintain physical distance, place signboard and posters at site on COVID response etc. However, all the participants hold a very positive attitude towards the training program. Details of onsite trainings are given in Table 17.

15. To conclude, Environmental Safeguards compliance performance of the Contractors are improving slowly but steadily. The onsite training workshop and regular monitoring of ADB to sensitize the EAs and contractors seems to have obvious impact in this regard. However, due to accessibility issues attributed to restrictions associated with COVID-19, implementation of environmental safeguards is hindered, causes increasing trend in noncompliance issues. In addition, inadequate safety measures are arranged to encounter COVID-19 in the construction sites.

16. There were instances that can be considered as poor implementation of the EMPs due to construction works of EAP. To address these concerns, a number of recommendations were made to improve the EMP implementation. The actions recommended have been implemented, ongoing, and to be monitored. Table 21 presents the environmental concerns along with the corrective actions.

17. Hence the RHD and BREB components have been completed by June 2021, therefore, no further updates on these components have been covered in this semester report.

# 1 Introduction

## 1.1 BACKGROUND

18. This report is the Seventh Semi-Annual Environmental Monitoring Report (hereinafter referred as EMR) of the ADB financed Emergency Assistance Project (ADB) in Bangladesh, which covers the period of July to December 2021. The report is produced to comply with the environmental scope stipulated in the subprojects' Environmental Management Plans (EMPs) implemented by Government Agencies/ Departments under the project.

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

## 1.2 THE PROJECT

20. On 7 May 2018, the Government of Bangladesh (GoB) requested Asian Development Bank (ADB) for grant support to provide basic infrastructure and essential services to displaced persons<sup>1</sup>. 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 is 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 builds 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 seeks 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)<sup>2</sup>.

21. The project supports the Government of Bangladesh in addressing the immediate and urgent needs of the displaced persons from Myanmar in Cox's Bazar District, as identified by the United Nations (UN) in

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<sup>1</sup> United Nations, Strategic Executive Group. 2018. 2018 JRP for Rohingya Humanitarian Crisis, March–December 2018. Cox's Bazar. Various terminology is used in media, official and unofficial documents to describe the affected people. Terminology used herein is intended solely to identify such people for the purposes of this paper, and not to assert any view regarding the manner or circumstances of such persons' displacement. Such terminology may not reflect the terminology used or accepted by any government or any agency thereof. ADB expresses no view and takes no position herein regarding the legal rights or political assertions or the characterization of any such persons. The use of the term "displaced persons" in this paper is not intended to have the same meaning as the term "displaced persons" defined in ADB's Safeguard Policy Statement (2009).

<sup>2</sup> Asian Development Bank. Grant 0582-Bangladesh: Emergency Assistance Project, <https://www.adb.org/projects/52174-001/main#project-pds>.

its Joint Response Plan (JRP) (displaced persons). The project mainly supports the improvement of water supply and sanitation, disaster risk management, sustainable energy supply, and access roads.

22. The impact of the project: Social recovery of affected communities accelerated in the sub-districts of Ukhia and Teknaf. The outcomes: 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 also provides 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) stand-alone solar powered street lights with solar photovoltaic panels, battery boxes, and mini grid-connected street lights; and (ii) 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 is being implemented for 3.5 years and grant was supposed to be closed by 5 January 2022. However, the project will be extended one more year till 5 January 2023 which is in progress to be approved soon. Due to COVID-19 pandemic, the project work delayed and grant closing date is being extended.

### 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-annual environmental safeguards monitoring report to ADB via PMU;
- Be responsible for training the PMU/contactor 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 environmental 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 project

## 2 Environmental Responsibilities and Institutional Setup

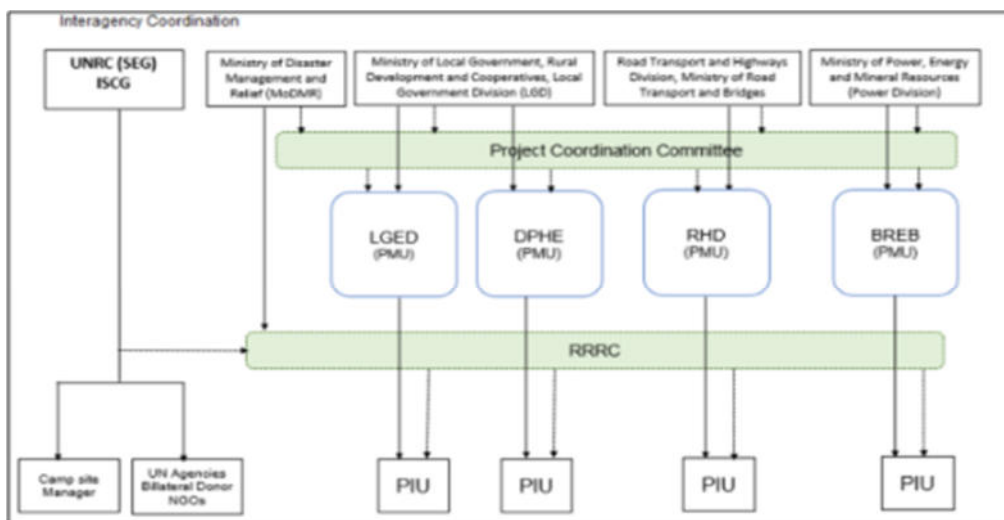
### 2.1 INSTITUTIONAL SETUP AND IMPLEMENTATION ARRANGEMENTS

31. The Refugee Relief and Repatriation Commission (RRRC) acts as the coordinator in the EAP on behalf the government to execute all the interventions. A steering committee, comprising of higher officials from relevant ministries, coordinated by the Economics Relations Division of the Ministry of Finance, is formed to provide the necessary guidance in expediting subproject development and implementation. 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) are the executing agencies (EA) and implementing agencies (IA) responsible for project oversight and coordination. Safeguards focal person has been designated by each EA who deals with safeguard concerns. EA/IA is assisted by Project Management Consultants. Dedicated project implementation units (PIUs) in each IA has been set-up, as needed, to oversee day-to-day implementation activities, project management, and reporting. The PIUs have identified a focal person for environmental safeguard. The focal person is assisted in the conduct of the environmental assessment, the development and implementation of EMPs, and compliance monitoring by project consultants. **Figure 2** presents the organizational structure of EAP.

**Table 1 Safeguard focal persons designated by the EAs**

Executing Agency	Name and Designation	Email Address	Contact no.
RHD	Md. Hafizur Rahman, Deputy Project Director, (SE, RHD), Chattogram Road Circle, Chattogram	hafiz_rhd@yahoo.com	01730782678
LGED	Md. Rashedul Hasan, Assistant Engineer	kauser261988@gmail.com	01673283831
DPHE	Md. Zahangir Alam, Team Leader, DMSC	z_alam63@yahoo.com	01841234749

32. All the IAs are currently implementing ADB projects under this institutional arrangement. ADB, through the Bangladesh Resident Mission (BRM), conducts regular safeguards training for EAs, IAs, and other development partners to build institutional capacity and improve safeguards implementation. A training was conducted by BRM on 19-20 August 2019, and a webinar on COVID-19 response and ensuring safe workplaces in ADB projects was held in July 2020.



Source: ADB. Project Administration Manual, June 2018

Figure 2 Project organizational structure

## 2.2 RESPONSIBILITIES: ENVIRONMENTAL SAFEGUARDS

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

34. **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 is helping the implementing agencies gain adequate capacity to manage environmental impacts through consultant support. Initial environmental examinations and environmental management plans are being prepared consistent with the EARF and incorporated in bidding documents and contract documents to be implemented by contractors and monitored by the implementing agencies. Executing and/or implementing agencies are providing environmental report to the Bangladesh Resident Mission on a semiannual basis.

35. **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 helps the implementing agencies gain adequate capacity to prepare resettlement plans, if required, through consultant support. Consultations have been undertaken with stakeholders in project areas during implementation. Executing and/or implementing agencies are providing resettlement implementation report to the Bangladesh Resident Mission on a semiannual basis.

## 2.3 ENVIRONMENTAL CRITERIA FOR SUBPROJECT SELECTION

36. Subprojects selected should not have significant environmental impacts. Environmental guidelines for subproject selection in Table 2 provide further guidance to avoid or minimize adverse impacts during the identification and finalization of subprojects.

**Table 2 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> a. Reported cases of waterborne diseases decreased by 20%. b. Occurrence of landslides and flooding in project area during average monsoon months reduced by 50%. c. At least 90% of households in project area connected to electricity. d. Average travel time to transport relief goods and services to campsites reduced by 50%.	a. Project beneficiary survey, executing agency reports	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> 1a. 5 mobile water carriers for the distribution of potable water to the camps provided (2018 baseline: 0) 1b. 600 community bathing facilities for women constructed and maintained, of which 10%–20% of women are employed and involved (2018 baseline: 0) 1c. 40 mini piped water supply systems with production tube wells constructed (2018 baseline: 0) 1d. 5 integrated waste management facilities constructed, and a collection system established (2018 baseline: 0) 1e. 2 small surface water treatment plants constructed or expanded (2018 baseline: 0)	1a–e. Periodic project progress reports prepared by the executing agency	Extreme climate events disrupt or delay execution of works.

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
2. Disaster risk management strengthened	2a. 10 multipurpose cyclone shelters constructed with sex- disaggregated toilets and designated space for women, including pregnant women and lactating mothers (2018 baseline: 0) 2b. 20 semi-permanent food distribution centers constructed and employed 10%–20% of women in the community (2018 baseline: 0) 2c. 5 km of hill slope protection and/or toe walls constructed (2018 baseline: 0) 2d. 5 km storm water drainage network constructed (2018 baseline: 0) 2e. 200 lightning arresters installed (2018 baseline: 0) 2f. Gender-sensitive disaster risk management plans, adopting community-based disaster risk reduction approach, prepared and implemented (2018 baseline: not applicable)	2a–f. Periodic project progress reports prepared by the executing agency	
3. Energy sources provided	3a. A 33/11 kV, 10 MVA substation constructed; and Cox's bazar-Teknaf grid augmented 3b. A 50 km, ≤11 kV new distribution line constructed with 5 MVA distribution transformers installed (2018 baseline: 0) 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) 3d. 70,000 retained heat cookers provided (2018 baseline: 0) 3e. 50 solar PV micro-grid systems installed at Balukhali, Kutupalong, Noyapara, Leda, and Shamlapur camps (2018 baseline: 0)	3a–e. Periodic project progress reports prepared by the executing agency	

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
4. Access roads improved	4a. 30 km of internal roads and stairs (where required) with drainage facilities constructed (2018 baseline: 0) 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) 4c. 50 km of the road from Cox's Bazar to Teknaf resurfaced, including the improvement of critical sections (market areas and culverts) (2018 baseline: 0) 4d. 10%–20% of women employment in the construction and rehabilitation of access roads achieved (2018 baseline: 0)	4a–d. Periodic project progress reports prepared by the executing agency	
<b>Key Activities with Milestones</b> 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

37. The National Environmental Policy (NEP) was adopted in 1992 (revised in 2018). 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.

38. 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.

39. 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).

40. The Environment Conservation Act (ECA) 1995 and the Environment Conservation Rules (ECR) 1997 are the main environmental regulations in Bangladesh which provide that no project or industrial unit can be undertaken without securing an environmental clearance certificate (ECC) from the Department of Environment (DOE). **Table 3** provides an overview on the status of securing the relevant clearances and permits.

**Table 3 Status of Clearances and Permits**

Clearances and Permits	RHD Component	LGED Component	DPHE Component	BREB Component
Environmental Clearance Certificate	Obtained Environmental clearance certificate (ECC) from DOE on 15 November 2020.	Waiting to receive the Environmental clearance from DOE. LGED has prepared an IEE for all packages and started processing to obtain the environmental clearance and final approval is awaited.	Obtained Environmental Approval for DPHE/W19 subproject from DOE on 10 October 2021 (Appendix- I).	BREB has prepared an IEE for all packages and started processing to obtain the environmental clearance and final approval is awaited.
NOC from the Forest Department	Not required; road rehabilitation works is being done within existing ROW and no forest patch is affected.	LGED applied to FD for the NOC for LGED/W5 and final approval is awaited.	DPHE applied to FD for the NOC for DPHE/W12B and final approval is awaited.	Application process is under progress for the NOC for BREB/W2.
NOC from Local Authority	Obtained NOC from DC office.	Obtained NOC from respective Union Parishad and RRRC.	Obtained NOC from RRRC.	Obtained NOC from RRRC.
Permit for use of groundwater	Not required. Required only when constructing a deep tube well in Dhaka and Chattogram metropolitan area.	Not required. Required only when constructing a deep tube well in Dhaka and Chattogram metropolitan area.	Not required. Required only when constructing a deep tube well in Dhaka and Chattogram metropolitan area.	Not required. Required only when constructing a deep tube well in Dhaka and Chattogram metropolitan area.
Bangladesh Labor Law of 2006	Complied. Occupational Health and Safety has been addressed in the EMP.	Complied. Occupational Health and Safety has been addressed in the EMP.	Complied. Occupational Health and Safety has been addressed in the EMP.	Complied. Occupational Health and Safety has been addressed in the EMP.
Public Health (Emergency Provisions) Ordinance, 1994	Complied.	Complied.	Complied.	Complied.

Clearances and Permits	RHD Component	LGED Component	DPHE Component	BREB Component
Bangladesh National Building Code, 2006	Complied.	Complied.	Complied.	Complied.
BREB = Bangladesh Rural Electrification Board; DC = Deputy Commissioner; DOE = Department of Environment; DPHE = Department of Public Health Engineering; ECC = environmental clearance certificate; FD = Forest Department; LGED = Local Government Engineering NOC = No objection certificate; ROW = right of way; RRRC = Refugee Relief and Repatriation Commission				

### 3.2.2 SPS, 2009 Compliance Status

41. Refer to **Table 4** for the status of the respective component sub-projects with regard to compliance status to ADB's policy statement (2009).

**Table 4 ADB Safeguards Policy compliance Status for the EAP subprojects**

ADB Safeguard Policy Statement	Contract Package Status				
	Cyclone Shelter Subproject	Road Subproject	Drainage/erosion Subproject	Water Supply Subproject	Others Subproject
(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	NA	NA	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	NA	NA	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	NA	complied	complied	NA	NA

ADB Safeguard Policy Statement	Contract Package Status				
	Cyclone Shelter Subproject	Road Subproject	Drainage/erosion Subproject	Water Supply Subproject	Others Subproject
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.	NA	NA	NA	NA	NA

### 3.2.3 Compliance with Grant Covenants

42. Schedule 5 of the Agreements for Grant 0582-BAN includes covenants for environmental issues. The Project's compliance with the contractual environmental safeguards covenants are shown in the **Table 5**.

**Table 5 Compliance with Environmental Considerations of Grant Agreements**

Covenant	Reference in the Grant Agreement	Compliance Status
<b>Procurement</b>		
The Recipient shall not award any Works contract for a Subproject which involves environmental impacts until all the applicable EAs has:  Obtained the final approval of the IEE from the concerned sector agency for IEEs; and, Incorporate the relevant provision from the EMP into the Works contract.	Schedule 3, para. 3, page 11	Complied.
<b>Subproject Selection Criteria</b>		
The Recipient shall ensure, or cause the EAs to ensure that the subprojects are selected and approved in accordance with the selection criteria set out in Appendix 1 to the PAM. The Recipient shall cause the EAs to retain appraisal files for each Subproject throughout Project Implementation period and thereafter for review by ADB.	Schedule 3, para. 7, page 12	Complied.
<b>Safeguards</b>		
<b>Environment</b> The Recipient shall ensure, or cause the EAs to ensure, that the preparation, design, construction, implementation, operation and decommissioning of each Subproject comply with (a) all applicable laws and regulations of the Recipient relating to environment, health, and safety; (b) the Environmental Safeguards; (c) EARF; and (d) all measures and requirements set forth in the respective IEE and EMP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.	Schedule 3, para. 8, page 12	Complied.  All requirements addressed in preparation and design stages including contract documentation.
<b>Human and Financial Resources to Implement Safeguards Requirements</b>		
The Recipient shall make available, or cause the EAs to make available, necessary budgetary and human resources to fully implement the EMPs and the RPs.	Schedule 3, para. 12, page 13	Complied.
<b>Safeguards – Related Provisions in Bidding Documents and Works Contracts</b>		
The Recipient shall ensure, or cause the EAs to ensure, that all bidding documents and contracts for Works contain provisions that require	Schedule 3, para. 13, page 13	Complied.

Covenant	Reference in the Grant Agreement	Compliance Status
contractors to:		
(a) comply with the measures and requirements relevant to the contractor set forth in the relevant IEE, EMP and RP (to the extent they concern impacts on affected people during construction), and any corrective or preventative actions set out in a Safeguards Monitoring Report;		Complied. All Bidding Documents and Contracts contain the required provisions
(b) make available a budget for all such environmental and social measures;		Complied.
(c) provide the Recipient with a written notice of any unanticipated environmental, resettlement or indigenous peoples risks or impacts that arise during construction, implementation or operation of the Subproject that were not considered in the relevant IEE, EMP and RP;		Complied.
(d) adequately record the condition of roads, agricultural land and other infrastructure prior to starting to transport materials and construction.		Complied.
Safeguards Monitoring and Reporting		
The Recipient shall do the following, or shall cause the EAs to do the following:	Schedule 3, para. 14, page 13	Complied
(a) submit semi-annual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission.		
(b) If any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Subproject that were not considered in the relevant IEE, EMP and RP, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan; and,		Complied
(c) report any actual or potential breach of compliance with the measures and requirements set forth in the relevant EMP or the RP promptly after becoming aware of the breach.		Complied
Prohibited List of Investments		
The Recipient shall ensure, or cause the EAs to ensure, that no proceeds of the Grant are used to finance any activity included in the list of prohibited investment activities provided in Appendix 5 of the SPS.	Schedule 3, para. 15, page 14	Complied

### 3.2.4 Compliance Status with ADB' Review Mission

43. During reported period, Asian Development Bank (ADB) fielded a fact finding mission in November 2021 in Cox's Bazar. The mission consulted several completed, ongoing and planned activities and reviewed the implementation. Some snippets are covered in Appendix-II.

44. However, status of implementation of CAP provided in **Table 6** which was recommended during last virtual review mission imparted from 28 April to 4 May 2021 for EAP.

**Table 6 Status of implementation of corrective action plan**

Recommended Corrective Action Measures	Responsibility	Implementation Status
DPHE to get the environmental clearance certificate (ECC) of all eligible packages including W19 to comply with Environment Conservation Act 1995.	DPHE	<b>Being complied.</b> Obtained Environmental Approval for DPHE/W19 package from DOE on 10 October 2021 (Appendix- I).

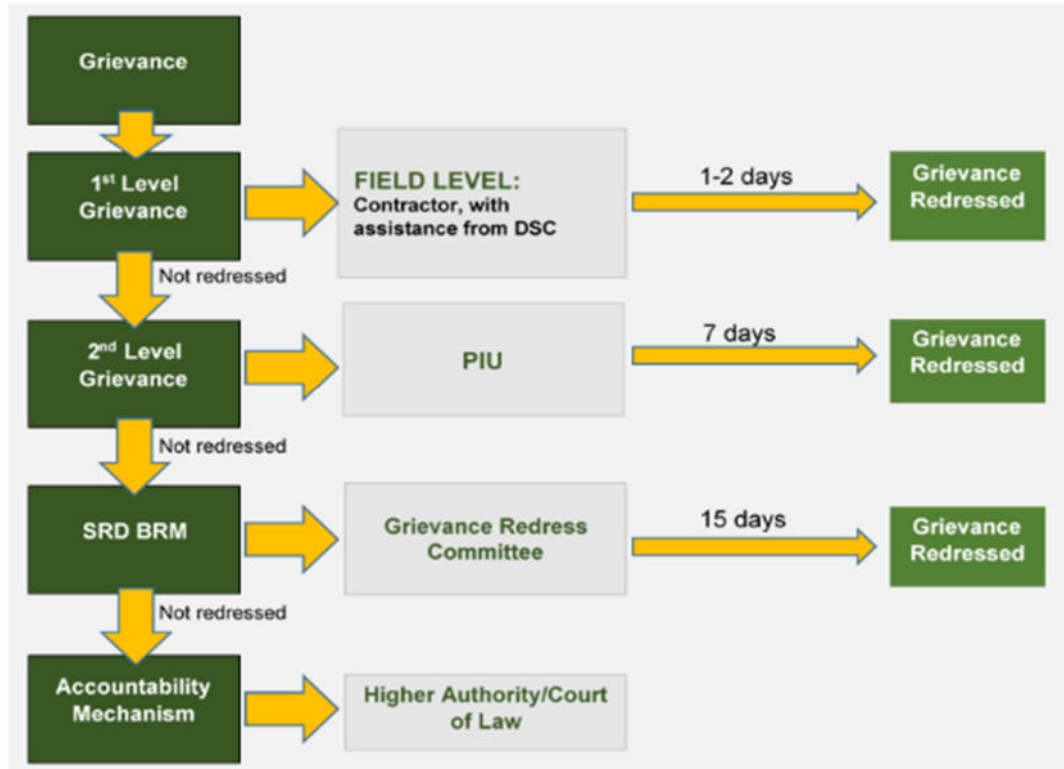
Recommended Corrective Action Measures	Responsibility	Implementation Status
DPHE to finalize the 7-remaining indicative IEEs for surface water supply packages (W11, W12A, W12B, W18) and waste management packages (W9A, W9B, W19) and submit for ADB's approval and disclosure.	DPHE	<b>Being complied.</b> The IEE has been prepared covering required information and submitted to the ADB for disclosure.
DPHE to complete compensatory tree plantation as planned for specific interventions.	DPHE	<b>Being complied.</b>
DPHE to increase inputs of Environmental Specialist and extend the contract till the closure of EAP for finalization of IEEs, perform environmental monitoring and reporting.	DPHE	<b>Being complied.</b> ADB TA consultant is onboard who might support EAs to improve environmental safeguard documentation.
LGED to obtain environmental clearance certificates (ECC) to comply with Environment Conservation Act 1995.	LGED	<b>Being complied.</b> LGED has prepared a comprehensive IEE for all packages and started processing to obtain the ECC.
LGED to ensure installation of solar panel in cyclone shelters immediate after completion of civil works.	LGED	<b>Being complied.</b>
RHD to complete the roadside compensatory plantation program.	RHD	<b>Not yet complied.</b> To be achieved by December 2022.

### 3.3 GRIEVANCE REDRESS MECHANISM

45. The objective of the grievance redress mechanism (GRM) is to resolve complaints as quickly as possible and at the local level through a process of conciliation; and, if that is not possible, to provide clear and transparent procedures for appeal. A well-defined grievance redress and resolution mechanism is planned to be established to resolve grievances and complaints in a timely and satisfactory manner. All affected persons to be made fully aware of their rights, and the detailed grievance redress procedures should be publicized through an effective public information campaign.

46. During implementation of the project, a grievance redress committee (GRC) is essentially required to be formed at the Upazila level to District / National level by following by the approved Environmental Assessment and Review Framework (EARF) through discussion at all the respective levels of the EAs (LGED, DPHE, RHD and BREB). The grievance redress mechanism and procedure as per EARF are depicted in the following **Figure 3**.





**Figure 3 Grievance redress mechanism**

47. GRM has been formed in LGED and DPHE components. The eight members GRC Committee formed for resolving complaints of DPHE component at Cox's Bazar and Ukhiya. However, two members GRC Committee also formed in LGED component The details of the committee members are furnished in Table 7 to Table 10.

**Table 7 GRM Committee for resolving complaints in LGED component**

Sl. No.	Name	Designation	Mob. Number
1	Tofazzal Ahmed	Superintending Engineer, LGED, Chottogram	01708123149
2	Prati Pada Dewan	Senior Assistant Engineer, LGED, Cox's Bazar	01708161051

**Table 8 GRM Committee in DPHE component (DPHE/W11- SWTP, Cox's Bazar Sadar)**

Sl. No.	Name	Designation	Mob. Number
1	Mr. Tipu Sultan, Jhelongjha Union Council, Cox's Bazar Sadar	President	01819330618
2	Mr. Fazlul Haque, Member, Ward No. 5, Jhelongjha Union Council, Cox's Bazar Sadar	Member	01816026804
3	Mr. Abdur Rashid, Member, Ward No. 8, Jhelongjha Union Council, Cox's Bazar Sadar	Member	01819974598
4	Ms. Mahbuba Khaleda Akter, Female Member, Ward No. 8, Jhelongjha Union Council, Cox's Bazar Sadar	Member	01818757934
5	Mr. Abul Kalam, Headmaster, Chanderpara Govt. Primary School, Jhelongjha, Cox's Bazar Sadar	Member	01816458960
6	Mr. Shafiullah, Headmaster, Jumchori Ghatkuliapara Govt. Primary School, Cox's Bazar Sadar	Member	01826557286

Sl. No.	Name	Designation	Mob. Number
7	Mr. Abul Hossain, Beneficiary, Jhelongjha, Cox's Bazar Sadar	Member	01819622163
8	Mr. Alamin, Sub-Assistant Engineer, DPHE, Cox's Bazar Sadar	Member	01754266339

**Table 9 GRM Committee, Mohajerpara Tankirpar, Cox's Bazar Town (DPHE/W11)**

Sl. No.	Name	Designation	Mob. Number
1	Mr. Helal Uddin Kabir, Panel Mayor-02, Cox's Bazar Pourashava, Cox's Bazar	President	01819520038
2	Mr. Salah Uddin Shetu, Councilor Ward 10, Cox's Bazar Pourashava, Cox's Bazar	Member	01712168433
3	Ms. Jaheda Akter, Reserved Female Councilor, Ward 7,8,9, Cox's Bazar Pourashava, Cox's Bazar	Member	01813996771
4	Mr. Ram Mohon, Headmaster, Cox's Bazar Govt. High School, Cox's Bazar Pourashava, Cox's Bazar	Member	01777155152
5	Mr. Nasir Uddin, Headmaster, Cox's Bazar Govt. Girls High School, Cox's Bazar Pourashava, Cox's Bazar	Member	01822053668
6	Mr. Abdur Rahim, Beneficiary, Cox's Bazar Pourashava, Cox's Bazar	Member	01831832884
7	Mr. Mahmudul karim Madu, Beneficiary, Cox's Bazar Pourashava, Cox's Bazar	Member	01715808095
8	Mr. Alamin, Sub-Assistant Engineer, DPHE, Cox's Bazar Sadar	Member	01754266339

**Table 10 GRM Committee, Anjumanpara, Palongkhali, Ukhiya (DPHE/W18)**

Sl. No.	Name	Designation	Mob. Number
1	Mr. M Gafur Uddin Chowdhury, Chairman, Palongkhali UP, Ukhiya, Cox's Bazar	President	01819035876 01819911622
2	Mr. Sultan Ahmed, UP Member, Ward No. 9, Palongkhali UP, Ukhiya, Cox's Bazar	Member	01572531108
3	Ms. Rasheda Begum, UP Member, Palongkhali UP, Ukhiya, Cox's Bazar	Member	01816463016
4	Mr. Rajibul Haque, Teacher, Eftadie Madrasa, Palongkhali UP, Ukhiya, Cox's Bazar	Member	01585771400
5	Ms. Nur Mahal, Teacher, Eftadie Madrasa, Palongkhali UP, Ukhiya, Cox's Bazar	Member	01575406212
6	Mr. Jokir Alam, Beneficiaries, Palongkhali UP, Ukhiya, Cox's Bazar	Member	01402076865
7	Mr. M Gafur Uddin Chowdhury, Chairman, Ward No. 5, Palongkhali UP, Ukhiya, Cox's Bazar	Member	01591137770
8	Mr. Alamin Biswas, Sub-Assistant Engineer, DPHE, Ukhiya, Cox's Bazar.	Member	01629290835

48. **Complaints status in DPHE/W18:** During reported period (July-December 2021), no complaint is received and recorded. DPHE along with Consultant team members were jointly supervising the work in order to ensure the quality.

## 4 Status of Ongoing Contract Packages

### 4.1 PROJECT STATUS

49. To date 49 sub-projects have been finalized, instead of 60 sub-projects preliminarily identified in 2018. Out of these 49 subprojects, BREB implements eight subprojects, DPHE implements 21 subprojects, LGED implements 17 subprojects while RHD implements three subprojects. In terms of categorization, 31 subprojects were category B based on SPS 2009. According to SPS 2009, category A projects/subprojects are required to prepare EIA, category B are required to prepare IEE. Given that the subprojects under the EAP were identified after the approval of the Grant, an EARF was prepared and agreed between the government and ADB. The EARF was disclosed to ADB website in June 2018.

50. However, out of the 49 subprojects contracts awarded, 26 packages have already been completed. The summary status of the subprojects is given in **Table 11**.

**Table 11 Subproject progress status of EAP (information up to December 2021)**

Executing Agency	Total Package	Contact Awarded	Completed Package	Financial Progress
BREB	08	08	08	94%
DPHE	21	21	07	84%
LGED	17	17	08	92%
RHD	03	03	03	97%
<b>Total</b>	<b>49</b>	<b>49</b>	<b>26</b>	<b>90%</b>

51. The list of sub-projects that have been awarded to date are presented in Table 12.

**Table 12 List of subprojects been awarded to date and their progress status**

SL no.	Component	Package No.	Description	Progress to date
<b>BREB</b>				
1	Disaster Risk management	EAP/BREB/G1	Supply and installation of 200 nos. lightning arresters along the access roads from Palongkhali to Kutupalong camp, and all other camps.	a) All 200 lightning arresters completed b) Progress 100%
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; b) Progress 100%
3	Energy	EAP/BREB/G2B	Supply and installation of 2,000 nos. solar powered 20-watt LED street lights, in all camps	a) All 2,000 street lights completed; b) Progress 100%
4	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.) All 50 nos. solar nano-grid installation complete. b.) Progress 100%.
5	Energy	EAP/BREB/W1A	Design, Supply, Installation, Testing & Commissioning of 33/11kV, 10/14MVA Electrical Sub-station (Turn-key)	Progress 100%. The system is functioning appropriately.
6	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)	Completed works: Poles installed = 1130 no, Conductor installation = 43 km, Transformer installed = 66 nos. (out of 100). Total line

SL no.	Component	Package No.	Description	Progress to date
				completed = 43 km (out of 50 km). Overall physical progress is 100%.
7	Energy	EAP/BREB/G6	Supply, Installation, Operation and Maintenance of 50 Nos. (Lot G6A – 25 nos. & Lot G6B – 25 nos.) Solar PV Nano Grid for household electricity.	a.) All 50 nos. solar nano-grid installation complete. b.) Progress 100%.
8	Disaster Risk management	EAP/BREB/G7	Supply and installation of 200 lightning arrestors along the access roads within the camps	a.) All 200 lightening arrestors complete. b.) Progress 100%.
<b>DPHE</b>				
9	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	Progress 100%. Handover completed.
10	Water and sanitation	EAP/DPHE/G2	Supply and operation of waste management equipment/vehicle for two years for Camps in Ukhiya.	10% physical progress has been achieved to date.
11	Water and sanitation	EAP/DPHE/G3	Supply and operation of waste management equipment/vehicle for two years for camps in Teknaf.	70% physical progress has been achieved to date.
12	Water and Sanitation	EAP/DPHE/G4	Supply and operation of 4 no. drilling rigs	Supply of equipment in progress and overall progress is 93%.
13	Water and Sanitation	EAP/DPHE/W1	Construction and operation of mini piped water	Progress 100%. Handover completed.
14	Water and Sanitation	EAP/DPHE/W2	Construction and operation of mini piped water supply system (10 schemes): Package 2	Progress 100%. Handover completed.
15	Water and Sanitation	EAP/DPHE/W3	Construction and operation of mini piped water supply system (10 schemes): Package 3	97% physical progress has been achieved up to date.
16	Water and Sanitation	EAP/DPHE/W4	Construction and operation of mini piped water supply system (10 schemes): Package 4	97% physical progress has been achieved up to date.
17	Water and Sanitation	EAP/DPHE/W5	Construction and operation of mini piped water supply system (5 schemes): Package 5	98% physical progress has been achieved up to date.
18	Water and Sanitation	EAP/DPHE/W9A	Construction and operation of 2 Integrated waste management and resource recovery facilities with collection system at the outskirts of Kutupalong Balukhali Mega camp, Ukhiya Group-2	Lot - 1: 65% progress has been achieved to date. Lot - 2: 90% progress has been achieved to date.
19	Water and Sanitation	EAP/DPHE/W9B	Construction and operation of Integrated waste management (Kutupalong Balukhali) Group-3	95% physical progress has been achieved to date.
20	Water and Sanitation	EAP/DPHE/W10	Construction and operation of Integrated waste management system (Shamlapur, Teknaf) Group -1	100% physical progress has been achieved to date.
21	Water and Sanitation	EAP/DPHE/W11	Construction of Surface Water Treatment Plant for supporting water supply at Cox's Bazar city and surrounding areas	Lot 1: 65% physical progress has been achieved to date. Lot 2: 26% physical progress has been achieved to date. Lot 3: 63% physical progress has been achieved to date. Lot 4: 66% physical progress has been achieved to date. Lot 5: 36% physical progress has been achieved to date.

SL no.	Component	Package No.	Description	Progress to date
22	Water and sanitation	EAP/DPHE/W12A	Construction of surface water reservoir based piped water system (Nayapara, Teknaf)	Lot 1: 90% physical progress has been achieved to date. Lot 2: 65% physical progress has been achieved to date.
23	Water and Sanitation	EAP/DPHE/W12B	Construction of piped water systems (Unchiprang/ Shamlapur)	75% physical progress has been achieved to date.
24	Water and Sanitation	EAP/DPHE/W13	Construction of Community Bathing Facilities (100 units), Group -1	Progress 100%. Handover completed.
25	Water and Sanitation	EAP/DPHE/W14	Construction of Community Bathing Facilities (200 units), Group -2	Progress 100%. Handover completed.
26	Water and Sanitation	EAP/DPHE/W15	Construction of Community Bathing Facilities (200 units), Group -3	Progress 100%. Handover completed.
27	Water and sanitation	EAP/DPHE/W18	Construction of piped water supply with surface water reservoirs, treatment plant and other and associated facilities at Ukhiya	Lot 1: 45% physical progress has been achieved to date. Lot 2: 70% physical progress has been achieved to date. Lot 3: 35% physical progress has been achieved to date.
28	Water and sanitation	EAP/DPHE/W19	Design, Supply, Install, Test, Commission, Operation and Maintenance of Faecal Sludge and Segregated Solid Waste Treatment Plant	20% physical progress has been achieved to date.
29	Water and Sanitation	EAP/DPHE/CON/1	Design, Monitoring and Supervision consulting services of DPHE component, Cox's Bazar	Consultants fielded as per TOR.
<b>LGED</b>				
30	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	80% physical progress has been achieved to date.
31	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	100% complete.
32	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	80% physical progress has been achieved to date.
33	Roads	EAP/LGED/OCB-N/W2B	Construction of 7.5 km Internal Roads Internal Roads and Stairs with Drainage Facilities Inside the camps in Teknaf Group 4	92% physical progress has been achieved to date.
34	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.	85% physical progress has been achieved to date.
35	Roads	EAP/LGED/ OCB-N/W5	Upgradation of existing 8.8 km link road connecting Cox's Bazar-Teknaf and Marine Drive Highways, Ukhiya	45% physical progress has been achieved to date.
36	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	95% physical progress has been achieved up to date.
37	Disaster Risk Management	EAP/LGED/OCB-N/W8	Construction of 3 nos. school cum cyclone shelter for affected people, 3 story LGED Prototype, in Ukhiya	100% physical progress has been achieved up to date.
38	Disaster Risk Management	EAP/LGED/OCB-N/W9	Construction of 3 nos. School cum cyclone shelter for affected people, 3 story LGED Prototype, in Teknaf	85% physical progress has been achieved up to date.
39	Disaster Risk Management	EAP/LGED/OCB-N/W10	Construction of Hill Slope Protection inside the Kutuplong Balukhali Mega Camp at Ukhiya	18% physical progress.

SL no.	Component	Package No.	Description	Progress to date
40	Roads	EAP/LGED/ OCB-N/W4C	Improvement of Hajirpara Mukter Swdagor bari Side-Dakhin Faliapara Sajahan bari Rd. Ch. 00-2400 m, Malercul LGED Road-Dakhin Faliapara Rd. Ch. 00-814 m & Ali Mohammed Pingir Rd. Ch. 00-2327 m by BC, under Ukhiya Upazila, Dist: Cox's Bazar	100% complete
41	Roads	EAP/LGED/ OCB-N/W4D	Improvement of Ratnapalong UP office Coat Bazar – Valukhiya Bazar Road by BC at Ch. 00-4300m & Ratnapalong UP Office – Chakbaita Bazar via Goyalmara Road by BC at Ch. 00-4435m under Ukhiya Upazila, Dist: Cox's Bazar	100% complete.
42	Disaster Risk Management	EAP/LGED/OCB-N/W6A	Construction of Boundary wall of 7 nos. Multipurpose Cyclone Shelters at Ukhiya Upazila and 3 nos. Multipurpose Cyclone Shelters at Teknaf Upazila in Cox's Bazar	85% physical progress has been achieved to date.
43	Disaster Risk Management	EAP/LGED/OCB-N/W19	Construction of Semi-Permanent Food Distribution Centers and loading /unloading yard in Ukhiya and Teknaf	100% complete. All 4 FDCs handed over.
44	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	100% complete
45	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	100% complete
46	Disaster Risk Management	EAP/LGED/CON/1	Design, Monitoring and Supervision consulting services through ICT for LGED component, Cox's Bazar	The consultancy service successfully completed in time.
<b>RHD</b>				
47	Roads	EAP/RHD/W1	Rehabilitation of National Highway from LinkRoad (Coxs Bazar) (Chainage 381+494) to Ukhia (Chainage- 406+494)	100% complete.
48	Roads	EAP/RHD/W2	Rehabilitation of National Highway from Ukhia (Chainage 406+494) to Unchiprang (Chainage-431+494)	100% complete.
49	Roads	EAP/RHD/CON/1	Design, Monitoring and supervision consulting services for RHD component, Cox's Bazar	The consultancy service successfully completed in time.

## 5 Environmental Status

### 5.1 STATUS OF ENVIRONMENTAL SAFEGUARDS DOCUMENTS

52. To date (December 2021) out of 31 B category projects according to ADB classification, 31 IEEs (including 7 indicative IEE) have been drafted with 31 EMPs and 8 ECoPs. Some EMPs and subsequent IEEs are due, require some additional works to be done. **Table 13** represents the status of preparation of safeguards documents.

**Table 13 Summary Status of safeguards documents preparation for subprojects**

Agency	Total B Category project	IEE	EMP	ECoP
DPHE	13	13	13	4
LGED	14	15	15	2
RHD	02	2	2	0
BREB	02	2	2	2
<b>Total</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>8</b>

53. To date 13 EMPs for DPHE, 14 EMPs for LGED, 2 EMPs for BREB and 2 EMPs for RHD have been prepared. Of 31 IEEs, 13 IEEs for DPHE, 14 IEEs for LGED, 2 IEEs for RHD and 2 IEEs for BREB have been prepared. The only EIA for DPHE (W19- Omni Processor) has been accomplished and approved by the DOE. Details of subproject wise status of IEE and EMP preparation has been presented in **Table 14**.

**Table 14 Subproject wise status of preparation of safeguards documents**

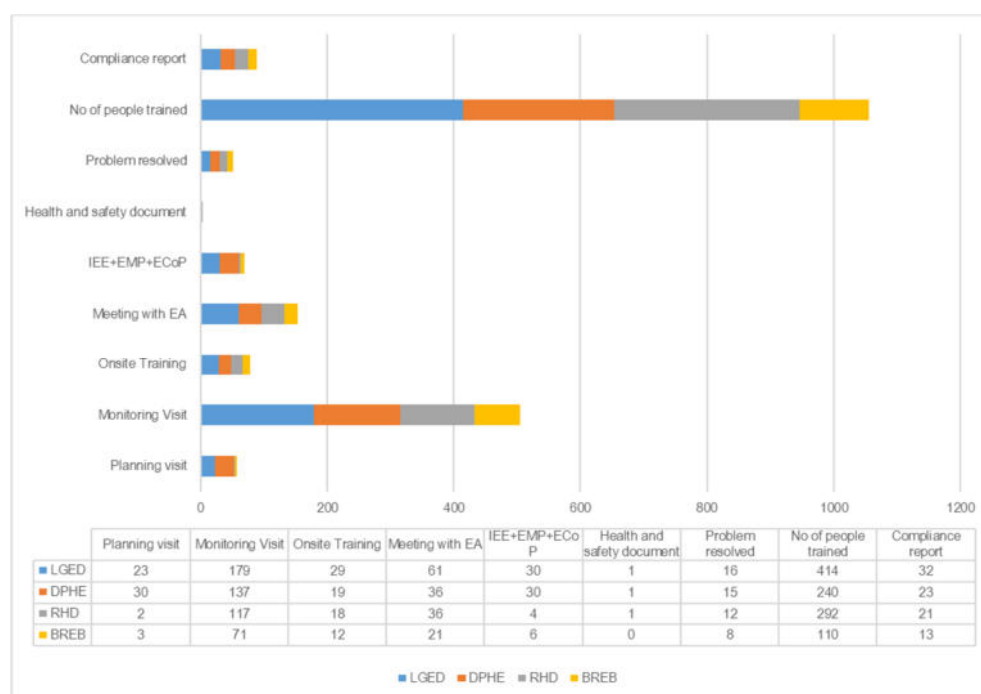
Sl. No.	Package No.	Category	EMP	IEE	ECoP	Remarks
<b>BREB</b>						
01	EAP/BREB/G1	C	N/A	N/A		
02	EAP/BREB/G2A	C	N/A	N/A	Done	
03	EAP/BREB/G2B	C	N/A	N/A	Done	
04	EAP/BREB/G5	C	N/A	N/A		
05	EAP/BREB/G6	C	N/A	N/A		
06	EAP/BREB/G7	C	N/A	N/A		
07	EAP/BREB/W1A	B	Done	Done and disclosed		
08	EAP/BREB/W2	B	Done	Done and disclosed		
Total B category		02	02	02	2	
<b>DPHE</b>						
01	EAP/DPHE/G1	C	N/A	N/A	Done	
02	EAP/DPHE/G2	C	N/A	N/A		
03	EAP/DPHE/G3	C	N/A	N/A		
04	EAP/DPHE/G4	C	N/A	N/A		
05	EAP/DPHE/W1	B	EMP done, 2 <sup>nd</sup> revision	Done and disclosed		
06	EAP/DPHE/W2	B	EMP done, 2 <sup>nd</sup> revision	Done and disclosed		

Sl. No.	Package No.	Category	EMP	IEE	ECoP	Remarks
07	EAP/DPHE/W3	B	EMP done, 3 <sup>rd</sup> revision	Done and disclosed		
08	EAP/DPHE/W4	B	EMP done, 2 <sup>nd</sup> revision	Done and disclosed		
09	EAP/DPHE/W5	B	EMP done, 2 <sup>nd</sup> revision	Done and disclosed		
10	EAP/DPHE/W9A	B	EMP done, 3 <sup>rd</sup> revision	Revised IEE prepared, disclosure required		
11	EAP/DPHE/W9B	B	EMP done, 2 <sup>nd</sup> revision	Revised IEE prepared, disclosure required		
12	EAP/DPHE/W10	B	EMP done, 2 <sup>nd</sup> revision	Revised IEE prepared, disclosure required		
13	EAP/DPHE/W11	B	Indicative EMP done. Final version will be come out after final design of distribution pipeline, ground reservoir and location of OHTs and RP etc.	Revised IEE prepared, disclosure required		
14	EAP/DPHE/W12A	B	Indicative EMP done; 2 <sup>nd</sup> revision. Final version will be come out after final design of distribution pipeline and location of SWTP.	Revised IEE prepared, disclosure required		
15	EAP/DPHE/W12B	B	Indicative EMP done. Final version will be come out after final design of distribution pipeline and location of the SWTP.	Revised IEE prepared, disclosure required		
16	EAP/DPHE/W13	C	N/A	N/A	Done	
17	EAP/DPHE/W14	C	N/A	N/A	Done	
18	EAP/DPHE/W15	C	N/A	N/A	Done	
19	EAP/DPHE/W18	B	Indicative EMP done. Final version will be come out after final design of SWTP, transmission and distribution pipeline and location of the ground reservoirs etc.	Revised IEE prepared, disclosure required		
20	EAP/DPHE/W19 (Omni-Processor)	B	Done	Revised IEE prepared, disclosure required.		
Total B category		13	13	13	4	
<b>LGED</b>						
01	EAP/LGED/OCB-/W1A	B	EMP done, 3 <sup>rd</sup> revision	Done and disclosed		
02	EAP/LGED/OCB-/W1B	B	EMP done, 1 <sup>st</sup> revision	Done and disclosed		
03	EAP/LGED/OCB-/W2A	B	EMP done, 5 <sup>th</sup> revision	Done and disclosed		
04	EAP/LGED/OCB-/W2B	B	EMP done, 5 <sup>th</sup> revision	Done and disclosed		
05	EAP/LGED/OCB-/W3	B	EMP done, 4 <sup>th</sup> revision	Done and disclosed		
06	EAP/LGED/OCB-/W4C	B	EMP done, 2 <sup>nd</sup> revision	Done and disclosed		



Sl. No.	Package No.	Category	EMP	IEE	ECoP	Remarks
07	EAP/LGED/OCB/W4D	B	EMP done, 3 <sup>rd</sup> revision	Done and disclosed		
08	EAP/LGED/OCB-N/W5	B	EMP done 4 <sup>th</sup> revision	Done and disclosed		
09	EAP/LGED/OCB-N/W6	B	EMP done, 2 <sup>nd</sup> revision	Done and disclosed		
10	EAP/LGED/OCBN/W8	B	EMP done, 2 <sup>nd</sup> revision	Done and disclosed		
11	EAP/LGED/OCB-N/W9	B	EMP done, 2 <sup>nd</sup> revision	Done and disclosed		
12	EAP/LGED/OCB-/W10	B	EMP done, 2 <sup>nd</sup> revision	Done and disclosed		
13	EAP/LGED/W19	C	N/A	N/A	Done	
14	EAP/LGED/OCB-/W20	B	EMP done, 4 <sup>th</sup> revision	Done and disclosed		
15	EAP/LGED/OCB-/W21	B	EMP done, 2 <sup>nd</sup> revision	Done and disclosed		
16	EAP/LGED/W6A	C	N/A	N/A	Done	
Total B category		14	14	14	2	
<b>RHD</b>						
01	EAP/RHD/W1	B	Done	Done and disclosed		
02	EAP/RHD/W2	B	Done	Done and disclosed		
Total B category		02	02	02		
<b>Grand Total (B category)</b>		<b>31</b>	<b>31</b>	<b>31</b>	<b>8</b>	

54. For a detailed information on safeguard implementation, see **Figure 4** below.



**Figure 4 Comparative analysis of safeguard implementation (up to December 2021)**

## 5.2 ENVIRONMENTAL SAFEGUARDS MONITORING

55. 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 are not anticipated to 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.

56. 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 subproject.

57. 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-07.

## 5.2.1 Monitoring Visits

58. In response to COVID-19, countries across the globe have implemented a range of public health and social measures, including movement restrictions, partial closure or closure of businesses, quarantine in specific geographic areas and international travel restrictions. During the reporting period the general level of epidemiology was not so high like urban area. However, the fear of death spread across the rural area also, thus, construction works slowed down rapidly due to the lockdown declared by the government. Environmental Safeguard team was not able to visit all the location due to pandemic situation which significantly affect environmental monitoring activity at EAP construction sites.

59. A total of 34 environmental safeguards monitoring visits have been conducted during the current cycle (July – December 2021) of monitoring period. See photographs of monitoring visits at different construction sites in **Figure 5**. Reports are prepared based on site visit to track the corrective measures and desired progress (**Appendix-III**).

**Table 15 Environmental safeguards monitoring visit conducted during July- December 2021**

Site Visit				Total
BREB	DPHE	LGED	RHD	
0	17	17	0	34



DPHE-W11 (Lot 04)



DPHE-W11 (Lot 01)



DPHE-W18 (Lot 02)



DPHE-W18 (Lot 01)

Figure 5 Monitoring visit at DPHE sites

### 5.3 CONSTRUCTION PERIOD ENVIRONMENTAL SAFEGUARDS MONITORING

#### 5.3.1 Air Quality

60. 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.

61. 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.

### 5.3.2 Noise Level

62. During the reporting period (July- December 2021), no measurement of noise level was carried out. However, during construction, there would be an increase in ambient noise levels due to construction machinery operation and movement of construction vehicles. The following measures are suggested:

- 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 3m 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.

### 5.3.3 Surface and Ground Water Quality

63. During the reporting period (July- December 2021), no test for monitoring surface and groundwater quality was carried out. However, 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.

- 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 labor 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.

### 5.3.4 Soil Quality

64. During the reporting period (July – December 2021), no test for monitoring soil quality was carried out. However, 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. 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.

## 5.4 TREE PLANTATION PROGRAMME

65. Due to implementation of Emergency Assistance Project, habitats of flora and fauna are being disturbed to some extent, therefore, provision for plantation is kept in the contract for all the components and this would help to conserve resources, prevent soil erosion, enhance air and water quality, sequestration of carbon and conservation of biodiversity.

66. During Seventh monitoring period, tree plantation is being carried out along storm water drainage canals in LGED/W20, LGED/W21, LGED/W3 and LGED/W4D (**Figure 6**). The key objectives of this plantation are to stabilize the canal embankment, reduce risk of soil erosion and landslide, and improve biodiversity.

67. Special attention should be paid to the tree plantation plan covering selection of tree species (both timber and medicinal plants), proper distribution of the species, plantation technique and after care of the planted saplings so that plantation to be successful and helpful in preventing soil erosion and restoration of biodiversity as well. In view of this, a detailed tree plantation programme is asked from the contractor to be prepared in line with the plantation plan and guideline is provided in the IEE. Site specific information on tree plantation program by LGED including quantities of saplings, species distribution, plantation technique etc. are given in **Table 19**.

68. Till date, approx. 10000 saplings of various species such as Jarul, Kanchanbati, Agor, Sunali, Akashi, Gamari, Kathbadam, Jam, Jolpai, Amloki, Arjun, Chalta, Hortoki, Mahogany Jhaw etc. were planted in multiple schemes under LGED component.

**Table 16 Tree plantation program conducted in LGED component**

Packages	Quantities of Saplings	Species Distribution	Plantation Technique
EAP/LGED/OCB-N/W20	6000	Jarul- 100 nos, Kanchanbadi- 100 nos, Jhao tree- 1500, Agor- 500nos, Sunali- 300 nos, Hybrid Akashi- 3000 nos, Gamari- 500 nos.	2 m distance
EAP/LGED/OCB-N/W21	2600	Kathbadam- 300 nos, Jam- 200 nos, Jolpai- 500 nos, Amloki-300 nos, Arjun- 200 nos, Hybrid Akashi- 500 nos, Chalta- 300 nos, Hortoki-300 nos.	
EAP/LGED/OCB-N/W3	50	Hybrid Akashi/ Eucalyptus - 25 nos, Mahogany- 25 nos.	



Packages	Quantities of Saplings	Species Distribution	Plantation Technique
EAP/LGED/OCB/W4D	1000	Hybri Akashi/ Eucalyptus - 700 nos, Mahogany- 300 nos.	



**Figure 6: Tree plantation programme in the project sites (LGED/W20)**

69. Under DPHE component, the plantation is being done to land stabilization, reduce risk of land slide, improve watershed, enrich micro-climatic condition. In addition, the planted native species also enrich the ecosystem by providing food and shelter to wildlife and other microorganism, improving overall goods and services can attain from the ecosystem. Tree plantation done in W1-W5 earlier and tree plantation is ongoing DPHE/W12A-lot-1 (partially), DPHE/12B, DPHE/9B and DPHE/9A (partially). Contractors are responsible for the after care of the sampling and payment is to be made only when trees are fully grown. The survival number are not yet counted. After counting the number of saplings of tree and the number of tree survive then the record will be included in the next EMR.

70. Compensatory plantation programme to be done by RHD for the loss of 468 no. of trees due to the implementation of the Improvement of National Highway (N1) from Link Road (Cox's Bazar) to Teknaf under Emergency Assistance Project. This plantation is for environmental, landscape and for aesthetic purposes. However, in the event of an unforeseen rise in the number of deaths of COVID-19, tree planting will take place by December 2022, in a tentative changed program, alongside 50 km roads from Link Road (Cox's Bazar) to Unchiprang under first phase of the project.

71. Arboriculture unit under RHD have their own nurseries to produce saplings which will be used in this project. The saplings will be planted along the highways, however, two rows of plantations on both sides of the road is planned. The first row would be 1000 mm from the end of the slope, and the distance between rows of trees would be 2000 mm. Maintenance of the trees will be made for two years, where the health, vigor and compatibility of vegetation with the environment and damage from insects and diseases right from the time of planting will be conserved. On premature death of any plant, new plant will be planted. One gardener will be employed for per km maintenance and RHD will bear all the expenses incurred for it.

## 5.5 TRAINING, AWARENESS AND WORKSHOP

72. Onsite trainings and meetings with contractors and EAs were conducted during the current monitoring period. The site-based trainings were arranged to sensitize the contractors on implementing the environmental safeguards according to the EMPs and other contracts. Five (5) onsite trainings were arranged during July-December 2021 where total 90 participants were attended. A brief lecture has been given to the participants majorly focused on: occupational health and safety including PPEs, safety signage, housekeeping, waste management, management of hazardous materials, emergency procedures. Moreover, explained COVID-19 protocols such as appropriate PPEs, entry protocol to the worksite, hand washing protocol, discourage gathering at site and maintain physical distance, place signboard and posters at site on COVID response etc. However, all the participants hold a very positive attitude towards the training program. Details of the monitoring visits are given in **Table 17** below. Photographs of onsite trainings are in **Figure 7**.

**Table 17 Environmental safeguards training conducted during July – December 2021**

Onsite Training and No. of Participant				Total
BREB	DPHE	LGED	RHD	
0	1	4	0	5
0	30	60	0	90



**Figure 7: Onsite trainings conducted at DPHE component**

## 5.6 RESPONSE TO COVID-19

73. The whole reporting period (July– December 2021) went through pandemic situation of COVID-19. Though the situation was not favorable for construction activities works went on regular basis with quality. EAs directed all concerned to take proper measures to prevent the pandemic and contractor's workers were advised to keep proper health hygiene by wearing face mask, hand washing and maintaining physical distances at the work sites. The following preventive measures were taken during the reporting period to protect the pandemic situation:

74. **Respiratory hygiene.** Corona virus may transmit through respiration, and it is one of the main causes to spread COVID-19. As protection measure construction workers were used face mask supplied from respective Contractors when they were in construction works.

75. **Hand hygiene.** Hand sanitizer like soap, hand wash and alcoholic hand rubs were provided to only the management /supervising personnel of the contractors but not to the labors. Hand hygiene facilities were provided to the participants of training, workshops, official meetings and demonstration fields.

76. **Physical distancing.** A safe physical distance has been maintained in all indoor and outdoor workplaces and direct physical contact i.e., hugging, touching, shaking hands has been avoided. A strict control over external access, to the offices has been maintained. Reduction of people's density in the building (no more than one person per 10 square meters) has not been maintained but physical spacing at least 1 meter apart for workstations and common spaces, such as entrances /exits, canteens, stairs, and other areas congregation or queuing of employees or visitors /clients has been maintained. Physical meetings have been minimized and online meeting, by using teleconferencing facilities like zoom and Microsoft cloud meeting software has been enhanced in almost all offices.

77. **Regular environmental cleaning and disinfection.** To remove dirt, debris from used materials regular housekeeping was done at the regular basis in the construction sites. Office room, kitchen, toilets, working appliances and other common spaces with their fittings were disinfected regularly but the labor sheds and their kitchen and toilets were not disinfected as the contractors didn't provide those materials to them.



Figure 8: COVID response for the workers

78. High risk category of exposure to COVID-19 was not found in the project area. No death case of project personnel or contractors' personnel by contamination of COVID-19 has been recorded during reporting period. Therefore, no such preventive measures have not been described in this period of reporting.

## 5.7 ENVIRONMENTAL ISSUES OF THE CURRENT PROJECT

79. Until date a few numbers of environmental issues have ben encountered or identified to be affecting project design. **Table 18** represents the environmental issues, recommendations and measures taken.

80. Summary of Key Issues Identified are:

- Waterlogging problems due to project implementation at several sites in the project area;
- Lack of proper solid waste management system;
- Dust pollution resulting from construction work and irregular watering;
- Lack of proper management for hazardous materials;



- Lack of proper PPEs;
- Poor implementation of safety measures for COVID-19 in both camps and construction sites;
- Consideration of community health and safety is minimal; and
- No site has proper emergency procedure.

81. **Figure 9** later represents some current safeguards photographs from various sites taken during field visits.

**Table 18 Environmental Status of the subproject, issues and recommendation**

Package	Major issues identified during 6th monitoring period (Jan-Jun 21)	Issues addressed during 7th monitoring period (Jul-Dec 21)	New Issues identified during 7th monitoring period (Jul-Dec 21)	Comments
DPHE W3	<ul style="list-style-type: none"> <li>• Boundary fencing for the pump house and solar panel is yet to construct, unauthorized entry in the site was seen.</li> <li>• Poor implementation of safety measures for COVID-19 at construction sites.</li> <li>• Poor waste management was noticed during site inspection.</li> <li>• No tool box meeting was conducted at site to educate the workers.</li> <li>• Emergency procedure was not followed at site.</li> </ul>	<ul style="list-style-type: none"> <li>• Boundary fencing is constructed, and solar panel is provided, no more unauthorized entry.</li> <li>• Implementation of safety measures for COVID-19 is improved.</li> <li>• Waste management situation is improved.</li> </ul>	Poor performance in site reinstatement works	Construction work is complete, and the system is in operation. However, installation of generator is in progress.
DPHE W4	<ul style="list-style-type: none"> <li>• Environmental quality monitoring survey has not been done yet.</li> <li>• Poor implementation of safety measures for COVID-19 at construction sites.</li> <li>• Excavated soils are stored on the local road hinders accessibility.</li> <li>• Poor waste management was reported during site inspection.</li> <li>• No tool box meeting was conducted at site to educate the workers.</li> <li>• Emergency procedure was not followed at site.</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation of safety measures for COVID-19 is improved</li> <li>• Stored excavated soils on the local road are removed.</li> <li>• Waste management situation is improved.</li> <li>• Health and safety plan is properly maintained.</li> </ul>	Poor performance in site reinstatement works	Construction work is complete, and the system is in operation. However, installation of generator is in progress.
DPHE W5	<ul style="list-style-type: none"> <li>• Boundary fencing for the pump house and solar panel is yet to construct, unauthorized entry in the site was seen.</li> <li>• Poor implementation of safety measures for COVID-19 at construction sites.</li> <li>• Poor waste management was noticed during site inspection.</li> <li>• No tool box meeting was conducted at site to educate the workers.</li> <li>• Emergency procedure was not followed at site.</li> </ul>	<ul style="list-style-type: none"> <li>• Boundary fencing is constructed, and solar panel is provided, no more unauthorized entry.</li> <li>• Implementation of safety measures for COVID-19 is improved.</li> <li>• Waste management situation is improved.</li> </ul>	Poor performance in site reinstatement works	Construction work is complete, and the system is in operation. However, installation of generator is in progress.
DPHE W9A	<ul style="list-style-type: none"> <li>• Environmental quality monitoring has not been conducted yet.</li> <li>• Site Specific EMP yet to submit by the contractor.</li> <li>• Insufficient safety measures for COVID-19 in construction sites.</li> <li>• Tool box meeting was not conducted at site to educate the workers.</li> </ul>	<ul style="list-style-type: none"> <li>• EMP is submitted by the contractor.</li> <li>• Environmental safeguard monitoring is improved.</li> </ul>	<ul style="list-style-type: none"> <li>• Poor waste management at site.</li> <li>• Emergency procedure was not followed at site.</li> </ul>	Contractor to focus on OHS training, waste management and pollution control.
DPHE W9B	<ul style="list-style-type: none"> <li>• Environmental quality monitoring has not been conducted yet.</li> <li>• Site Specific EMP yet to submit by the contractor.</li> <li>• Insufficient safety measures for COVID-19 in construction sites.</li> </ul>	<ul style="list-style-type: none"> <li>• EMP is submitted by the contractor.</li> <li>• Environmental safeguard monitoring is improved.</li> <li>• Implementation of safety measures for COVID-19 is improved.</li> </ul>	<ul style="list-style-type: none"> <li>• Poor waste management at site.</li> <li>• Emergency procedure was not followed at site.</li> <li>• Poor performance in site reinstatement works.</li> </ul>	Contractor to focus on OHS training, waste management and pollution control.

Package	Major issues identified during 6th monitoring period (Jan-Jun 21)	Issues addressed during 7 <sup>th</sup> monitoring period (Jul-Dec 21)	New Issues identified during 7 <sup>th</sup> monitoring period (Jul-Dec 21)	Comments
	<ul style="list-style-type: none"> <li>Tool box meeting was not conducted at site to educate the workers.</li> <li>Emergency procedure was not followed at site.</li> </ul>			
DPHE W11	<ul style="list-style-type: none"> <li>Site Specific EMP yet to submit by the contractor.</li> <li>Insufficient safety measures for COVID-19 in construction sites.</li> <li>Poor waste management was noticed during site inspection.</li> <li>Tool box meeting was not conducted at site to educate the workers.</li> <li>Emergency procedure was not followed at site.</li> </ul>	<ul style="list-style-type: none"> <li>EMP is submitted by the contractor.</li> <li>Environmental safeguard monitoring is improved.</li> <li>Implementation of safety measures for COVID-19 is improved.</li> <li>Tool box meeting was conducted at site.</li> </ul>	<ul style="list-style-type: none"> <li>Poor waste management at site.</li> <li>Emergency procedure was not followed at site.</li> </ul>	Contractor to appoint an EHS nodal person and focus on OHS training, slope protection, waste management and pollution control.
DPHE W12A	<ul style="list-style-type: none"> <li>Site Specific EMP yet to submit by the contractor.</li> <li>Insufficient safety measures for COVID-19 in construction sites.</li> <li>Tool box meeting was not conducted at site to educate the workers.</li> <li>Emergency procedure was not followed at site.</li> </ul>	<ul style="list-style-type: none"> <li>Environmental safeguards monitoring is improved.</li> <li>Implementation of safety measures for COVID-19 is improved.</li> <li>Tool box meeting was conducted at site.</li> </ul>	<ul style="list-style-type: none"> <li>Poor waste management at sites.</li> <li>Emergency procedure was not followed at site.</li> </ul>	Contractor to focus on OHS training, waste management and pollution control.
DPHE W12B	<ul style="list-style-type: none"> <li>Site Specific EMP yet to submit by the contractor.</li> <li>Insufficient safety measures for COVID-19 in construction sites.</li> <li>Poor waste management was noticed during site inspection.</li> <li>Tool box meeting was not conducted at site to educate the workers.</li> <li>Emergency procedure was not followed at site.</li> </ul>	<ul style="list-style-type: none"> <li>EMP is submitted by the contractor.</li> <li>Environmental safeguards monitoring is improved.</li> <li>Implementation of safety measures for COVID-19 is improved.</li> <li>Tool box meeting was conducted at site.</li> </ul>	<ul style="list-style-type: none"> <li>Poor waste management at sites.</li> <li>Emergency procedure was not followed at site.</li> </ul>	Contractor to focus on OHS training, waste management and pollution control.
DPHE W18	<ul style="list-style-type: none"> <li>Environmental quality monitoring has not been conducted yet.</li> <li>Site Specific EMP yet to submit by the contractor.</li> <li>Insufficient safety measures for COVID-19 in construction sites.</li> <li>Tool box meeting was not conducted at site to educate the workers.</li> <li>Emergency procedure was not followed at site.</li> </ul>	<ul style="list-style-type: none"> <li>EMP is submitted by the contractor.</li> <li>Environmental safeguards monitoring is improved.</li> <li>Implementation of safety measures for COVID-19 is improved.</li> </ul>	<ul style="list-style-type: none"> <li>Due to rain no dust observed in the visiting period.</li> <li>Emergency procedure was not followed at site.</li> </ul>	Contractor to focus on OHS training, waste management and pollution control.
DPHE W19	<ul style="list-style-type: none"> <li>Insufficient safety measures for COVID-19 in construction sites.</li> <li>Poor waste management was noticed during site inspection.</li> <li>Tool box meeting was not conducted at site to educate the workers.</li> <li>Emergency procedure was not followed at site.</li> </ul>	<ul style="list-style-type: none"> <li>Environmental safeguards monitoring is improved.</li> <li>Implementation of safety measures for COVID-19 is improved.</li> <li>Tool box meeting was conducted at site.</li> </ul>	<ul style="list-style-type: none"> <li>There is no waste management plan prepared by the contractor and not approve by PMU. But waste is placed in designated bins.</li> <li>Emergency procedure was not followed at site.</li> </ul>	Contractor to focus on OHS training, waste management and pollution control
DPHE- W1, W2, W10, W13, W14 and W15- Construction is completed and the work site is reinstated prior to leaving the construction site.				
LGED W1A	<ul style="list-style-type: none"> <li>Site specific EMP yet to be generated by contractor and approved by the PD.</li> <li>Monthly monitoring checklist yet to be submitted by contractor.</li> <li>Health and safety plan should be prepared and implement at working site strictly.</li> <li>Access disturbance to the local community is occurred since no alternative route is being designated during construction activity.</li> <li>No road safety measure is followed at site.</li> <li>Appropriate safety signs to be placed in the site.</li> <li>No first aid box is available at the site.</li> </ul>	<ul style="list-style-type: none"> <li>Health and safety plan is provided to the contractor which is partially followed at site.</li> <li>PPEs are partially addressed.</li> <li>Onsite training is carried out to educate the contractor' staffs and workers.</li> <li>Construction camp is confined and secured by boundary fencing.</li> <li>Sanitation facility is improved in the camp site.</li> </ul>	<ul style="list-style-type: none"> <li>Waste management yet to be implemented in the camp site.</li> <li>No first aid box is available at the site.</li> <li>Tool box meeting is not conducted at site to educate the workers.</li> <li>Poor implementation of safety measures for COVID-19 at construction sites.</li> </ul>	Contractor to appoint an EHS nodal person and focus on OHS training, slope protection, waste management and pollution control.

Package	Major issues identified during 6th monitoring period (Jan-Jun 21)	Issues addressed during 7 <sup>th</sup> monitoring period (Jul-Dec 21)	New Issues identified during 7 <sup>th</sup> monitoring period (Jul-Dec 21)	Comments
	<ul style="list-style-type: none"> <li>Tool box meeting is not conducted at site to educate the workers.</li> </ul>	<ul style="list-style-type: none"> <li>Site safety signage is placed in the camp site.</li> </ul>		
<b>LGED W2A</b>	<ul style="list-style-type: none"> <li>Site specific EMP yet to be generated by contractor and approved by the PD.</li> <li>Monthly monitoring checklist yet to be submitted by contractor.</li> <li>Health and safety plan should be prepared and implement at working site strictly.</li> <li>Access disturbance to the local community is occurred since no alternative route is being designated during construction activity.</li> <li>No road safety measure is followed at site.</li> <li>Appropriate safety signs to be placed in the site.</li> <li>No first aid box is available at the site.</li> <li>Tool box meeting is not conducted at site to educate the workers.</li> </ul>	<ul style="list-style-type: none"> <li>Health and safety plan is provided to the contractor which is partially followed at site.</li> <li>PPEs are partially addressed.</li> <li>Construction camp is confined and secured by boundary fencing.</li> <li>Sanitation facility is improved in the camp site.</li> <li>Site safety signage is placed in the camp site.</li> </ul>	<ul style="list-style-type: none"> <li>Waste management yet to be implemented in the camp site.</li> <li>No first aid box is available at the site.</li> <li>Tool box meeting is not conducted at site to educate the workers.</li> <li>Poor implementation of safety measures for COVID-19 at construction sites.</li> </ul>	Contractor to appoint an EHS nodal person and focus on OHS training, slope protection, waste management and pollution control.
<b>LGED W2B</b>	<ul style="list-style-type: none"> <li>Site specific EMP yet to be generated by contractor and approved by the PD.</li> <li>Monthly monitoring checklist yet to be submitted by contractor.</li> <li>Health and safety plan should be prepared and implement at working site strictly.</li> <li>Access disturbance to the local community is occurred since no alternative route is being designated during construction activity.</li> <li>No road safety measure is followed at site.</li> <li>Appropriate safety signs to be placed in the site.</li> <li>No first aid box is available at the site.</li> <li>Tool box meeting is not conducted at site to educate the workers.</li> </ul>	<ul style="list-style-type: none"> <li>Health and safety plan is provided to the contractor which is partially followed at site.</li> <li>PPEs are partially addressed.</li> <li>Construction camp is confined and secured by boundary fencing.</li> <li>Sanitation facility is improved in the camp site.</li> <li>Site safety signage is placed in the camp site.</li> </ul>	<ul style="list-style-type: none"> <li>Waste management yet to be implemented in the camp site.</li> <li>No first aid box is available at the site.</li> <li>Tool box meeting is not conducted at site to educate the workers.</li> <li>Poor implementation of safety measures for COVID-19 at construction sites.</li> </ul>	Contractor to appoint an EHS nodal person and focus on OHS training, slope protection, waste management and pollution control.
<b>LGED W6</b>	<ul style="list-style-type: none"> <li>Hazardous materials including fuel drums are stored in the labor shed where no fire extinguisher is kept to put out the fire. Fire protection measures should be arranged immediately in the fuel storage site.</li> <li>Kitchen wastes are still disposed openly in the construction site.</li> <li>Poor implementation of safety measures for COVID-19 at construction sites.</li> <li>Emergency procedure is still not followed.</li> </ul>	<ul style="list-style-type: none"> <li>Hazardous materials are removed. Fire protection measures are provided.</li> <li>No more kitchen wastes in the site.</li> <li>Implementation of safety measures for COVID-19 is improved.</li> </ul>	<ul style="list-style-type: none"> <li>Poor implementation of safety measures for COVID-19 at construction sites.</li> <li>Emergency procedure for accident, fire incident is not maintained at the site.</li> <li>Fall protection is still unavailable in the site.</li> <li>Emergency procedure is not followed.</li> </ul>	Works almost completed. Contractor to focus on Health and Safety plan to improve their construction practice.
<b>LGED W9</b>	<ul style="list-style-type: none"> <li>Drainage congestion is a major concern for Nilah Burmese GPS since most of the construction yard was inundated during monsoon season.</li> <li>Labor shed is still seen in the school building which to be relocated immediately.</li> <li>Kitchen wastes are still disposed openly in the construction site.</li> <li>No electric safety was ensured in the site where electric wire was found in water which may cause accident.</li> </ul>	<ul style="list-style-type: none"> <li>Drainage congestion situation is improved.</li> <li>Labor shed is relocated.</li> <li>No more kitchen wastes in the site.</li> <li>Implementation of safety measures for COVID-19 is improved.</li> <li>Electric safety issue is addressed.</li> </ul>	<ul style="list-style-type: none"> <li>Poor implementation of safety measures for COVID-19 at construction sites.</li> <li>Emergency procedure for accident, fire incident is not maintained at the site.</li> <li>Fall protection is still unavailable in the site.</li> <li>Emergency procedure is not followed.</li> </ul>	Works almost completed. Contractor to focus on OHS training, slope protection, waste management and pollution control.
<b>LGED W3</b>	<ul style="list-style-type: none"> <li>Environmental focal person yet to appoint to oversee EMP implementation.</li> <li>Site specific EMP yet to be prepared by contractor and approved by the PD.</li> </ul>	<ul style="list-style-type: none"> <li>EMP is prepared by the contractor and approved by the PD.</li> <li>Implementation of safety measures for COVID-19 is improved.</li> </ul>	<ul style="list-style-type: none"> <li>Waste management yet to be implemented in the camp site.</li> <li>No first aid box is available at the site.</li> </ul>	Contractor to appoint an EHS nodal person and focus on OHS training, slope

Package	Major issues identified during 6th monitoring period (Jan-Jun 21)	Issues addressed during 7 <sup>th</sup> monitoring period (Jul-Dec 21)	New Issues identified during 7 <sup>th</sup> monitoring period (Jul-Dec 21)	Comments
	<ul style="list-style-type: none"> <li>Poor implementation of safety measures for COVID-19 at construction sites.</li> <li>Dust resulting from construction work.</li> <li>Emergency procedure for accident, fire incident is not maintained at the site.</li> <li>Tool box meeting is not conducted at site to educate the workers.</li> </ul>	<ul style="list-style-type: none"> <li>Emergency procedure has been improved including accident, fire incident etc.</li> </ul>	<ul style="list-style-type: none"> <li>Tool box meeting is not conducted at site to educate the workers.</li> </ul>	protection, waste management and pollution control.
<b>LGED W5</b>	<ul style="list-style-type: none"> <li>Environmental focal person yet to appoint to oversee EMP implementation.</li> <li>Site specific EMP yet to be prepared by contractor and approved by the PD.</li> <li>NOC from Forest Department has yet to be obtained.</li> <li>Poor implementation of safety measures for COVID-19 at construction sites.</li> <li>Dust is being occurred due to irregular dust suppression measure.</li> <li>Emergency procedure for accident, fire incident is not maintained at the site.</li> <li>Tool box meeting is not conducted at site to educate the workers.</li> </ul>	<ul style="list-style-type: none"> <li>EMP is prepared by the contractor and approved by the PD.</li> <li>Implementation of safety measures for COVID-19 is improved.</li> <li>Emergency procedure has been improved including accident, fire incident etc.</li> </ul>	<ul style="list-style-type: none"> <li>Waste management yet to be implemented in the camp site.</li> <li>No first aid box is available at the site.</li> <li>Tool box meeting is not conducted at site to educate the workers.</li> </ul>	Contractor to appoint an EHS nodal person and focus on OHS training, slope protection, waste management and pollution control.
<b>LGED- W1B, W4D, W4C, W8, W19, W20 and W21-</b> Construction is completed and the work site is reinstated prior to leaving the construction sites.				



**Figure 9 Safeguards status at various sites (found as partially to fully satisfactory)**



## 6 Performance Indicators

82. 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 19** and performance indicators in **Table 20**, some photographs of site visits where information collection through onsite training with workers were done are presented in **Figure 10**.



Figure 10 Training and information collection from various subprojects

**Table 19 H&S Performance indicators of all subprojects**

Environmental Safeguards Questions	DPHE										LGED							
	W3	W4	W5	W9 A	W9 B	W1 1	W1 2A	W1 2B	W1 8	W19	W3	W5	W6	W9	W1 A	W2 A	W2 B	W6 A
1. Sensitive receptors adjacent to the site? (i.e. residential, schools/learning center, health care center, daycare...)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2. Are the workers aware of the EMP?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
3. Occupational Health and Safety:																		
3.1 Is there a designated person responsible for ensuring safe working practices? Are the workers aware?	Y	Y	Y	Y	N	N	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y
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	Y	N	Y	N	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	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	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	Y	Y	Y	Y	Y
3.6 Are there any hazardous materials? Are they stored and handled appropriately?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
3.7 Are workers exposed to risks from working at height? If yes, are the workers using harnesses (fall protection equipment)?	N	N	N	N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	N	N	N	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	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	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	N	N	N	N	N
3.11 What medical facilities are made available for the workers?	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Labor Camps:																		
3.12 What toilet and washing facilities are provided?	Y	Y	Y	Y	Y	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	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	Y	Y	Y	Y	Y
Emergency Procedures:																		
3.15 Are any procedures in place in case of an injury on site?	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
3.16 Is there a first aid kit available on site?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
3.17 Are any procedures in place for chlorine leak, oil spills?	N	N	N	N	N	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?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
4. Grievance Redress Mechanism (GRM):																		
4.1 Are the names and contact information posted for possible complaints?	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N
4.2 Is there a log book available on site?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
5. Housekeeping:																		
5.1 Did you observe examples of poor housekeeping? (i.e. empty containers scattered, stagnation of water from improper disposal of solid waste?)	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N

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

\*\*PPEs are partially used in all site

\*\*\* F= First Aid boxes are available on site

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

**Table 20 Mitigation effectiveness rating for all subprojects (deduced from consultants' observation)**

Sl. No.	Package No.	Q1 (Jul – Sep 18)	Q2 (Oct – Dec 18)	Q3 (Jan – Mar 19)	Q4 (Apr – Jun 19)	Q5 (Jul – Sep 19)	Q6 (Oct – Dec 19)	Q7 (Jan – Mar 20)	Q8 (Apr – Jun 20)	Q9 (Jul – Sep 20)	Q10 (Oct – Dec 20)	Q11 (Jan – Mar 21)	Q12 (Apr – Jun 21)	Q13 (Jul – Sep 21)	Q14 (Oct – Dec 21)	Overall Score
<b>DPHE</b>																
01	EAP/DPHE/W1	Construction completed														
02	EAP/DPHE/W2	Construction completed														
03	EAP/DPHE/W3				3	3	3	4	4	4	4	4	4	4	4	3.7
04	EAP/DPHE/W4				2	3	3	3	3	3	3	4	4	4	4	3.2
05	EAP/DPHE/W5					2	3	4	4	4	4	4	4	4	4	3.7
06	EAP/DPHE/W9A									2	2	4	4	4	4	3.3
07	EAP/DPHE/W9B								2	2	3	3	3	3	3	2.7
08	EAP/DPHE/W10							3	3	4	4	4	4	4	4	3.8
09	EAP/DPHE/W11										3	3	3	3	4	3.2
10	EAP/DPHE/W12A										3	3	3	3	4	3.2
11	EAP/DPHE/W13	Construction completed														
12	EAP/DPHE/W14	Construction completed														
13	EAP/DPHE/W15	Construction completed														
14	EAP/DPHE/W18										2	3	3	3	4	3
15	EAP/DPHE/W19											3	3	4	4	3.5
<b>LGED</b>																
01	EAP/LGED/OCB-N/W6		1	2	3	3	4	4	4	4	4	4	4	4	4	3.4
02	EAP/LGED/OCB-N/W8	Construction completed														
03	EAP/LGED/OCB-N/W9			1	2	3	4	4	3	3	3	4	4	4	4	3.2
04	EAP/LGED/OCB-N/W19	Construction completed														
06	EAP/LGED/OCB-N/W4C								2	3	3	4	4	4	4	3.3
07	EAP/LGED/OCB-N/W4D	Construction completed														
08	EAP/LGED/OCB-N/W20	Construction completed														
09	EAP/LGED/OCB-N/W21	Construction completed														
10	EAP/LGED/OCB-N/W1A										2	3	3	3	3	2.8
11	EAP/LGED/OCB-N/W1B	Construction completed														
12	EAP/LGED/OCB-N/W2A										2	3	3	3	3	2.6
12	EAP/LGED/OCB-N/W2B											2	3	3	3	
12	EAP/LGED/OCB-N/W6A											2	3	3	3	
13	EAP/LGED/OCB-N/W3					2	3	3	4	3	3	3	3	3	3	3
14	EAP/LGED/OCB-N/W5					2	3	3	3	3	3	3	3	3	3	2.9
Note: Mitigation Effectiveness Rating Criteria																
1		2			3			4			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 Conclusion and Recommendations

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

84. Due to accessibility issues attributed to restrictions associated with COVID-19, implementation of environmental safeguards is hindered, causes increasing trend in noncompliance issues. In addition, inadequate safety measures are arranged to encounter COVID-19 in the construction sites. Onsite regular COVID-19 precautions should be maintained by the contractors regularly.

85. There were instances that can be considered as poor implementation of the EMPs due to construction works of EAP. To address these concerns, a number of recommendations were made to improve the EMP implementation. The actions recommended have been implemented, ongoing, and to be monitored. **Table 21** presents the environmental concerns along with the corrective actions.

**Table 21 Environmental issues and corrective action plan**





No.	Environmental Issues	Corrective Action	Component	Requirement	Responsibility
1	Obtaining legal permits (ECC) are still under process	LGED require to expedite the process of securing the permits and ECC from DOE.	LGED	Clearance	LGED
2	None of the contractors has appointed EHSO at the project sites	Appoint qualified EHSO to guide the contractors in the preparation and implementation of site-specific EMPs and follow up EHS issues with EAs, DMSC, and ADB. The EAs need to pay attention to improve the implementation of the EMPs by the contractors.	DPHE/LGED	EHS Officer	DPHE/LGED
3	Occupational safety and health measures are partially addressed at construction sites in EAP. COVID-19 response on health and safety guidance is also partially followed in EAP sites.	Appropriate use of health and safety equipment, PPEs, and monitoring and documentation of OHS hazards at work and camp sites. Technical Guidance for Social and Institutional Containment and Prevention of Pandemic COVID-19 Infection by GOB and ADB has to be complied with. Monitoring of compliance by contractors need to be strictly enforced.	DPHE/LGED	Compliance to H&S Plan and guidelines for COVID-19	Contractors
4	Perform quarterly air quality, noise measurement, surface water quality, and ground water testing and analysis to guarantee that environmental safeguard criteria are met.	Appoint a Testing Firm with laboratory facilities as per DoE to perform the specified tests.	DPHE	Specified environmental tests	Contractors

86. A number of recommendations were made in the 6<sup>th</sup> EMR for the construction contractors to improve the environmental safeguards implementation. A summary on compliances to the recommendations made by the contractors is provided in **Table 22**.

**Table 22: Compliances status of recommendations made in the 6<sup>th</sup> EMR**

Recommended Corrective Action Measures	Implementation Status
Finalize the design of access road (EAP/LGED/W5) and immediately share with the TA consultant (environmental Specialist) so that EMP and IEE can be prepared accordingly.	Complied. The IEE has been prepared covering required information and disclosed.



Recommended Corrective Action Measures		Implementation Status	
To improve the Health & Safety condition of the site, contractor should use the ADB recommended checklist (to be shared by ADB TA consultant) on weekly basis.		Complied. Recommended instructions duly followed in the sites.	
Waterlogging problems due to changes of stream flow that occurred along the cyclone shelter in Teknaf (LGED/W9) causing inundation to the adjacent land.		Complied. A box culvert is built to drain the water smoothly.	
Seven indicative IEEs for DPHE component (surface water supply and waste management packages) require revisions for disclosure on the ADB website.		Complied. The IEE has been prepared covering required information and submitted to the ADB for disclosure.	
Non-compliances recorded	Compliance Status	Photo before rectification	Photo after rectification
Soil erosion in package LGED/W-1B, Location: Camp 2W and 2E.	Complied. After rainy season, road side protective work has been done. (Latest image included)		
Huge amount of construction wastes piled up at the package LGED/W9	Complied. The Cyclone Shelters of package (LGED/W9) is almost finished & finishing works ongoing. The sites have no issue regarding the subject.		

#### Reporting Information:

Revision	Description	Originator	Reporting Contribution
00	Seventh Semi-Annual Environmental Monitoring Report (July-December 2021)	Md. Jubaer Arefin	1. Md. Jubaer Arefin, Environment Specialist (TA Consultant, ADB) 2. Md. Rashedul Hasan, Assistant Engineer, LGED (LGED Component) 3. Md. Zahangir Alam, Team Leader, Consultant (DPHE Component)

## Appendix I: Environmental Approval for DPHE/W19

শেখ হাসিনার নির্দেশ  
জলবায়ু সহিষ্ণু বাংলাদেশ



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

Memo No: 22.02.0000.018.72.081.21-140

Date: October 10, 2021

**Subject: Approval of Environmental Impact Assessment (EIA) Report for Design, Supply, Install, Test, Commission, Operation, Maintenance of Fecal Sludge and Segregated Solid Waste Treatment Plant by the Department of Public Health Engineering (EAP/DPPHE/W-19)**

Ref: Your Application dated 29/08/2021

With reference to the above, the Department of Environment (DoE) hereby approves Environmental Impact Assessment (EIA) Report for Design, Supply, Install, Test, Commission, Operation, Maintenance of Fecal Sludge and Segregated Solid Waste Treatment Plant by the Department of Public Health Engineering (EAP/DPPHE/W-19) at Ukhiya, Cox'sbazar subject to the compliance of terms and conditions and environmental safeguards as under:

1. The EIA approval is valid for Design, Supply, Install, Test, Commission, Operation and Maintenance of Fecal Sludge and Segregated Solid Waste Treatment Plant (Omni Processor).
2. The detailed design and layout plan should be maintained as per EIA report. In case of any changes in design the proponent must obtain consent from DoE.
3. Project Proponent may undertake activities for land development and infrastructural development of the project.
4. Project Proponent may open L/C (Letter of Credit) for importing machineries for the project which shall also include machineries relating to waste treatment plant and other pollution control devices.
5. The activity under construction of the project shall not release any pollutant that affect human health or will have damaging impact on the environment or natural resources or ecosystem.
6. Proper and adequate mitigation measures shall be ensured throughout preparation and construction period of the proposed project activities.
7. Any hill, ecologically critical area, wetlands and other environmentally, religious and archeologically sensitive places shall be kept protected.
8. Environment friendly construction and development practices shall be followed that minimize loss of habitats and fish breeding, feeding & nursery sites.
9. Construction works shall be restricted to day time hours so as to avoid/mitigate the disturbance of local lives as well as implementation schedules of the works shall be notified in advance to nearby residents.
10. Proper and adequate sanitation facilities shall be ensured in labor camps throughout the proposed project period.
11. In order to control noise pollution, vehicles & equipment shall undergo regular maintenance; working during sensitive hours and locating machinery close to sensitive receptor shall be avoided.
12. No solid waste can be burnt in the project area.

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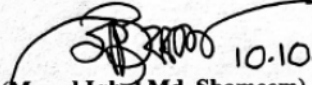
13. Proper and adequate on-site precautionary measures and safety measures shall be ensured so that no habitat of any flora and fauna would be endangered or destroyed.
14. All the required mitigation measures suggested in the EIA report along with the emergency response plan are to be strictly implemented and kept operative/functioning on a continuous basis.
15. To control dust, spraying of water over the earthen materials should be carried out from time to time.
16. Storage area for soils and other construction materials shall be carefully selected to avoid disturbance of the natural drainage.
17. Adequate considerations should be given to facilitate drainage system for run-off water from rain/tidal surge.
18. Adequate facilities should be ensured for silt trap to avoid clogging of drain/canal/water bodies.
19. Construction material should be properly disposed off after the construction work is over.
20. As described in the EIA report, environmental monitoring should be strictly followed and monitoring report should be shared with DoE to ensure the environmental management properly.
21. All activities (pre-construction, construction and post-construction stage) should be implemented according to EMP clearly listed in the EIA report.
22. Air, water and social data should be monitored regularly with a network monitoring system with a view to assess the natural quality of the surroundings and other fragile ecosystem and report of monitoring results should be submitted to Cox'sbazar District Office, Cox'sbazar and Head Office of the Department of Environment simultaneously.
23. There should be regularly disclosure of the report through workshops and websites and responses should be taken care accordingly.
24. The project authority should provide all sort of logistics support to DOE and other relevant agencies for monitoring environment related items/events
25. Conduct stakeholder meetings on regular basis for better performance the project as a whole
26. The project authority shall submit a detail work plan with time schedule of development activities at least 7 (seven) days ahead of the work commences in the field to the Cox'sbazar District Office, Cox'sbazar and Head Office of the Department of Environment simultaneously.
27. Environmental Monitoring Reports according to specific format specified in the EIA Report shall be made available simultaneously to Cox'sbazar District Office, Cox'sbazar and Head Office of the Department of Environment on a quarterly basis during the construction period of the project.
28. The following records must be kept in respect of any samples required to be collected for the purposes of environmental monitoring activities :
  - (a) the date(s) on which the sample was taken;
  - (b) the time(s) at which the sample was collected;
  - (c) the point at which the sample was taken; and
  - (d) the name of the person who collected the sample.
29. The results of any monitoring required to be conducted under this EIA report must be recorded.
30. In case of any emergency, the following information shall immediately be reported to Cox'sbazar District Office, Cox'sbazar and Head Office of the Department of Environment (simultaneously)
  - a) Nature of incident (fire, accident, collision, land slide etc.)
  - b) Personnel affected (injured, missing, fatalities etc.)
  - c) Emergency support available and its location (standby transport, medical facilities)
  - d) Weather conditions



শেখ হাসিনার নির্দেশ  
জলবায়ু সহিষ্ণু বাংলাদেশ

- e) Current operations (abandoning the site, firefighting, etc.)
31. The project authority or its employees must notify the Department of Environment of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident.
  32. All pollution incidents shall be reported immediately and simultaneously to the Cox'sbazar District Office, Cox'sbazar and Head Office of the Department of Environment in Dhaka.
  33. No activity of cutting/razing/ dressing of hill is endorsed under this approval of EIA.
  34. Re-vegetation and replantation under green belt activities shall be undertaken in consultation with the Forest Department according to those mentioned in the EIA report.
  35. Violation of any of the above conditions shall render this approval void.
  36. Without obtaining Environmental Clearance Certificate, the proponent shall not start operation of the project.
  37. This EIA approval is valid for one year from the date of issuance and the project authority shall apply for renewal to the Cox'sbazar District Office, Cox'sbazar and Head Office of the Department of Environment in Dhaka.

This EIA approval has been issued with the approval of the appropriate authority.

  
(Masud Iqbal Md. Shameem)

Director (Environmental Clearance)  
Phone # 8181673

**Project Director**

Design, Supply, Install, Test, Commission, Operation and Maintenance of Fecal Sludge and Segregated Solid Waste Treatment Plant  
DPHE, Cox'sbazar.

**Copy Forwarded to:**

1. Secretary, Ministry of Environment, Forests and Climate Change, Bangladesh Secretariat, Dhaka.
2. Director, Department of Environment, Chattogram Regional Office, Chattogram.
3. Deputy Director, Department of Environment, Cox'sbazar District Office, Cox'sbazar.
4. Assistant Director, Office of the Director General, Department of Environment, Dhaka.



## Appendix II: Site Photographs

ADB review mission during reported period (July-December 2021):



**DPHE component:**





**LGED component:**



## Appendix III: Site Visit Report

<b>EAP-DPHE</b>	Date: 22/08/2021	Time:11:00 AM -01:40 PM
<b>Environmental Group Alignment Checklist</b>	Client Personnel:	
	Consultant Personnel:	Mr.Anowar
	Contractor Personnel:	
Locations inspected on this tour:	Kotopalong, Ukihya, Cox's Bazar	

Issues	Location	Present Status/ Photo Ref	Required Action and Description Timeline	First time/ Repeated Problem
Spoil pile along with pipe line	Sha Pori Police station, Ukihya, Cox's Bazar	Heavy hill stone found when cutting the trench of pipeline.( Image-01)	Removed the heavy hill stone by heavy vibrator drill machine and then pipe has been placed as per design.(Image-2)	
Excess Dust	Sha Pori Police station, Ukihya, Cox's Bazar	Due to rain no dust observed in the visiting period		
Excess Noise				
Equipment exhaust				
Pedestrian hazard				
Damage to nearby drains				
Condition of Toilet for workers				
Drain obstruction				
Ponding/waterlogging		Due to rain too much dirty stagnant water observed in the mainline area, which causes mosquito breeding (Image-05, 09).	Need to clean the area and use mosquito killer spray urgently. Dewatering properly.	
Dirt deposited on road way by trucks		Cutting earth obstructed for drain(Image-11)	Need to remove as soon as possible	
Dirt/muddy in roadway		Dirt deposited on roadway (Image-07)	Need to remove as soon as possible	
Leaky water tap				



Material stockpiles not covered				
Drain obstruction				
<b><u>Other:</u></b> <b><u>Housekeeping</u></b>		Various kinds of waste thrown here and there, which pollute the environment, (Image-03,04&06)	Need to take proper action urgently.	

Attach Photos:



**Image-01, Spoil pile along pipe line**



**Image-02, Remove spoil pile**



**Image-03, Various kinds of waste thrown here and there, which pollute the environment**



**Image-04, Various kinds of waste thrown here and there, which pollute the environment**



**Image-05, Too much dirty stagnant water observed in the mainline, which causes mosquito breeding**



**Image-06, Various kinds of waste thrown here and there, which pollute the environment.**





Image-07, Dirt deposited on roadway



Image-08, Dressing caveated earth for laying pipe



Image-09, Heavy water logging



Image-10, Remove water by mud pump



**Image-11, P369, Cutting earth obstructed for drain**



**Image-12,Dirt deposited on roadway**



**Soil remove for over the pipe line by heavy rain**



**Soil remove for over the pipe line by heavy rain**

## Appendix IV: Compliance Monitoring Checklist

### Access Road and Internal Road Packages (LGED Component):

Sl. No.	Issues	Location	Compliance status			Remarks
			C	PC	NC	
A. Construction Camp and Site Office						
1	Locate the construction camps at areas which are acceptable from environmental, cultural or social point of view		√			
2	Environment, Health and Safety Officer designated				√	Need to deploy. Contractor not interested.
3	Site Specific Environmental Management Plan (SEMP) in site office		√			
4	Health and Safety Plan in site office		√			
5	First aid box with first aiding agents in site office		√			
6	Fire extinguisher/ protective arrangements		√			
7	Emergency contacts in case of any incident		√			
8	Incident register book		√			
9	Complain/ visitor's comment book		√			
10	Installation of materials and equipment storage		√			
11	Separate storage of fuel and lubricant			√		Need improvement. Contractor not interested. Due to small quantity is used.
12	Installation of safety signboards		√			
13	Installation of fences to restrict public access into the camp		√			
B. Labor shed						
1	Establishment of labor shed		√			
2	Hygiene and sanitation facilities		√			
3	Bin for collecting garbage and food waste with disposal system		√			
4	Wastewater disposal system			√		Need improvement.
5	Special facilities for female labor (dress-up, breast feeding, etc.)			√		Need improvement.
6	Measures against mosquito, insects, snakes etc.		√			
C. Roads Safety and Traffic Management						
1	Consult with community on schedule of construction activity		√			
2	Implementation of traffic management plan approved by PD				√	Need to prepare.
3	Observation of traffic regulations, installation of traffic signs along the construction sites			√		Need improvement.
4	Install bold diversion signs to be visible even at night, and provide flag persons to warn of dangerous conditions (24 hours/as necessary)			√		Need improvement.
5	Provide sufficient lighting at night within and in the vicinity of construction sites		√			
D. Occupational Health and Safety						
1	Implementation of H&S plan			√		Need improvement

Sl. No.	Issues	Location	Compliance status			Remarks
			C	PC	NC	
2	Personal Protective Equipment (safety boots, helmets, gloves, protective clothing, breathing mask, goggles and ear protection)			√		Need improvement. Contractor as well as labor negligence. More training and supervision is needed.
3	Fall prevention and protection measures to prevent the hazard of falling more than 2 meters			√		Need improvement.
4	Ensure no involvement of child labour		√			
5	Installation of safety signboards at the sites		√			
6	Installation of reversing signals on the construction vehicles			√		Need improvement.
7	Confined the construction sites to restrict public access		√			
8	Accident/ Incident records and steps taken		√			
9	Tool box talk on OHS, PPE and others before starting construction activity		√			
<b>E. Environmental Quality</b>						
1	All site personnel have a basic level of environmental awareness training		√			
2	Implementation of waste management plan approved by Consultant/PMU			√		Need improvement.
3	Measures for construction waste/ debris management			√		Need improvement.
4	Undertake housekeeping at all sites and camps to ensure cleanliness		√			
5	Prohibit burning of any kind of waste		√			
6	Air quality monitoring and dust controlling measures			√		Need improvement. inadequate water spraying.
7	Noise level monitoring and controlling measures		√			
8	Effluents not to be disposed of directly into natural waters, but via settling basins to allow suspended sediment to settle out			√		Need improvement.
9	Management of excavated soil			√		Need improvement.
10	Restoration of any utility services		√			
11	Any private property damage		√			
12	Locate hot mix and batching plant at environmental and socially acceptable area		√			
13	Provide dust extraction systems for the hot mix and batching plant		√			
14	Prohibit disposal of bitumen in running or dry streambeds or in ditches		√			
<b>F. Protection for Biodiversity</b>						
1	Awareness raising program for managing biodiversity (wildlife and vegetation)			√		Need to conduct
2	Strictly prohibit hunting of birds and other animals in the forest		√			
3	Removal of trees require prior approval of PMU/Consultant/FD etc.		√			
4	Supply gas for cooking to avoid tree felling		√			
5	Taking care not to block the routes with equipment of temporary storage		√			
6	No construction related camp, equipment and material storage at the crossing site		√			
7	Contractor needs to be fully aware when working in vicinity of elephant travel routes		√			



### Multi-purpose Cyclone Shelter Packages- (LGED Component):

Sl. No.	Issues	Location	1Compliance status			Remarks
			C	PC	NC	
A. Construction Camp and Site Office						
1	Locate the construction camps at areas which are acceptable from environmental, cultural or social point of view		√			
2	Environment, Health and Safety Officer designated			√		Contractor to deploy.
3	Site Specific Environmental Management Plan (SEMP) in site office		√			
4	Health and Safety Plan in site office		√			
5	First aid box with first aiding agents in site office		√			
6	Fire extinguisher/ protective arrangements		√			
7	Emergency contacts in case of any incident		√			
8	Incident register book		√			
9	Complain/ visitor's comment book		√			
10	Installation of materials and equipment storage		√			
11	Separate storage of fuel and lubricant		√			
12	Installation of safety signboards		√			
13	Installation of fences to restrict public access into the camp		√			
B. Labor shed						
1	Establishment of labor shed		√			
2	Hygiene and sanitation facilities		√			
3	Bin for collecting garbage and food waste with disposal system		√			
4	Wastewater disposal system		√			
5	Special facilities for female labor (dress-up, breast feeding, etc.)		√			
6	Measures against mosquito, insects, snakes etc.		√			
C. Roads Safety and Traffic Management						
1	Consult with community on schedule of construction activity		√			
2	Implementation of traffic management plan approved by PD			√		
3	Observation of traffic regulations, installation of traffic signs along the construction sites		√			
4	Install bold diversion signs to be visible even at night, and provide flag persons to warn of dangerous conditions (24 hours/as necessary)		√			
5	Provide sufficient lighting at night within and in the vicinity of construction sites		√			
D. Occupational Health and Safety						
1	Implementation of H&S plan		√			
2	Personal Protective Equipment (safety boots, helmets, gloves, protective clothing, breathing mask, goggles and ear protection)		√			
3	Fall prevention and protection measures to prevent the hazard of falling more than 2 meters		√			
4	Ensure no involvement of child labour		√			

5	Installation of safety signboards at the sites		√			
6	Installation of reversing signals on the construction vehicles		√			
7	Confined the construction sites to restrict public access		√			
8	Accident/ Incident records and steps taken		√			
9	Tool box talk on OHS, PPE and others before starting construction activity		√			
E. Environmental Quality						
1	All site personnel have a basic level of environmental awareness training		√			
2	Implementation of waste management plan approved by Consultant/PMU			√		Need to improve
3	Measures for construction waste/ debris management		√			
4	Undertake housekeeping at all sites and camps to ensure cleanliness		√			
5	Prohibit burning of any kind of waste		√			
6	Air quality monitoring and dust controlling measures		√			
7	Noise level monitoring and controlling measures		√			
8	Effluents not to be disposed of directly into natural waters, but via settling basins to allow suspended sediment to settle out		√			
9	Management of excavated soil		√			
10	Restoration of any utility services		√			
11	Any private property damage		√			
12	Locate hot mix and batching plant at environmental and socially acceptable area		√			
13	Provide dust extraction systems for the hot mix and batching plant		√			
14	Prohibit disposal of bitumen in running or dry streambeds or in ditches		√			
F. Protection for Biodiversity						
1	Awareness raising program for managing biodiversity (wildlife and vegetation)			√		Need to conduct
2	Strictly prohibit hunting of birds and other animals in the forest		√			
3	Removal of trees require prior approval of PMU/Consultant/FD etc.		√			
4	Supply gas for cooking to avoid tree felling		√			
5	Taking care not to block the routes with equipment of temporary storage		√			
6	No construction related camp, equipment and material storage at the crossing site		√			
7	Contractor needs to be fully aware when working in vicinity of elephant travel routes		√			