

# **Environmental Monitoring Report**

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**PUBLIC**

**Project No. 49329-006  
Semestral Report (July-December 2023)  
January 2024**

**Bangladesh: Second City Region Development Project**

Prepared by the Local Government Engineering Department (LGED) under Ministry of Local Government Division (LGD), Government of Bangladesh for the Asian Development Bank (ADB).

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## LIST OF ABBREVIATIONS:

ADB	Asian Development Bank
AIDS	Acute Immune Deficiency Symptom
BOQ	Bill of Quantities
BRM	Bangladesh Resident Mission
C-ESMP	Contractor's Environment and Social Management Plan
COVID	Corona Virus Affected Disease
CRDP	City Region Development Project
CRDP-2	Second City Region Development Project
DDR	Diligence Reports
DMP	Drainage Master Plan
DOE	Department of Environment
DPD	Deputy Project Director
EARF	Environmental Assessment and Review Framework
ECR	Environmental Conservation Rule
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ES	Environment Safeguard
ESHS	Environmental and Social Health and Safety
ESIA	Environment and Social Impact Assessment
ESMP	Environment and Social Management Plan
FE	Field Engineer
FGD	Focus Group Discussion
GCC	Gazipur City Corporation
GIS	Geographic Information System
GoB	Government of Bangladesh
GRM	Grievance Redress Mechanism
H&S	Health and Safety
HH	House Hold
HIV	Human Immune Deficiency Virus
IA	Implementing Agencies
ICCD	Institutional Capacity and Community Development
IEE	Initial Environmental Examination
KCC	Khulna City Corporation
KSTA	Knowledge Support for Technical Assistance
LGD	Local Government Division
LGED	Local Government Engineering Department
O&M	Operation and Maintenance
OHS	Occupational Health and Safety
PD	Project Director
PDS	Preparation, Design, And Supervision
PDS-2	Second Preparation, Design and Supervision
PIU	Project Implementation Unit
PMCU	Project Management Coordination Unit
PPMS	Project Performance Monitoring System
PPTA	Project Preparatory Technical Assistance
PSC	Project Steering Committee

QPR	Quarterly Progress Report
RDEC	Rural Development Engineering Centre
ROW	Right of Way
RRP	Report and Recommendation of President
RSTP	Revised Strategic Transport Plan
RTC	Regional Training Centre
SEMP	Site Specific Environmental Management Plans
SEMR	Semi-annual Environmental Monitoring Report
SPS	Safeguard Policy Statement
SWM	Solid Waste Management
TA	Technical Assistance
USD	United States Dollar

# Executive Summary

## A. Introduction

The City Region Development Project aimed at enhancing growth potential and improving environmental and economic sustainability of the target city regions through effective regional urban planning. The target city regions of the Project are Dhaka City Region and Khulna City Region. The Project supported the development of key urban infrastructure, focusing on urban environment and local economic development. The Project also supported the Government in its efforts to improve regional and urban planning, and to strengthen municipal management and the capacity for effective and sustainable urban development.

The Local Government Engineering Department (LGED) is the executing agency of the Project under the Ministry of Local Government, Rural Development and Cooperatives. Sub-projects are implemented by the project Implementing Units (PIUs). The PIUs are: Gazipur City Corporation (GCC), Khulna City Corporation (KCC), and the Pourashavas as well as Executive Engineer Office of LGED under the Project. Project Management and Coordination Unit (PMCU), based at the LGED Headquarters, is responsible for the overall management, co-ordination and implementation of the Project.

The scope of this report is to summarize and analyze the performance of the environmental works of the contracted subprojects, and to verify the environmental requirements that are specified in the contract documents are adequately addressed.

**Environmental Category of Subprojects:** The CRDP-2 improvement works have been divided into 35 subproject packages for the convenience of project implementation. These 35 packages are classified into category B as per EARF (ADB SPS, 2009). As per EARF, the project will not include subprojects prompting Category A. Thus, the Solid Waste Management (SWM) subproject in KCC has been classified as Category B per ADB SPS, 2009. Nonetheless, the SWM subproject falls in Category Red (as per ECR-2023) and will require EIA. Initial Environmental Examinations (IEEs) of all the subprojects except the SWM have been prepared with their respective EMP template considering all possible impacts due to implementation activities and their mitigation measures.

**Utilization of Consultancy Services:** In order to execute the necessary mitigation measures and to undertake monitoring activities, the PDS Consultant team is now fully in place. The procurement process for PDS-2 is completed, and ICCD consultants have already been deployed. The TA consultant has also been on board from November 2023.

**Safeguard Issues:** Road Safety Signs for all pedestrians are considered in all road design.

## B. Compliance Status with National Statutory Requirements

The DOE-issued Environmental Clearance Certificate to all subprojects under CRDP-2. All requirements of the Department of Environment (DoE) related to environmental clearance/renewal are generally being met, in particular, the underlined terms and conditions for Environmental Clearance Certificate. Besides monitoring and recording of subproject ambient air, water (surface and groundwater) quality and noise level, there are specific reporting conditions are to be satisfied. As regards the reporting conditions, Environmental Monitoring Reports shall be made available simultaneously to Head Quarters and respective Regional Offices of the Department of Environment on a quarterly basis during the whole period of the project. As regards the status on relevant GOB Permits, it is to note that the subproject schemes will be constructed within the Right-of- Way (RoW) and will not involve any potential tree removal, hence no prior permission is to be obtained from the forest department. However, the details of acquiring permits and NOC have been discussed in the

respective DDR reports.

### **C. Compliance Status with Environmental Loan Covenants**

The covenants to the loan agreement with ADB require that subprojects are designed, constructed, operated, and maintained in accordance with Borrower's Environmental Conservation Rule 1997, ADB's Safeguard Policy Statements (SPS, 2009) and EARF prepared for the Project and agreed between the Borrower and ADB. Other covenants written into the loan agreement related to disclosure, grievance redress and environmental safeguards and their status of compliances are described in a table of the main document.

### **D. Compliance Status with the Environmental Management Plan**

Environmental Safeguard Framework: EMPs and supporting criteria inclusive of environmental specifications for inclusion in construction contract tender documents provide the basis for monitoring compliance.

**Initial Environmental Examination (IEE)/Environmental Impact Assessment (EIA):** All 35 subprojects under CRDP-2 have been classified into category B as per EARF (ADB SPS, 2009). However, IEEs of all subproject packages, except the SWM one, have been prepared, and the said EIA for the SWM subproject (Red category subproject as per ECR-2023) has been prepared to meet the national requirement, not for the ADB requirement.

**Subproject Environmental Monitoring:** The system for environmental monitoring consists of observations using a checklist for comparison with contractor performance that reflects the requirements of the construction specifications. As a part of the monitoring program, field visits were undertaken regularly by PDS-2 consultants. Individual Environmental Consultant have also visited the sites for monitoring purpose to Araihasar W-01/02/03 on 26/12/2023 and Savar W-02/05/06 on 27/12/2023; Savar W-07 main, link-1 and link-2 on the same day in Dhaka region.

As regards the overall compliance with EMP, field observation demonstrates satisfactory status of implementation with environmental regards.

### **E. Approach and Methodology for Environmental Monitoring of the Project**

**Environmental Performance:** Environmental specifications reflect general construction requirements as identified in the subproject EMPs. Though costs of implementation of the environmental works (as per environmental specification) are considered the responsibility of the contractor and are part of the overall bid price, a provisional sum to cover environmental works is included in the bid price.

**Environmental Training / Capacity Building:** Capacity building is aimed at orientation and training of PIUs/contractor's staff in ADB's safeguards policy and management.

It is to note that 7 (seven) workshops on awareness campaign of SWM at KCC Ward level have been organized by ICCD. Based on the recommendation of ADB Mission and CRDP-2, ICCD organized to complete the total process of awareness campaign on SWM in 15 Wards of KCC during the period 19 December 2022 to 05 December 2023 to develop the awareness on Integrated Solid Waste Management among the members of the households of selected wards. The details of these orientation and training have been documented in section 10.

**Consideration of Climate Change Effects in CRDP-2:** As climate change is causing shifts in weather patterns, including increased frequency and intensity of extreme weather events such as storms, floods, and heatwaves, these changes pose significant challenges to the functioning and longevity of infrastructure systems. To this situation, climate change vulnerability and disaster risk assessment have been conducted for the subprojects under CRDP-2. Results of these assessment have been used to design the said subprojects.

## **F. Occupational Health Safety (OHS) issues and site security measures**

Occupational Health and Safety (OHS) covering site security measures, workers' health, site-specific OHS control measures undertaken at worksite /OHS monitoring checklist, PPE inventories, medical and first aid provision, OHS training covering toolbox meeting etc. has been included in Sec. VI. During this reporting period, implementation and monitoring of site-specific OHS measures at subproject sites have been undertaken using a checklist. However, completed task-specific OHS monitoring checklists as sample for subproject sites are included in the Annex 11. Further, as a part of OHS measures, it is required to record all environmental incidents that occur at the work site and be brought to the attention of the PDS-2 Environmental Consultant / PIU Focal person / Site Engineer for action to take. In this regard, a sample accident/incident/ near miss report Form has been provided to the contractor to keep recording incident and near miss (if any). It is worthwhile to point out here that no environmental incident/near miss was found to occur during this reporting period.

## **G. Monitoring of Environmental Impacts on Project Surroundings (Ambient Air, Water Quality and Noise Levels)**

In order to assess the base environmental quality of subproject surroundings, analysis of the ambient air, water quality and noise levels were conducted. The analytical results of the tested environmental parameters are found more or less within the standard limit set by DoE and Bangladesh Noise Pollution (Control) Rules, 2006. The details of the analytical results and interpretations thereof are provided inside the main report. Appended EMP compliance monitoring sample checklists (Appendix 4) including few random environmental compliance snap shots from field monitoring sites, and summary of field findings on EMP compliances (Appendix 5) may be seen for overall appraisal of environmental safeguard compliances.

## **H. Grievance Redress Mechanism**

The GRM provides redress for grievance arising from resettlement, compensation and environmental impact during subproject implementation. The Grievance Redress Committees (GRC), formed on June 07, 2020, is progressively complying with all aspects related to the GRM. The GRM among the local people are discussed at the Focus Group Discussion (FGD) meeting. The measures considered to publicize the GRM among the local people reside in the project area have been outlined inside the main report.

## **I. Complaints Received during Subproject Implementation**

No formal complaints were received from the community or from any individual of the community during this reporting period at the construction site.

## **J. Summary of Key Issues and Remedial Actions**

No complaint was received from the community or from any individual of the community at the construction sites. However, during monitoring field visits, in some instances poor initiative was noticed in suppressing dust pollution by spraying plentiful water on dry surfaces of construction sites. Taking into consideration this issue, contractor site engineer/supervisor was suggested to use dust suppression log chart to demonstrate routine spraying of water on dry surfaces and accordingly, the contractors are found to maintain dust suppression log chart at construction site. As example, such log charts are appended at the end of this report (Annex 6).

## **K. Project strategy against COVID-19 H&S Guidelines**

Project strategy against COVID-19 H&S Guidelines that have been shared by ADB during TPRM held on June 2020 and Status of COVID-19 guidelines implementation. To ensure the proper implementation of the recommended COVID-19 H&S protocols, staffs have been assigned both from PMU and from contractors. They are monitoring the COVID-19 H&S issues, using a template provided by BRM of ADB, in the construction sites. Some examples of monitoring records and photographs on preventive measures practicing at the worksite against spread of COVID-19 infection are displayed at the end of this report.

## **L. Conclusions and Recommendations**

Environmental mitigation measures related to subprojects are being implemented in line with the Environmental Safeguard Framework. Contractors are required to mitigate environmental adverse impacts, and monitoring is being conducted by the environmental specialists and PIU staff. The GRM has been outlined for being implementation with GRCs formed at local level. The Environmental Specialist will continue to work with PIUs and contractors to pursue improvement in subproject works. The time bound corrective action plan with recommendation for further improvement have been spelled out inside the main text.

# 1. INTRODUCTION

## A. Purpose of the Report

- 1 ***Loan effectiveness and PDS inception.*** ADB Loan was effective from 19 November 2019. PDS-2 incepted from November 2021. Implementation consultants joined the project in the beginning of 2020. Safeguard specialist was hired directly by the PMCU towards the beginning of 2019.
- 2 The Local Government Engineering Department (LGED) is the executing agency of the Project under the Ministry of Local Government, Rural Development and Cooperatives. Sub-projects are implemented by the project Implementing Units (PIUs). The PIUs are: Gazipur City Corporation, Khulna City Corporation, and the Pourashavas as well as Executive Engineer's Office of LGED under the Project. Project Management and Coordination Unit (PMCU), based at the LGED Headquarters, is responsible for the overall management, coordination and implementation of the Project.
- 3 The ADB's Safeguard Policy Statement (SPS 2009) in respect to information disclosure related to project safeguard documentation, where it has been stated that the borrower/client will submit semi-annual monitoring reports during construction for projects/subprojects.
- 4 This semi-annual report compiles environmental monitoring results to comply with the spirit of ADB policy to "enhance stakeholders' trust in and ability to engage with ADB, and thereby increase the development impact \*of projects+\*" in which disclosure of safeguard monitoring is a prominent aspect.

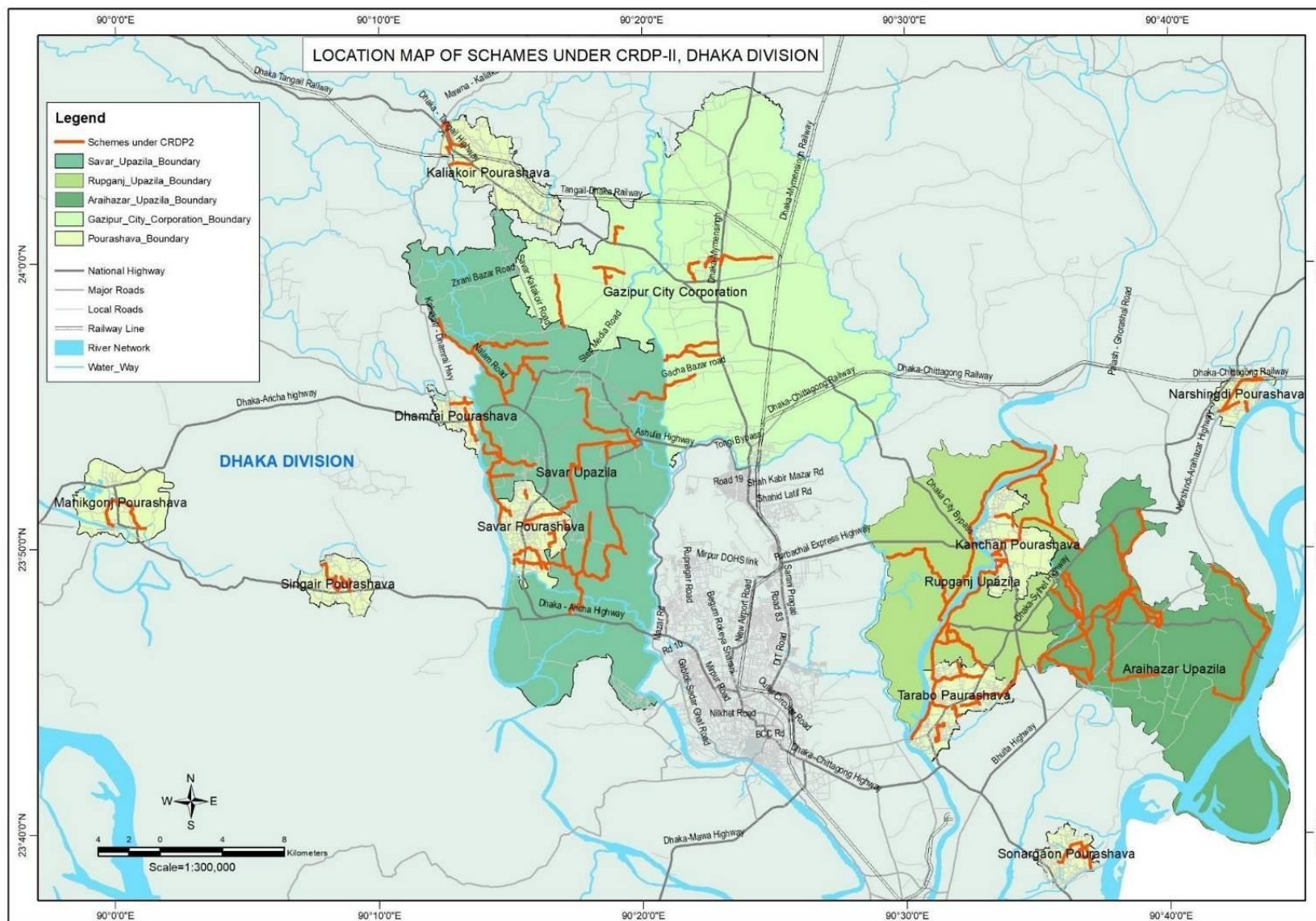
**Scope of Monitoring Report:** The scope of this report is to summarize and analyze the performance of the environmental works of the contracted subprojects, and to verify the environmental requirements that are specified in the contract documents are adequately addressed.

**Reporting Period:** 1<sup>st</sup> July 2023 to 31<sup>th</sup> December 2023

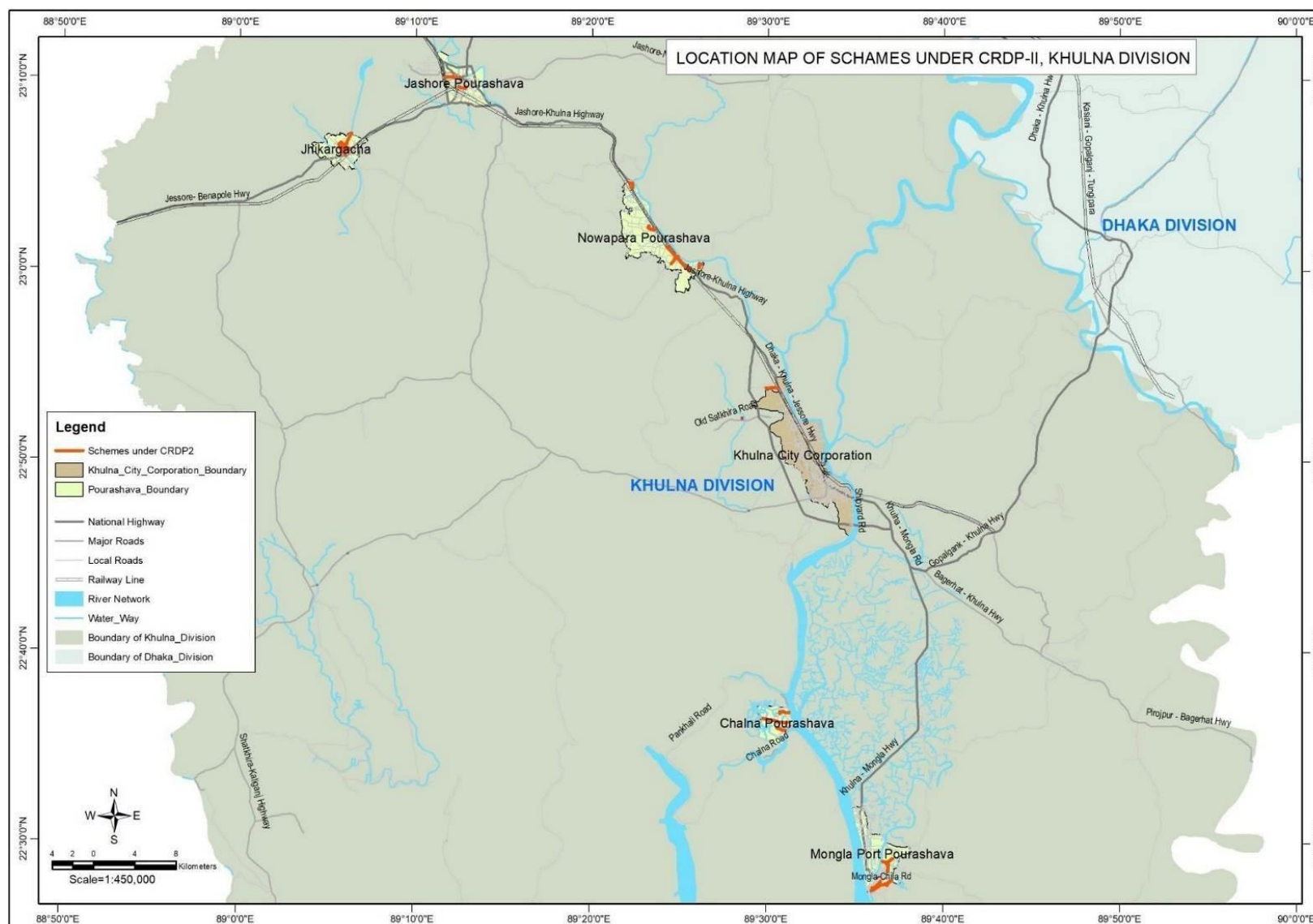
**Purpose of Monitoring:** The purpose of monitoring is to ensure that environmental requirements specified in the contract documents are adequately performed,

**Project Location:** The Project location map showing all contract packages are presented here below in Figure 1.1 and 1.2.





**Figure 1-1: Location map of schemes under CRDP-2 - Dhaka Division**



## B. Environmental Category of subprojects

- 5 CRDP-2 project has 35 subprojects. All 35 subprojects under CRDP-2 have been classified as category B as per EARF (ADB SPS, 2009). However, the EIA for the SWM subproject of KCC fall under Red category as per ECR-2023. The EIA of SWM has been prepared to meet the national requirement only. Package-wise IEE/EIA status has been presented inside the main document.

### **Status on Implementation of Environmental Management Activities:**

- 6 The status on implementation of environmental management activities including environmental monitoring reports along with sampling and testing of environmental parameters are shown in the table below:

**Table 1.1: Progress status on implementation of environmental management activities**

Sl.no	Environmental Management Activities	Progress Status
1.	Preparation of Initial Environmental Examination (IEE)	All 35 (thirty-five) subproject packages have been classified as Category B as per ADB SPS, 2009 and EARF. IEEs of all the 35 CRDP-2 subproject packages have been prepared and cleared/approved by ADB. IEEs of all subproject packages, except the SWM one, have been disclosed so far on ADB's website. However, the EIA for the SWM subproject (Red category subproject as per ECR-2023) has been prepared to meet the national requirement only.
2.	Renewal of Environmental Clearance Certificate (ECC)	The Department of Environment has renewed the ECC for all B-Category subprojects of CRDP-2. This renewal is valid till 09 February, 2024 (Appendix 1). The Department of Environment has renewed the ECC for SWM sub-project of CRDP – II (Red category subprojects as per ECR-2023). This renewal is valid till 16 August, 2024 (Appendix 2).
3.	Field monitoring to check EMP compliance at construction sites	Undertake field visit for EMP monitoring compliance at least once in every month.
4.	Monitoring of ambient Air, Water (surface & ground water Quality and Noise Levels)  Sample collection Analysis and analytical results	Sample collected for end line (at the end of subproject construction) environmental quality data from 5 (five) selected subproject sites. Sample collected for baseline environmental quality data from 1 (one) selected subproject site. Details of sampling are given inside the report. Analysis of the environmental parameters of collected samples from selected subproject sites have been completed and their analytical results have been discussed and presented inside the report.
5.	Monitoring Reporting  Monthly Progress Report	The followings are the output of Monitoring reports over the project period (as of December,2023): 6 nos. monthly progress reports

	Quarterly Progress Report Semi-annual Environmental Monitoring Report	2 nos. Quarterly Progress reports 1 no. Semi-annual Environmental Monitoring Report
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### **C. Utilization of Consultancy Services**

- 7 There are three categories of consultants under the Project. These are: (1) Second Preparation, Design and Supervision (PDS-2) Consultants, (2) Institutional Capacity and Community Development (ICCD) Consultants and (3) Individual Consultants. The PDS-2 Consultant team and ICCD consultants are now fully in place. The individual TA consultants are also on board from November 2023.

### **D. Overall Project Description and Objectives**

- 8 The Second City Region Development Project (CRDP-2) is the second phase of impact-oriented urban development program using the integrated city region approach to improve spatial and inter-sectoral connectivity as means for accelerating broad-based economic growth. In the City Region Development Project (CRDP), the city region concept is operationalized to include a major city (like Dhaka or Khulna) with its surrounding municipalities and non-municipal urban centers. The experience of CRDP and project preparation activities of CRDP-2 points to the necessity of broadening the spatial coverage of the city region concept to include rural-to-urban connectivity in addition to urban-to-peri-urban linkages as such areas are naturally interlinked and warrant immediate intervention to enhance connectivity.
- 9 The objective of the Project is to improve the mobility, Climate Resilience and solid waste management in the Project areas within the Dhaka and Khulna city regions. The outputs of the Project will include:
- Output 1: Urban infrastructure in project areas of Dhaka and Khulna regions improved and made climate-resilient;
  - Output 2: Institutional and Community Development

### **E. Description of Subprojects**

- 10 Activities of Output -1: Urban infrastructure in project areas improved and made climate-resilient

Improvement of Roads in Dhaka City Region:

- Improvement of road: 312 km
- Construction of bridges/culverts: 1714m
- Construction of drain: 91km

Improvement of Drainage in Pourashavas:

- Construction of drain: 62km
- Improvement of road: 45 km
- Re-excavation/dredging of Khal/Canal: 20 km
- Slope Protection: 10 km
- Improvement of Bus Terminal: 1 no.

Solid waste management:

- Composting plant and associated facilities constructed and operational in KCC: 1no.

11 Activities of Output -2: Institutional and community capacities strengthened

- Future priority urban investments of at least \$100 million identified and detailed engineering design reports prepared by LGED;
- Detailed feasibility study including gender, social and environmental assessment and engineering design for integrated waste management facilities in KCC prepared;
- Drainage master plans for 13 pourashavas prepared or updated;
- O&M plans including annual budget allocation for all subprojects prepared by all subproject pourashavas and city corporations with LGED support;
- 50 staff (including 15 female staff) of project pourashavas and city corporations report enhanced knowledge on integrated urban planning, sustainable service delivery, and O&M of urban infrastructure; and
- At least 200,000 people (at least 50% women) covered under awareness campaigns on reducing, reusing, and recycling solid waste in KCC.

12 Project Locations: Dhaka City Region and Khulna City Region. The Project Area includes the following:

***Dhaka city region:***

City Corporation: Gazipur City Corporation (GCC)

Pourashavas : Savar, Dhamrai, Narsingdi, Kanchon, Kaliakoir, Singair, Sonargaon, Tarabo and Manikganj

Upazila : Savar, Araiazar and Rupganj

***Khulna city region:***

City Corporation: Khulna City Corporation (KCC)

Pourashavas : Nowapara, Mongla, Chalna, Jhikargacha and Jashore

13 Implementation Period of the Project:

- i) Date of Commencement : January 2019
- ii) Date of Completion : December 2024

**F. Personnel Responsible for Environmental Monitoring**

14 Monitoring of mitigation measures during construction are the responsibility of the PIU Environmental Management Officer, supported by the PMCU Environmental Specialists. The monitoring system involves a Monitoring Checklist (Appendix-4), which reflects the requirements of the EMP and Special Conditions. The checklist is filled in monthly by the PIU and PMCU Environmental Specialists.

The composition of the project safeguards Team is outlined in **Table 1.2** below:

**Table 1.2: Project Safeguard Team**

Name	Designation/ Office	Email Address	Contact	Roles
1. PMU Md. Shahabul Islam	Sr. Assistant Engineer, LGED, Dhaka	Shahabul@lged.gov.bd	+8801714225344	Liaise with the various Government agencies on environmental and other regulatory matter Pertaining to implementation of the subprojects;
2. PIUs a) Md. Abdul Aziz, Dhaka PIU	Assistant Engineer, LGED	ae.dhaka@lged.govt.bd	+8801758999111	Liaise with the Contractors and Consultants on the implementation of the Environmental management measures proposed in the IEE/EMP; including the implementation of the environmental monitoring plan outlined in the IEE.
b) Abdullah Rasheddeen, Narayanganj PIU	Assistant. Engineer, LGED	ae.narayanganj@lged.gov.bd	+8801712623112	
c) Md. Alam Miah, Savar pourashava PIU	Assistant Engineer	Alammiah327@gmail.com	+8801712507060	
d) Mydul Islam, GCC PIU	Assistant Engineer, Gazipur City Corporation	mydulislam80@gmail.com	+8801612104080	
e) Md. Zakir Hossain, Tarabo pourashava	Assistant Engineer	Eng.zakir99@gmail.com	+8801711960845	
f) Abdul Baten, Singair pourashava	SAE	singairpourashava@gmail.com	+8801712606156	
g) Krisna Dayal Roy,	Assistant Engineer	engineerkdroy@gmail.com	+8801712125010	



Name	Designation/ Office	Email Address	Contact	Roles
Narshingdi pourashava				
h) Md. Hasan Ali, Kanchan pourashava	Sub-Assistant Engineer	saehasanali@gmail.com	+8801711006474	
i) S M Abdus Samad, Sonargoan pourashava	Sub-Assistant Engineer	abdussamadcda@gmail.com	+8801914474972	
j) Md. Zubaur Rahman, Jeshore Pourashava	SAE	zubadhch@gmail.com	+8801710371842	
k) Md. Ruhul Amin, Dhamrai pourashava	SAE	Eng.ruhul81@gmail.com	+8801718574013	
3. Individual Consultant Fouzia Nusrat	Environment Safeguard Specialist	<a href="mailto:fnshimul@gmail.com">fnshimul@gmail.com</a>	+8801819286613	Assist PMCU in ensuring compliance of Second CRDP and its subprojects with all relevant national laws; Interact with the sector specialists and integrate environmentally sound practices into the detailed design of project components; oversees all environmental safeguard issues

## **G. Scenario of Subproject Implementation**

- 15 Initial Environmental Examinations (IEEs) for all 35 (thirty-five) contracted subproject packages with their respective EMP template have been prepared considering all possible impacts due to implementation activities and their mitigation measures.

## **H. Safeguard Consideration**

- 16 Road Safety Signs and safe crossings for pedestrians would be provided after completion of the road construction as per requirements in all designed road. Also, green space besides roads are considered based on availability of space/land. Provision of tree plantation in different subproject schemes is also available in the project based on the availability of land.

## **I. Consideration of Climate Change Effects in CRDP-2**

- 17 As climate change is causing shifts in weather patterns, including increased frequency and intensity of extreme weather events such as storms, floods, and heatwaves, these changes pose significant challenges to the functioning and longevity of infrastructure systems. To this situation, climate change vulnerability and disaster risk assessment have been conducted for the subprojects under CRDP-2. Results of these assessment have been used to design the said subprojects.
  - a) In road construction and maintenance, climate change considerations involve designing and constructing roads that can withstand the impacts of changing weather conditions. For the said purpose, CRDP-2 subproject's road design includes using climate-resilient materials, incorporating proper drainage systems to manage increased rainfall, and ensuring adequate slope stabilization to withstand erosion and landslides.
  - b) Drainage construction systems are vital for managing storm-water runoff and preventing flooding. With climate change, precipitation patterns are becoming more erratic, leading to intense rainfall events. It is essential to consider these changes when designing drainage infrastructure. Drainage design of CRDP-2 subprojects involve increasing the capacity of drains and culverts, constructing flood-resistant structures.
  - c) For bridge construction, the critical design parameter derived from precipitation and catchment characteristics is flood level which determines the required vertical clearance of the bridge deck.
  - d) Solid waste management systems need to adapt to climate change as well. Rising temperatures can accelerate the decomposition of organic waste, leading to increased greenhouse gas emissions. Additionally, extreme weather events can disrupt waste collection and disposal services. In order to integrating climate change considerations into solid waste management subproject, design involves promoting waste reduction, recycling, and composting (i.e., reuse) to minimize greenhouse gas emissions. It also requires developing resilient waste management facilities and contingency plans to handle disruptions caused by climate-related events.
- 18 It is to mention that the changes in projected monthly temperature and precipitation, when presented in comparison to the base data, will help the engineers, planners and designers to design relevant subprojects more effectively with precision.



## 2. COMPLIANCE STATUS WITH NATIONAL STATUTORY ENVIRONMENTAL REQUIREMENTS

- 19 **Status on ECC:** As the validity of the issued ECC for all B-Category subprojects (as per ADB SPS, 2009 and EARF) has been expired on February 9, 2023, DoE has made consequent renewal of the ECC of targeted subproject packages vide Memo No. DoE/clearance/5194/2013/89; dated 19/07/2023, and this renewal is valid until February 9, 2024 (**Appendix 1**).
- 20 SWM subproject in KCC has been classified as Category B per ADB SPS, 2009 and EARF. However, the SWM subproject falls under Category Red (as per ECR-2023) and thus prepared an EIA. As the validity of ECC for the said EIA has been expired, KCC filed petition depositing the required amount of fees to DoE for the renewal of the subject ECC. In response to this petition, DoE has issued renewal of the ECC vide DoE Environmental Clearance Certificate no. 23.104166.111, dated 02/08/2023, and this renewal is valid until August 16, 2024 (**Appendix 2**).
- 21 **Status on other relevant GOB Permits:** The subproject improvement works will not involve any potential tree removal as the subproject schemes are to construct within the right of way of the existing roads mainly. Thus, no permission is required from the forest department. Since the construction is to be carried out on government property, any NOCs related to land and property is not required. Also NOCs related to other line departments are not required for this project.
- 22 The only such event in which an NOC related to line departments may be required, is an event in which we would have to shift any electric pole. However, such a measure (NOC) is not necessary as the electricity department does the shift themselves if applied to with the required amount of fees. However, the details of acquiring permits and NOC have been discussed in subproject respective DDR reports.
- 23 All requirements of the Department of Environment, related to environmental clearance/renewal and monitoring and reporting are being met for CRDP-2 subprojects.

### 3. COMPLIANCE STATUS WITH ENVIRONMENTAL LOAN COVENANTS

- 24 The covenants to the loan agreement with ADB require that subprojects are designed, constructed, operated, and maintained in accordance with Borrower's Environmental Conservation Rule 1997, ADB's Safeguard Policy Statements (2009) and EARF prepared for the Project and agreed between the Borrower and ADB. Other covenants written into the loan agreement related to disclosure, grievance redress and environmental safeguards are listed in Table 3.1. The status of compliance is described in the table.

**Table 3.1: Compliance Status with Environmental Loan Covenants:**

Covenants	Reference in the Loan/Grant Agreement	Status of Compliance (As of June 2023)
<b>Particular Covenants:</b>		
<b><u>Environment</u></b> <b><i>Schedule 5. Para. 7</i></b> The Borrower shall ensure or cause LGED and Project Implementing Agencies to ensure that the preparation, design, construction, implementation, operation and decommissioning of the Project, each Subproject and all Project facilities comply with <ul style="list-style-type: none"> <li>a) all applicable laws and regulations of the Borrower relating to environment, health, and safety;</li> <li>b) the Environmental Safeguards;</li> <li>c) the EARF; and</li> <li>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.</li> </ul>	<b>Schedule 5 to the Ordinary Operations Loan Agreement</b>	<b>Complied with.</b>  All requirements describe in Schedule 5. Para. 7 with regard to all applicable laws and regulations concerning overall environmental safeguards and environmental safeguards monitoring are being satisfactorily met.
<b><u>Human and Financial Resources to implement safeguards Requirement</u></b> <b><i>Schedule 5. Para. 11</i></b> The borrower shall make available or caused LGED and the project implementing agencies to make available necessary budgetary and human resources to fully implement the EMPs and the RPs.	<b>Schedule 5 to the Ordinary Operations Loan Agreement</b>	<b>Complied with.</b>  Sufficient funds are being allocated in the project costs for hiring consultants, and to fully implement the environmental safeguards, EMPs and RPs.
<b><u>Safeguards - Related Provisions in Bidding Documents and Works Contracts</u></b> <b><i>Schedule 5. Para. 12</i></b> The Borrower shall ensure or cause LGED and the Project Implementing Agencies to	<b>Schedule 5 to the Ordinary Operations Loan Agreement</b>	<b>Complied with.</b>  All requirements set forth in Schedule 5. Para. 12 with regard to safeguards related

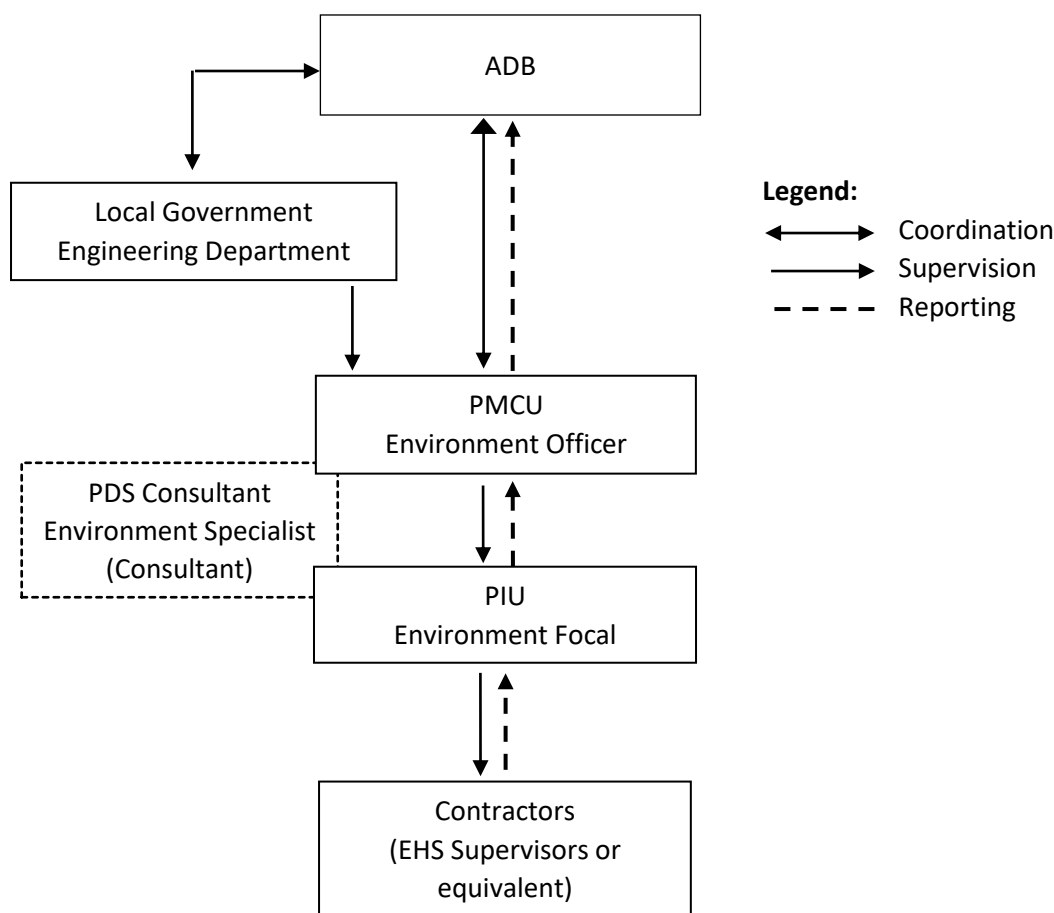
Covenants	Reference in the Loan/Grant Agreement	Status of Compliance (As of June 2023)
<p>ensure that all bidding documents and contracts for Works contain provisions that require contractors to:</p> <ul style="list-style-type: none"> <li>a) comply with the measures relevant to the contractor set forth in the IEEs, the EMPs, and the RPs (to the extent they concern impacts on affected</li> <li>b) make available a budget for all such environmental and social measures;</li> <li>c) provide the Borrower with a written notice of any unanticipated environmental or resettlement risks or impacts that arise during</li> <li>d) adequately record the condition of roads, agricultural land and other infrastructure prior to starting to transport materials and construction;</li> <li>e) Reinstall pathways, other local infrastructure, and agricultural land to at least their pre-project condition upon the completion of construction.</li> </ul>		<p>provision in Bidding Documents and Works Contracts are being adequately met</p>
<p><b><u>Safeguards Monitoring and Reporting</u></b>  <b><i>Schedule 5. Para. 13</i></b>  The Borrower shall cause LGED to do the following:</p> <ul style="list-style-type: none"> <li>a) submit semiannual safeguard Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission;</li> <li>b) if any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEEs, the EMPs or the RPs promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan; and</li> <li>c) report any actual or potential breach of compliance with the measures and requirements set forth in the EMPs promptly after becoming aware of the breach</li> </ul>	<p><b>Schedule 5 to the Ordinary Operations Loan Agreement</b></p>	<p><b>Complied with.</b></p> <p>All requirements lay down in Schedule 5. Para. 13 with regard to safeguards Monitoring and Reporting are being met satisfactorily</p>
<p><b><u>Labor Standards, Health and Safety:</u></b>  The Borrower shall ensure or cause LGED and the Project Implementing Agencies to ensure that the core labor standards and the Borrower's applicable laws and</p>	<p><b>Schedule 5 to the Ordinary Operations Loan Agreement</b></p>	<p><b>Complied with</b></p>

Covenants	Reference in the Loan/Grant Agreement	Status of Compliance (As of June 2023)
<p>regulations are complied with during Project implementation. The Borrower shall ensure that LGED and the Project Implementing Agencies include specific provisions in the bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things:</p> <ul style="list-style-type: none"> <li>a) comply with the Borrower's applicable labor law and regulations and incorporate applicable workplace occupational safety norms;</li> <li>b) do not use child labor;</li> <li>c) do not discriminate workers in respect of employment and occupation;</li> <li>d) do not use forced labor;</li> <li>e) allow freedom of association and effectively recognize the right to collective bargaining; and</li> <li>f) disseminate, or engage appropriate service providers to disseminate, information on the risks of sexually transmitted diseases, including Human Immune Deficiency Virus (HIV) and Acute Immune Deficiency Symptom(AIDS), to the employees of contractors engaged under the Project and to members of the local communities surrounding the Project area, particularly women.</li> </ul>		

## **4. COMPLIANCE STATUS WITH THE ENVIRONMENTAL MANAGEMENT PLAN**

### **A. Environmental Safeguard Framework**

- 25 The Environmental Assessment and Review Framework (EARF) has been developed in accordance with ADB SPS, 2009 and Government of Bangladesh environmental laws and regulations to guide subproject selection, screening and categorization, environmental assessment, and preparation and implementation of safeguard plans of subprojects and to facilitate compliance with the requirements specified in ADB SPS 2009. The EARF (i) describes the proposed subprojects including safeguards criteria that are to be used in selecting subprojects and/or components; (ii) explains the general anticipated environmental impacts of the subprojects; (iii) specifies the requirements in subproject screening and categorization, assessment, and planning; (iv) arrangements for meaningful consultation with affected person and other stakeholders and information disclosure requirements; (v) PMCU capacity to implement national laws and ADB's requirements and needs for capacity building; (vi) specifies implementation procedures and institutional arrangements; (vii) specifies monitoring and reporting requirements; and (viii) describes the respective responsibilities of PMCU, PIUs, and ADB in relation to the preparation, implementation, and progress review of environment safeguards compliance of the project. The EARF are being reviewed regularly and, if necessary, updated during implementation when (i) new types of unanticipated impacts are identified requiring review of applicability and relevance, and/or (ii) when there is any change in legal and regulatory framework. None of the provisions of EARF are being relaxed or lowered in the subsequent revisions and updates. The most important compliance requirements are:
- a) Compliance with the exclusion and subproject selection criteria;
  - b) Meeting meaningful consultation and disclosure requirement;
  - c) ADB approval of IEE prior to invitation of bids; and
  - d) Obtaining all necessary regulatory clearances and approvals prior to award of contract approvals
- 26 The IEEs, which include the Environmental Management Plans (EMPs) are being prepared for each subproject in accordance with ADB SPS, 2009 and EARF. The IEEs also include environmental compliance audit of existing facilities that are being rehabilitated or expanded under the project, and due diligence of associated facilities as defined in ADB SPS, 2009. The IEEs form part of the bid and contract document. No works can commence until final IEEs are approved by ADB, and if required, will be further updated for ADB's review during the implementation. In the event of unanticipated impact and/or any design change and/or non-compliance during project implementation, the IEE is being updated to include (i) assessment of the unanticipated impact and corresponding mitigation measures, and/or (ii) information on the design change and assessment of associated environmental impacts, if any, and/or (iii) corrective actions, associated cost and schedule; respectively.
- 27 All IEEs are being disclosed on ADB, executing, and implementing agency's websites. Environmental Safeguard Implementation Arrangement is shown in the Figure 4.1. Further, EMP implementation status for CRDP-2 component (for the Reporting Period) is shown in Table 4.3.



**Figure 4-1: Environmental Safeguard Implementation Arrangement**

## B. Initial Environmental Examination (IEE)

- 28 All 35 (thirty-five) subproject packages have been classified as Category B as per ADB SPS, 2009 and EARF. However, IEEs of all subproject packages, except the SWM one, have been prepared, and the said EIA for the SWM subproject (Red category subproject as per ECR-2023) has been prepared to meet the national requirement, not for the ADB requirement. IEEs/EIA of all the 35 CRDP-2 subproject packages have been prepared and submitted to ADB and have been disclosed on ADB's website (<https://www.adb.org/projects/49329-006/main#tabs-0-2>) after approval.

Package-wise IEE documentation status is given in Table 4.1.

**Table 4.1: Package-wise IEE Documentation Status**

Package Number	Final IEE based on Detailed Design			Site-specific EMP (or Construction EMP) approved by Project Director? (Yes/No)	Remarks
	Not yet due (detailed design not yet completed)	Disclosed on project website*	Final IEE provided to Contractor/s (Yes/No)		
Gazipur City Corporation: GCC (W-01)	Detailed design Complete	Cleared by ADB, disclosed on websites	Yes	Yes	All statutory clearance/s, no-objection certificates, permit/s, etc. have been obtained prior to award of contract/s. (Refer <b>Appendix1&amp;2:</b> Environmental clearance obtained)
Gazipur City Corporation: GCC (W-02)	Detailed design Complete	As above	Yes	Yes	
Araihazar Upazila: Araihazar (W-01)	Detailed design Complete	As above	Yes	Yes	
Araihazar Upazila: Araihazar (W-02)	Detailed design Complete	As above	Yes	Yes	
Araihazar Upazila: Araihazar (W-03)	Detailed design Complete	As above	Yes	Yes	
Araihazar Upazila: Araihazar (W-04)		As above	Yes	Yes	
Araihazar Upazila: Araihazar (W-05)	Detailed design Complete	As above	Yes	Yes	
Araihazar Upazila: Araihazar (W-06)	Detailed design Complete	As above	Yes	Yes	
Savar Upazila: Savar (W-01)	Detailed design Complete	As above	Yes	Yes	
Savar Upazila: Savar (W-02)	Detailed design Complete	As above	Yes	Yes	
Savar Upazila: Savar (W-03)	Detailed design Complete	As above	Yes	Yes	
Savar Upazila: Savar (W-04)	Detailed design Complete	As above	Yes	Yes	
Savar Upazila: Savar (W-05)	Detailed design Complete	As above	Yes	Yes	
Savar Upazila: Savar (W-06)	Detailed design Complete	As above	Yes	Yes	
Savar Upazila: Savar (W-07)	Detailed design Complete	As above	Yes	Yes	
Rupganj Upazila: Rupganj (W- 01)	Detailed design Complete	As above	Yes	Yes	
Rupganj Upazila: Rupganj (W- 02)	Detailed design Complete	As above	Yes	Yes	
Rupganj Upazila: Rupganj (W- 03)	Detailed design	As above	Yes	Yes	

Package Number	Final IEE based on Detailed Design			Site-specific EMP (or Construction EMP) approved by Project Director? (Yes/No)	Remarks
	Not yet due (detailed design not yet completed)	Disclosed on project website*	Final IEE provided to Contractor/s (Yes/No)		
	Complete				
Rupganj Upazila: Rupganj (W- 04)	Detailed design Complete	As above	Yes	Yes	
Savar Pourashava: SavarPourashava (W-01)	Detailed design Complete	As above	Yes	Yes	
Manikganj Pourashava: Manikganj (W -01)	Detailed design Complete	As above	Yes	Yes	
Chalna Pourashava: Chalna (W-01)	Detailed design Complete	As above	Yes	Yes	
Construction of Composting Plant and Associated facilities for KCC	Detailed design Complete	As above	Yes	Yes	
Gazipur City Corporation: GCC (W-03)	Detailed design Complete	As above	Yes	Yes	
DhamraiUpazila: Dhamrai (W- 01)	Detailed design Complete	As above	Yes	Yes	
Sonargaon Pourashava: Sonargaon (W-01)	Detailed design Complete	As above	Yes	Yes	
Narasingdi Pourashava: Narasingdi (W-01)	Detailed design Complete	As above	Yes	Yes	
Singair Pourashava: Singair (W-01)	Detailed design Complete	As above	Yes	Yes	
Mongla Pourashava: Mongla (W-01)	Detailed design Complete	As above	Yes	Yes	
Jashore Pourashava: Jashore (W-01)	Detailed design Complete	As above	Yes	Yes	
Jhikargacha Pourashava: Jhikargacha (W-01)	Detailed design Complete	As above	Yes	Yes	
Nowapara Pourashava: Nowapara (W-01)	Detailed design Complete	As above	Yes	Yes	
Kanchon Pourashava : W01	Detailed design Complete	As above	Yes	Yes	
Tarabo Pourashava : W01	Detailed design Complete	As above	Yes	Yes	
Kaliakoir Pourashava W-01	Detailed design Complete	As above	Yes	Yes	

\* Project website: <http://oldweb.lged.gov.bd/ProjectLibrary.aspx?projectID=867>



**Table 4.2: Package-wise Contractor/s' Contact Persons for Environmental Safeguards**

Sl. no	Package No.	Contractor	Contact Person	Mobile	E-mail Address
1	ARAIHAZAR/W-01	MEC Engineering & Consultant	Basudeb Sikder, PM	01711309481	<a href="mailto:mecib84@gmail.com">mecib84@gmail.com</a>
2	ARAIHAZAR/W-02	JV of NCL-PDL	Abdul Aziz Miah, DPM	01894975660	<a href="mailto:rfl73@rflgroupbd.com">rfl73@rflgroupbd.com</a>
3	ARAIHAZAR/W-03	Rezvi Construction-Md.Eunus al Mamun- KK Enterprise-JV	Foyez Ahammad Babul, PD	01911302649 01785642608	<a href="mailto:haque.enamul2244@gmail.com">haque.enamul2244@gmail.com</a> , <a href="mailto:eunusalmamunltd@gmail.com">eunusalmamunltd@gmail.com</a> <a href="mailto:mmgrouplimited9@gmail.com">mmgrouplimited9@gmail.com</a> <a href="mailto:comarifurrahman50c@gmail.com">comarifurrahman50c@gmail.com</a>
4	RUPGANJ/W-01	NDE Ltd-Taher Brothers Ltd JV	Md. Mizanur Rahman, PM	01709658842	<a href="mailto:info@ndebd.com">info@ndebd.com</a> , <a href="mailto:lged-01@ndebd.com.bd">lged-01@ndebd.com.bd</a>
5	RUPGANJ/W-02	JV of NCEL-PDL	Md. Mominul Islam, PM	01894958034	<a href="mailto:rfl73@rflgroupbd.com">rfl73@rflgroupbd.com</a>
6	RUPGANJ/W-03	JV of NCEL-PDL	Basirul Islam, DPM	01894930394	<a href="mailto:rfl73@rflgroupbd.com">rfl73@rflgroupbd.com</a>
7	SAVAR/W-01	M.M. Builders & Engineers Ltd-Fast Build JV	Abu Zafor, PE	01732124935	<a href="mailto:enqr.mizan97@gmail.com">enqr.mizan97@gmail.com</a> , <a href="mailto:fastbuild.bd@gmail.com">fastbuild.bd@gmail.com</a>
8	SAVAR/W-02	SEL-UDCJV	Nihar Halder, Construction Manager	01707078642	<a href="mailto:udcconstructionltd@gmail.com">udcconstructionltd@gmail.com</a>
9	SAVAR/W-03	Modern Structures Ltd	Shamsul Alam, PM	01719409553	<a href="mailto:info@mslgroupbd.com">info@mslgroupbd.com</a> , <a href="mailto:info@modernstructuresltd.com">info@modernstructuresltd.com</a>
10	SAVAR/W-04	M.M. Builders & Engineers Ltd-Fast Build JV	Md. Ariful Islam, Suveyor	01984680968	<a href="mailto:enqr.mizan97@gmail.com">enqr.mizan97@gmail.com</a> , <a href="mailto:fastbuild.bd@gmail.com">fastbuild.bd@gmail.com</a>
11	SAVAR/POU/W-01	Toma Shikder JV	Masud Pervez Razu, PM	01819916441	<a href="mailto:masudparvezrazu8@gmail.com">masudparvezrazu8@gmail.com</a>
12	GCC/W-01	RAB-RC(Pvt)Ltd& Hossain Construction	Zakaria Masud, PM	01874067764	<a href="mailto:hcpl.bd@gmail.com">hcpl.bd@gmail.com</a>
13	GCC/W-02	RAB-RC (Pvt) Ltd& Hossain Construction	Abdul Kaiyum Joni, PM	01883303838	<a href="mailto:hcpl.bd@gmail.com">hcpl.bd@gmail.com</a>
14	KANCHON/W-01	KSBL-MBPLJV	Syed Wazed Ali, Md. Banezir Alam, Ali Rajaur Rahman, Md. Rana Ahmed	01723898871 01778734336 01706068625 01873512119	<a href="mailto:Syedwazed88@gmail.com">Syedwazed88@gmail.com</a> , <a href="mailto:ksblmrk@gmail.com">ksblmrk@gmail.com</a>
15	TARABO/W-01	Asif & Brothers and Ratna Enterprise JV	Md. Habibur Rahman, Md. Ruhul Amin, Md. Omar Faruk, Md.Saiful Islam	01713118699 01738725101 01715854488 01924002276	<a href="mailto:rdp.habib@gmail.com">rdp.habib@gmail.com</a> , <a href="mailto:mdsojalaha766@gmail.com">mdsojalaha766@gmail.com</a> , <a href="mailto:fahimhmadoo@gmail.com">fahimhmadoo@gmail.com</a>
16	SONARGAO/W-01	Masud Hi-Tech Engineering Ltd.	S.M. Hasanur Rashid, Md. Esha Khan, Md. Abdur Rahim, Md. Fazly Rabbi Talukder, Paran Roy	01674834512 01724242598 01613002723 01683438472 01712088600	<a href="mailto:Hasanur1993@gmail.com">Hasanur1993@gmail.com</a> , <a href="mailto:eshakhan2425@gmail.com">eshakhan2425@gmail.com</a> , <a href="mailto:engr.abdurrahim02@gmail.com">engr.abdurrahim02@gmail.com</a> , <a href="mailto:fazlyrs@gmail.com">fazlyrs@gmail.com</a> , <a href="mailto:paranroy.mhel@gmail.com">paranroy.mhel@gmail.com</a>
17	NARSINGDI/W-	Muhammad Aminul	Abu Bakor Siddique, Khandaker Arshadul	01713383598	<a href="mailto:Basicplanner1999@gmail.com">Basicplanner1999@gmail.com</a> , <a href="mailto:msariantraders@gmail.com">msariantraders@gmail.com</a> , <a href="mailto:rsconstru">rsconstru</a>

Sl. no.	Package No.	Contractor	Contact Person	Mobile	E-mail Address
	01	Haque (Pvt.)Ltd.	Haque, Mohammad Shah Alam miah, Md. Shohel Mulla, Md. Mamun Bhuiyan	01819987302 01921393948 01911358037 01911180586	<a href="mailto:ction5876@gmail.com">ction5876@gmail.com</a> , <a href="mailto:sohelmulla50@gmail.com">sohelmulla50@gmail.com</a> , <a href="mailto:mamunbhuiyan80586@gmail.com">mamunbhuiyan80586@gmail.com</a>
18	SINGAIR/W-01	M/S Kohinoor Enterprise	Md. Rahatul Islam Nobin, Md. Kamruzzaman,	01748923760 01715948433	<a href="mailto:Rahatul735@gmail.com">Rahatul735@gmail.com</a> <a href="mailto:howlader.enterprise8833@gmail.com">howlader.enterprise8833@gmail.com</a> <a href="mailto:ombadal-barisal@yahoo.com">ombadal-barisal@yahoo.com</a>
19	DHAMRAI/W-01	Contact canceled on 08.06.2023			
20	MONGLA/W01	Mahabub Brothers (PVT)Limited	Md. Mizanur Rahman P.M Md. Mehedi Hassain Site Engineer	01992971150 01911965690	<a href="mailto:Mahabub_pvt@yahoo.com">Mahabub_pvt@yahoo.com</a>
21	CHALNA/ W01	RELIABLE BUILDERS LTD.- AL MAMUN ENTRPRISE LTD. JV	Md. Sahinul Islam, P.M Md. Mosarof, Site Engineer	01716014912 01739009240	<a href="mailto:Mayrbarguna109@gmail.com">Mayrbarguna109@gmail.com</a>
22	JASHORE/W-01	Mozahar Enterprise (Pvt.) Ltd.	Md. Motiar Rahman P.M Md. Ripon Rana, Site Engineer	01712139197 01922869500	mozahar enterprise <pvt@gmail.com< p=""><a href="mailto:mozaharenterpriseld@gmail.com">mozaharenterpriseld@gmail.com</a></pvt@gmail.com<>
23	JIKORGACHA/W-01	Mozahar Enterprise (Pvt)Ltd &ShamimChaklader (JV)	Md. Motiar Rahman P.M Md. Ripon Rana Site Engineer	01712139197 01922869500	msshaimim <a href="mailto:chaklader@gmail.com">chaklader@gmail.com</a>
24	SAVAR/W-05	Faridpur Jannat Construction-RAB-RC(PVT) LIMITED JV	Sajib Khan	01743184834	<a href="mailto:faridpurjannatconstructionltd@gmail.com">faridpurjannatconstructionltd@gmail.com</a>
25	SAVAR/W-06	Faridpur Jannat Construction-RAB-RC(PVT) LIMITED JV	Sajib Khan	01743184834	<a href="mailto:faridpurjannatconstructionltd@gmail.com">faridpurjannatconstructionltd@gmail.com</a>
26	NOWAPARA/W-01	Mozahar Enterprise (Pvt.) Ltd. &Shahmim Chaklader(JV	Md. Motiar Rahman P.M Md. Ripon Rana Site Engineer	01712139197 01922869500	mozahar enterprise <pvt@gmail.com< p=""><a href="mailto:mozaharenterpriseld@gmail.com">mozaharenterpriseld@gmail.com</a></pvt@gmail.com<>
27	MANIKGANJ/W-01	M/S Apex Enterprise and M/S Kamrul& Brothers (JV)	Md. Mohiuddin Mia P.M	01730178678	<a href="mailto:Mohiuddinmia350@gmail.com">Mohiuddinmia350@gmail.com</a> <a href="mailto:ape xenterprise61@yahoo.com">ape xenterprise61@yahoo.com</a> <a href="mailto:mithundas19938@gmail.com">mithundas19938@gmail.com</a>
28	KALIAKOIR/W-01	M/S TAZUL ISLAM	S.M. TAZUL ISLAM Md. Fahad Hasan Md. Rayhan Mollah	01961033510 01941250305 01732040287	<a href="mailto:Mstazulislam98@yahoo.com">Mstazulislam98@yahoo.com</a>
29	GCC/W-03	Toma Construction Ltd	Md. Rezaul Islam Kauser Ahmed Rafiqul Islam Rafi Mirza Md. Hamza	01712657684 01836806367 01886776923 01739614867	<a href="mailto:Engr.rezaulislam@gmail.com">Engr.rezaulislam@gmail.com</a> <a href="mailto:Kauserahmed135@gail.com">Kauserahmed135@gail.com</a> <a href="mailto:Rafi31730@gmail.com">Rafi31730@gmail.com</a> <a href="mailto:hamzayeaha@gmail.com">hamzayeaha@gmail.com</a>
30	ARAIHAZAR/W-05	UNVSC	SM JAMAL HOSSAIN Mahbul Islam Golam Sarwar	01711271785 01640053073 01747895488	<a href="mailto:smjamalhossain2017@gmail.com">smjamalhossain2017@gmail.com</a> <a href="mailto:mahabulislam138@gmail.com">mahabulislam138@gmail.com</a>

**Table 4.3: EMP implementation status for CRDP-2 component (for the Reporting Period)**

Potential Impacts (List from IEE)	Mitigation Measures (List from IEE)	Actual Implementation	Compliance Status (NC/PC/FC)	Date of Monitoring Conducted
<b>Design Phase</b>				
Road accidents	Ensure to include in the design the following: <ul style="list-style-type: none"> <li>• road signage in critical areas or curves,</li> <li>• speed limiters such as humps,</li> <li>• Barricades or similar structures in accident-prone areas, and</li> <li>• pedestrian crossing lanes, among others.</li> </ul>	Safe crossings, road safety signs and speed bumps have been designed based on the field condition.	Fully complied (FC)	Site and date of monitoring are as follows: <ul style="list-style-type: none"> <li>• Araihasar W-01/02/03 on 26/12/2023 and</li> <li>• Savar W-02/05/06/W-07 main, link-1 and link-2 on 27/12/2023</li> <li>• Kanchan W-01/Tarabo W-01/Sonargaon W-01 on 12/07/2023;</li> <li>• Manikganj W-01/Singair W-01/Kaliakoir W-01 on 13/07/2023;</li> <li>• Araihasar W-03/05/06 on 16/07/2023;</li> <li>• Rupganj W-01/02 on 18/07/2023</li> <li>• Jashore W-01/Jhikargacha W-01/Nowapara W-01 on 15/08/2023;</li> <li>• Chalna W-01/Mongla W-01/KCC W-01 on 17/08/2023</li> </ul>
Construction work camps, stockpile areas, storage areas, and disposal areas	Determine locations before award of construction contracts	Checked detailed phase	Fully complied (FC)	Site and date of monitoring are as follows: <ul style="list-style-type: none"> <li>• Araihasar W-01/02/03 on 26/12/2023 and</li> <li>• Savar W-02/05/06/W-07 main, link-1 and link-2 on 27/12/2023</li> <li>• Kanchan W-01/Tarabo W-01/Sonargaon W-01 on 12/07/2023;</li> <li>• Manikganj W-01/Singair W-01/Kaliakoir W-01 on 13/07/2023;</li> <li>• Araihasar W-03/05/06 on 16/07/2023;</li> </ul>

Potential Impacts (List from IEE)	Mitigation Measures (List from IEE)	Actual Implementation	Compliance Status (NC/PC/FC)	Date of Monitoring Conducted
				<ul style="list-style-type: none"> <li>Rupganj W-01/02 on 18/07/2023</li> <li>Jashore W-01/Jhikargacha W-01/Nowapara W-01 on 15/08/2023;</li> <li>Chalna W-01/Mongla W-01/KCC W-01 on 17/08/2023</li> </ul>
Existing utilities	Avoid disruption of services	No disruption of existing services	Fully complied (FC)	<p>Site and date of monitoring are as follows:</p> <ul style="list-style-type: none"> <li>Araihazar W-01/02/03 on 26/12/2023 and</li> <li>Savar W-02/05/06/W-07 main, link-1 and link-2 on 27/12/2023</li> <li>Kanchan W-01/Tarabo W-01/Sonargaon W-01 on 12/07/2023;</li> <li>Manikganj W-01/Singair W-01/Kaliakoir W-01 on 13/07/2023;</li> <li>Araihazar W-03/05/06 on 16/07/2023;</li> <li>Rupganj W-01/02 on 18/07/2023</li> <li>Jashore W-01/Jhikargacha W-01/Nowapara W-01 on 15/08/2023;</li> <li>Chalna W-01/Mongla W-01/KCC W-01 on 17/08/2023</li> </ul>
<b>Construction Phase</b>				
Trenching and excavation, run-off from stock piled materials and chemical contamination from fuels and lubricants may result to silt-laden runoff during rainfall,	<ul style="list-style-type: none"> <li>Reuse excess spoils and materials Disposal site in designated</li> <li>areas. Earthworks during dry season</li> <li>Stockyards at least 300m away from watercourses.</li> </ul>	Suggested mitigation measures, as outlined in the left side column, are being implemented at construction sites.	Fully complied (FC)	<p>Site and date of monitoring are as follows:</p> <ul style="list-style-type: none"> <li>Araihazar W-01/02/03 on 26/12/2023 and</li> <li>Savar W-02/05/06/W-07 main, link-1 and link-2 on 27/12/2023</li> <li>Kanchan W-01/Tarabo W-01/Sonargaon W-01</li> </ul>

Potential Impacts (List from IEE)	Mitigation Measures (List from IEE)	Actual Implementation	Compliance Status (NC/PC/FC)	Date of Monitoring Conducted
which may cause siltation and reduction in the quality of adjacent bodies of water.	<ul style="list-style-type: none"> <li>Fuel and other petroleum products stored at storage areas away from water drainage and protected by impermeable lining and bonded 110%.</li> <li>Take precautions to minimize the overuse of water</li> <li>Prevent wastewater into water sources. Ensure safe water diversion.</li> <li>No obstruction in flowing water.</li> </ul>			on 12/07/2023; <ul style="list-style-type: none"> <li>Manikganj W-01/Singair W-01/Kaliakoir W-01 on 13/07/2023;</li> <li>Araihazar W-03/05/06 on 16/07/2023;</li> <li>Rupganj W-01/02 on 18/07/2023</li> <li>Jashore W-01/Jhikargacha W-01/Nowapara W-01 on 15/08/2023;</li> <li>Chalna W-01/Mongla W-01/KCC W-01 on 17/08/2023</li> </ul>
Construction of Box Culvert and cross drain	Drainage congestion, erosion and sedimentation	Diversions with adequate opening have been constructed, stock piling and fill materials are properly managed.	Fully complied (FC)	Site and date of monitoring are as follows: <ul style="list-style-type: none"> <li>Araihazar W-01/02/03 on 26/12/2023 and</li> <li>Savar W-02/05/06/W-07 main, link-1 and link-2 on 27/12/2023</li> <li>Kanchan W-01/Tarabo W-01/Sonargaon W-01 on 12/07/2023;</li> <li>Manikganj W-01/Singair W-01/Kaliakoir W-01 on 13/07/2023;</li> <li>Araihazar W-03/05/06 on 16/07/2023;</li> <li>Rupganj W-01/02 on 18/07/2023</li> <li>Jashore W-01/Jhikargacha W-01/Nowapara W-01 on 15/08/2023;</li> <li>Chalna W-01/Mongla W-01/KCC W-01 on 17/08/2023</li> </ul>
Workers Health	Follow Occupational	Implementing	Fully complied	Site and date of

Potential Impacts (List from IEE)	Mitigation Measures (List from IEE)	Actual Implementation	Compliance Status (NC/PC/FC)	Date of Monitoring Conducted
and Safety	H&S Plan and COVID-19 H&S Plan	Occupational H&S Plan and COVID-19 H&S Plan	(FC)	monitoring are as follows: <ul style="list-style-type: none"> <li>• Araihaazar W-01/02/03 on 26/12/2023 and</li> <li>• Savar W-02/05/06/W-07 main, link-1 and link-2 on 27/12/2023</li> <li>• Kanchan W-01/Tarabo W-01/Sonargaon W-01 on 12/07/2023;</li> <li>• Manikganj W-01/Singair W-01/Kaliakoir W-01 on 13/07/2023;</li> <li>• Araihaazar W-03/05/06 on 16/07/2023;</li> <li>• Rupganj W-01/02 on 18/07/2023</li> <li>• Jashore W-01/Jhikargacha W-01/Nowapara W-01 on 15/08/2023;</li> <li>• Chalna W-01/Mongla W-01/KCC W-01 on 17/08/2023</li> </ul>
Community health and safety hazards	<ul style="list-style-type: none"> <li>• Implement risk management measure to protect the community from physical, chemical, or other hazards associated with sites under construction and decommissioning</li> <li>• restrict access to the site, constructing fence, signage etc.</li> <li>• adequate space and lighting, temporary fences, shining barriers and signage at active work sites</li> </ul>	Suggested mitigation measures, as outlined in the left side column, are being implemented at construction sites.	Fully complied (FC)	Site and date of monitoring are as follows: <ul style="list-style-type: none"> <li>• Araihaazar W-01/02/03 on 26/12/2023 and</li> <li>• Savar W-02/05/06/W-07 main, link-1 and link-2 on 27/12/2023</li> <li>• Kanchan W-01/Tarabo W-01/Sonargaon W-01 on 12/07/2023;</li> <li>• Manikganj W-01/Singair W-01/Kaliakoir W-01 on 13/07/2023;</li> <li>• Araihaazar W-03/05/06 on 16/07/2023;</li> <li>• Rupganj W-01/02 on 18/07/2023</li> <li>• Jashore W-01/Jhikargacha W-</li> </ul>

Potential Impacts (List from IEE)	Mitigation Measures (List from IEE)	Actual Implementation	Compliance Status (NC/PC/FC)	Date of Monitoring Conducted
	<ul style="list-style-type: none"> <li>Contractor to implement its approved SEMP, which include community health and safety measures</li> <li>implement measure to prevent proliferation of vectors of diseases at work sites</li> </ul>			01/Nowapara W-01 on 15/08/2023; <ul style="list-style-type: none"> <li>Chalna W-01/Mongla W-01/KCC W-01 on 17/08/2023</li> </ul>
Terrestrial ecology including terrestrial biodiversity	<ul style="list-style-type: none"> <li>Prevent workers or any other person from removing and damaging any flora and fauna found in the subproject sites;</li> <li>Prohibit employee and workers from poaching animals and cutting of trees for firewood at the subproject sites or their vicinities.</li> <li>Prevent workers or any other person from removing and damaging any flora and fauna found in the subproject sites</li> </ul>	Suggested mitigation measures, as outlined in the left side column, are being implemented at construction sites.	Fully complied (FC)	Site and date of monitoring are as follows: <ul style="list-style-type: none"> <li>Araihazar W-01/02/03 on 26/12/2023 and</li> <li>Savar W-02/05/06/W-07 main, link-1 and link-2 on 27/12/2023</li> <li>Kanchan W-01/Tarabo W-01/Sonargaon W-01 on 12/07/2023;</li> <li>Manikganj W-01/Singair W-01/Kaliakoir W-01 on 13/07/2023;</li> <li>Araihazar W-03/05/06 on 16/07/2023;</li> <li>Rupganj W-01/02 on 18/07/2023</li> <li>Jashore W-01/Jhikargacha W-01/Nowapara W-01 on 15/08/2023;</li> <li>Chalna W-01/Mongla W-01/KCC W-01 on 17/08/2023</li> </ul>
Slope erosion and canal sedimentation	<ul style="list-style-type: none"> <li>Provide siltation or sedimentation chambers (or similar structures) at all outlets of community canals along the Subproject Khal to</li> </ul>	Suggested mitigation measures, as outlined in the left side column, are being implemented at construction sites.	Fully complied (FC)	Site and date of monitoring are as follows: <ul style="list-style-type: none"> <li>Araihazar W-01/02/03 on 26/12/2023 and</li> <li>Savar W-02/05/06/W-07 main, link-1 and</li> </ul>

Potential Impacts (List from IEE)	Mitigation Measures (List from IEE)	Actual Implementation	Compliance Status (NC/PC/FC)	Date of Monitoring Conducted
	prevent accumulation of silts and solid wastes in the said canal <ul style="list-style-type: none"> <li>Retaining the existing plants and vegetation of canal bank and palisading,</li> <li>Scheduling to avoid heavy rainfall periods</li> <li>Contouring and minimizing length and steepness of slopes</li> <li>Mulching to stabilize exposed areas</li> <li>Re-vegetating bank slope areas promptly</li> <li>Lining steep channel and slopes (e.g. Use jute matting)</li> </ul>			link-2 on 27/12/2023 <ul style="list-style-type: none"> <li>Kanchan W-01/Tarabo W-01/Sonargaon W-01 on 12/07/2023;</li> <li>Manikganj W-01/Singair W-01/Kaliakoir W-01 on 13/07/2023;</li> <li>Araihazar W-03/05/06 on 16/07/2023;</li> <li>Rupganj W-01/02 on 18/07/2023</li> <li>Jashore W-01/Jhikargacha W-01/Nowapara W-01 on 15/08/2023;</li> <li>Chalna W-01/Mongla W-01/KCC W-01 on 17/08/2023</li> </ul>

**Table 4.4: Overall Compliance with CEMP/ EMP**

Sub-Project Name	EMP/ CEMP Part of Contract Documents (Yes/No)	CEMP/EMP Being Implemented (Yes/No)	Status of Implementation (Excellent/Satisfactory/ Partially Satisfactory/ Below Satisfactory)	Action Proposed and Additional Measures Required
<ul style="list-style-type: none"> <li>Savar W-01/02</li> <li>SavarW-05 – W07</li> <li>Araihazar W 01 - W03</li> <li>Araihazar W-05 /06</li> <li>Savar W-01/02</li> <li>Kanchan W-01</li> <li>Tarabo W-01</li> <li>Sonargaon W-01</li> <li>Manikganj W-01</li> <li>Singair W-01</li> <li>Kaliakoir W-01</li> <li>Rupganj W-01/02</li> <li>Jashore W-01</li> </ul>	Yes	Yes	Implementation of subproject works is progressing under all field practical difficulties. However, under these difficulties, field observation and environmental performance demonstrate more or less satisfactory status of implementation. Sample filled-in EMP compliance monitoring	Proposed actions and additional measures (if needed) for the smooth implementation of the subproject have been discussed in the field with the concerned engineering and other staff while



<ul style="list-style-type: none"> <li>• Jhikargacha W-01</li> <li>• Nowapara W-01</li> <li>• Chalna W-01</li> <li>• Mongla W-01</li> <li>• KCC W-01</li> </ul> <p>Information of monitoring field visits from randomly selected subproject sites conducted by the environmental safeguard consultant/field engineer/ PIU Nodal personnel during this reporting period is provided in the table 4.5</p>			<p>checklist has been included in Appendix 4. In order to demonstrate the overall environmental safeguard compliances at subproject construction site, few random pertinent environmental compliance snap shots from field monitoring sites are displayed below the Appendix 4. Further summary of findings of field visits from randomly selected subproject sites is included in Appendix 5.</p>	<p>making routine field visit at construction sites.</p>
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**Table 4.5: Itinerary of Monitoring visits during the reporting period (July to December 2023)**

Package	Location of monitoring site visit	Date of inspection	Inspection conducted by
<ul style="list-style-type: none"> <li>• Araihasar W-01/02/03</li> </ul>	At road /drain/ box culvert construction site and tree plantation sites	26/12/2023	Individual Consultant, PDS-2 Environmental safeguard Consultant / Field Engineer / PIU Safeguard Nodal Person
<ul style="list-style-type: none"> <li>• Savar W-02/05/06</li> <li>• Savar W-07 main, link-1 and link-2</li> </ul>	At road /drain/ box culvert construction site and tree plantation sites	27/12/2023	Individual Consultant, PDS-2 Environmental safeguard Consultant / Field Engineer / PIU Safeguard Nodal Person
<ul style="list-style-type: none"> <li>• Araihasar W-03/05/06</li> </ul>	At road /drain/ box culvert construction site and tree plantation sites	16/07/2023	PDS-2 Environmental safeguard Consultant / Field Engineer / PIU Safeguard Nodal Person
<ul style="list-style-type: none"> <li>• Kanchan W-01</li> <li>• Tarabo W-01</li> <li>• Sonargaon W-01</li> </ul>	At road /drain/ box culvert construction site and tree plantation sites	12/07/2023	PDS-2 Environmental safeguard Consultant / Field Engineer / PIU Safeguard Nodal Person
<ul style="list-style-type: none"> <li>• Manikganj W-01</li> <li>• Singair W-01</li> <li>• Kaliakoir W-01</li> </ul>	At road /drain/ box culvert construction site and tree plantation sites	13/07/2023	PDS-2 Environmental safeguard Consultant / Field Engineer / PIU Safeguard Nodal Person
<ul style="list-style-type: none"> <li>• Rupganj W-01 /02</li> </ul>	At road /drain/ box culvert construction site and tree plantation sites	18/07/2023	PDS-2 Environmental safeguard Consultant / Field Engineer / PIU Safeguard Nodal Person
<ul style="list-style-type: none"> <li>• Jashore W-01</li> <li>• Jhikargacha W-01</li> <li>• Nowapara W-01</li> </ul>	At road /drain/ box culvert construction site and tree plantation sites	15/08/2023	PDS-2 Environmental safeguard Consultant / Field Engineer / PIU Safeguard Nodal Person
<ul style="list-style-type: none"> <li>• Chalna W-01</li> <li>• Mongla W-01</li> <li>• KCC W-01</li> </ul>	At road /drain/ box culvert construction site and tree plantation sites	17/08/2023	PDS-2 Environmental safeguard Consultant / Field Engineer / PIU Safeguard Nodal Person

## 5. APPROACH AND METHODOLOGY FOR ENVIRONMENTAL MONITORING OF THE PROJECT

### A. Environmental Performance

- 29 Environmental monitoring occurs at the subproject level by observing performance during the construction phase. Environmental specifications reflect general construction requirements identified in the subproject environmental management plans (EMPs). A provisional sum to cover environmental mitigation is included in the bid price where needed; though costs for implementing the general requirements of the environmental specification are considered the responsibility of the contractor and are part of the overall bid price.

### B. Subproject Environmental Monitoring

- 30 The system for environmental monitoring consists of observations using a checklist for recording the EMP Compliance status with contractor performance that reflects the requirements of the construction specifications. Environmental compliance monitoring is being undertaken using the standard EMP Checklist. Environmental compliance monitoring of sample subprojects has been displayed in Appendix 4. During field visit, the environmental specialist discusses the results with the site supervision engineer, and then document the subproject EMP compliance status. It is worth pointing out that the recorded compliance status yielded yes to the compliances with the site- specific EMP of all subproject.

#### i) Air quality

##### ***Ambient Air Quality Monitoring Technique:***

- 31 Direct measurement of NO<sub>x</sub>, SO<sub>x</sub> and CO etc. was conducted on a spot over a period of 8-hours by using an instrument named Aeroquel Gas Analyser equipped with NO<sub>x</sub>, SO<sub>x</sub> and CO sensors (Model: 500, New Zealand). The portable wireless real time particle mass counters instrument named AEROCET, Model 531, USA was used to measure the particulates- SPM, PM<sub>10</sub> and PM<sub>2.5</sub>. Portable laser particle counters (Dylos, made: UK) were also used for the comparison of the particulate matters (PM<sub>10</sub> and PM<sub>2.5</sub>). High Volume Air Sampler Method was also employed for the collection of SPMs.
- 32 Air quality monitoring equipment was operated for 8 hours in peak traffic time and a conversion equation was used to convert the data from specific time period to expected time period. Conversion of hourly to 24-hour averages was adapted by applying a conversion process using Pasquill's (1961) air mass dispersion tables defining air mass stability classes and a set of meteorological conditions and Schroeder and Jugloff's (2012) conversion steps. Following the methodology mentioned above, air quality monitoring data of the subproject surroundings were converted to 1 hour, 8hr and 24hr/annual averages and were compared with the standards of Bangladesh national ambient air quality parameters as defined in the Air Pollution Control Rules (APCR) 2022.

#### ii) Surface and Groundwater Water quality

##### ***Sampling procedure including sample preservation and transportation process, lab information in brief:***

- 33 Surface water samples were collected from nearby ponds/inland water bodies and Groundwater samples were collected from nearby tube-well of each subproject site. The depth of tube-wells was in the range of 100-150m. Sample bottles were preconditioned with 5% nitric acid and rinsed with distilled deionized water. Each sample was collected in acid-washed 500 mL plastic bottle. Duplicate samples were taken per each sampling. Sample

location was marked on the bottle and suitable preservatives were added for storage till completion of quantitative chemical analysis. The bottle was filled to the brim with water taking care that no air bubble was trapped within the water sample. Samples were transferred to the laboratory in coolers containing ice to reduce the degradation of samples before analysis. Immediately after collection, samples were transferred to the laboratory.

- 34 One representative surface water sample was collected from a nearby pond of subproject site and another sample of groundwater was collected from a nearby drinking water tube well of subproject site to test their existing quality. This data will constitute the baseline information, which can be referred to in the construction/post construction monitoring at the subproject sites.

### **iii) Noise level**

#### ***Sampling procedure including monitoring duration, instrument etc.:***

- 35 The current noise levels along the proposed subproject sites have been measured during day (8am-9am, 12am-1pm & 6pm-7pm) time to identify existing noise level in the subproject area. A sound level meter/noise level meter was used to quickly determine the ambient noise level in the road construction site. The specification of sound level meter was: TES 1350A; Range: Low 35- 100dB, High 65-130dB.

### **C. Orientation Workshop for Contract Management (Environmental Safeguard Issues):**

- 36 Contract management meetings are being held at regular basis at PMCU or PIU level as well as site offices to disseminate information about subproject interventions and pertinent environmental safeguard issues related to road and drainage improvement under the subproject.

### **D. Institutional and community capacities strengthened Level**

#### **Community Consultations on the subproject IEEs:**

- 37 During field visit, local people living along the subproject road are informed through informal discussion about the followings: a) Information dissemination about the subproject, b) possible impacts of the subproject, c) participation of local people in different project activities, d) Employment potential for local people in the project works, e) Impact on social issues due to the project, and f) public Grievances Redressal Mechanism (GRM) etc. At this stage, no structured public consultations have been conducted.
- 38 It is to note that PIU and PDS consultants undertake field visit regularly for periodic monitoring and supervision of environmental safeguard compliances.

#### **Awareness Campaign on SWM**

- 39 In order to keep the waste treatment plant well running and getting benefit out of it, the wastes need to be properly segregated, collected and transported to the plant. So, all level of stakeholders must be oriented and motivated to segregate wastes at sources as per Waste Management By-laws 2021 and KCC will ensure collection and transportation of wastes from all the primary sources to secondary transfer station and finally to waste treatment plant. As most of the people are not informed about the Waste Management By-laws 2021 and aware of waste disposal in appropriate manner, KCC and CRDP-2 decided to organize an Awareness Campaign on SWM at 15 wards in KCC during the project period. Primarily two wards have been selected to organize Awareness Campaign on SWM on pilot basis to find out the appropriate modalities and financial requirements.

## 6. OCCUPATIONAL HEALTH SAFETY (OHS) ISSUES AND SITE SECURITY MEASURES

- 40 **Site-specific Security Measures:** The contractor should provide project workers with a safe and healthy workplace, taking into account inherent risks in its particular sector and specific classes of hazards that may be present. Where there are specific risks associated with certain work activities that could result in adverse effects on the health and safety of the workers and also nearby community.
- 41 In every subproject a designate a person responsible for OHS has been assigned who will implement the OHS plan. During the course of any work activity, the responsible person will ensure that project workers are dully qualified and competent to undertake assigned tasks, are provided with continued and appropriate supervision to ensure safe use of work equipment, and adequate implementation and enforcement of the OHS measures.
- 42 **Occupational and Community Health & Safety:** By and large, the Occupational and Community Health & Safety requirements for ADB Funded Urban Sector Projects include:
- a) Safe and healthy working conditions;
  - b) Prevent accidents, injuries; and
  - c) Preventive and emergency preparedness and response
- 43 **OHS Training Covering Toolbox Meeting:** All necessary trainings are being provided to all employees/workers, including contractors and subcontractors during the orientation meeting, working at the subproject construction site. These training basically include general induction, health and safety issues and job-specific training, as necessary. The Site Engineer/Supervisor is responsible for ensuring contractors and sub- contractors/employees work in a safe and healthy manner and are not harmed or do not cause harm to others while working at the construction work site. The topics/issues outlined in the table below are being covered in the on-site induction/training imparted to the employees and workers under the CRDP-2 subprojects:

**Table 6.1: Topics covered during the training to the employees and workers**

Topics addressed during induction/ orientation	Description	Yes	No	N/A
Introduction to the Job	Details of how to carry out the job safely, including welfare arrangements, HR contacts, emergency contacts and training requirements.	<input type="checkbox"/>		
Rights and responsibilities	General duties of employers, workers, and supervisors; worker right to refuse unsafe work and procedure for doing so; worker responsibility to report hazards and procedure for doing so	<input type="checkbox"/>		
Law, policy, safe systems of work, risk assessment	Employee's responsibilities, policies and procedures, and awareness of relevant risk assessments.	<input type="checkbox"/>		
Training	Arrange and provide necessary safety, environmental, compliance or policy/procedural training.	<input type="checkbox"/>		
OHS Management Plan for construction works under CRDP-2	Describe OHS Management Plan associated with health, safety & wellness policies for subproject construction works	<input type="checkbox"/>		

Topics addressed during induction/ orientation	Description	Yes	No	N/A
Emergency Procedures and arrangements	Discuss what to do and where to go in an emergency occasion: <ul style="list-style-type: none"> <li>• Fire - exits, assembly place, alarm points, use of fire extinguishers etc.</li> <li>• Demonstrate evacuation procedures</li> </ul>	<input type="checkbox"/>		
Reporting Accident / incident	Discuss procedures for reporting/investigating accidents and incidents at worksite	<input type="checkbox"/>		
Contractor's responsibilities	Discuss Contractor's responsibilities (safety precautions/ safety plan, compliance with relevant statutes, national OHS standards/regulations etc.)	<input type="checkbox"/>		
Violence in workplace (bullying/harassment)	Explain workplace bullying/harassment; measures to reduce the risk of violence in the workplace	<input type="checkbox"/>		
Hazardous Materials	Discuss the risk of hazardous materials use at workplace; how to handle, use, store, and make their safe disposal	<input type="checkbox"/>		
Personal Protective Equipment (PPE)	Discuss proper use and maintenance of PPE that must be worn during execution of the work	<input type="checkbox"/>		
First Aid Facility	Discuss what to do and where to go to have first aid help; what are the first aid provisions/ facilities/kits	<input type="checkbox"/>		
Toolbox meeting	Toolbox meeting is a brief to make everyone aware of safety protocols and tasks, work progress and potential challenges, and to address any issues before they escalate	<input type="checkbox"/>		
Potential Hazards	Discuss associated worksite hazards and safe work practices. Some of the potential hazards are: <ul style="list-style-type: none"> <li>• Falls from elevation (including ladder safety)</li> <li>• Scaffolding</li> <li>• Excavations and trenches</li> <li>• Confined spaces</li> <li>• Slips, trips, and falls</li> <li>• Environmental hazards</li> <li>• (e.g., noise, vibration, cold, sun, wildlife)</li> <li>• Electrical hazards</li> <li>• Chemical and biological hazards</li> <li>• Lack of pedestrian crossing</li> <li>• Potential traffic hazards/accidents</li> </ul>	<input type="checkbox"/>		





KCC W-01



Savar W-05

**Figure 6-1: OHS Training Covering Toolbox Meeting**

- 44 **Work Health and Safety Information:** All issued Work Health and Safety information together with minutes of Work Health and Safety related Meetings are being displayed on all Notice Boards in a timely manner.
- 45 **Health and safety management:** The management of OHS are in accordance with the general principles, which are applied to control work place hazards in order to:
  - Eliminate the risks;
  - Assess the risks, which cannot be avoided;
  - Reduce the risk at source;
  - Give priority to collective protective measures over individual protective measures;
  - Adapt the work to the individual, especially with regard to the design of work places and the choice of work equipment and production methods;
  - Adapt working methods to technical progress;
  - Develop a coherent overall prevention policy, which covers technology and work organization,
  - Give appropriate instructions to employees.
- 46 **Site- specific Occupational Health and Safety (OHS) Control Measures:** The site-specific occupational health and safety (OHS) control measures, which are being implemented at subproject sites, are delineated in the following table:

Type of Hazards	Control Measures
1. Falls from height	<ul style="list-style-type: none"> <li>• Implement guardrails, safety nets, and/or personal fall arrest systems</li> <li>• Provide appropriate ladders or scaffolds</li> <li>• Train workers on proper use of fall protection equipment</li> <li>• Regularly inspect and maintain fall protection equipment</li> </ul>
2. Struck by objects	<ul style="list-style-type: none"> <li>• Establish a safety zone around each work area</li> <li>• Ensure workers wear appropriate PPE, such as hard hats, safety glasses, safety boots, gloves etc.</li> <li>• Regularly inspect and maintain equipment</li> <li>• Use warning signs and signals to indicate work areas</li> </ul>
3. Electrocution	<ul style="list-style-type: none"> <li>• Identify electrical hazards and implement appropriate controls, such as grounding and circuit protection devices</li> <li>• Train workers on proper use of electrical equipment</li> <li>• Regularly inspect and maintain electrical equipment</li> <li>• Ensure proper use of PPE, such as insulated gloves and boots</li> </ul>
4. Trenching and excavation hazards	<ul style="list-style-type: none"> <li>• Ensure proper shoring or sloping of trenches</li> <li>• Provide proper access and egress to trenches</li> <li>• Train workers on proper excavation procedures and hazards</li> <li>• Regularly inspect and maintain trenching equipment</li> <li>• Use warning signs and barricades to indicate work areas</li> </ul>
5. Hazardous materials	<ul style="list-style-type: none"> <li>• Identify and label hazardous materials and establish appropriate controls for handling and disposal</li> <li>• Train workers on proper handling procedures for hazardous materials</li> <li>• Provide appropriate PPE, such as gloves, respirators, and protective clothing</li> <li>• Regularly inspect and maintain equipment used for handling hazardous materials</li> </ul>
6. Musculoskeletal disorders	<ul style="list-style-type: none"> <li>• Train workers on proper lifting and handling techniques</li> <li>• Encourage stretching and breaks to prevent repetitive strain injuries</li> <li>• Regularly inspect and maintain equipment to ensure it is in good working condition</li> </ul>

48 The site-specific occupational health and safety (OHS) control measures, which are implemented at subproject sites, are displayed underneath:







**Figure 6-2: Site-specific occupational health and safety (OHS) control measures at subproject sites.**

- 49 **Site-specific OHS implementation and monitoring:** To document the implementation status of site-specific OHS security measures at construction/camp site, the following checklist has been used. A sample filled-in checklists are included in the Annex 11 to demonstrate the site-specific OHS implementation and compliance status for subproject sites.
- 50 **Accident/Incident/Near miss Record at Construction sites:** As a part of OHS measures, it is required to record all environmental accident/incident/near miss that occur at the work site and brought to the attention of the Environmental Consultant / PIU Focal person / Site Engineer for action to take. In this regard, a sample form (Annex 11) has been provided to the contractor for recording accident/incident/near miss (if any occurrence takes place) that may occur at the construction site. However, it is worthwhile to point out here that no environmental incident/near miss was found to occur during this reporting period.
- 51 **Corrective Action:** Project/subproject construction management encourages and empowers all the workers and contractors to correct identified hazards, incidents and accidents, including near misses as soon as possible. With regard to the above context, construction management are to:
- Ensure all hazards, incidents and accidents, including near misses, are investigated fully and documented;
  - Take corrective action to eliminate the cause of the incident or accident to prevent recurrence; and
  - Review inspection reports to identify areas of improvement.

**Table 6.2: Supply of Personal Protective Equipment (PPE) at construction worksites**

Types of PPE	Description	Condition	Quantity available
1. Hard hat (Helmet)	A hard hat protects the head from falling objects.	Good	Sufficient
2. Eye protection	Eye protection such as goggles can protect your eyes from flying objects or chemicals	Good	Sufficient
3. Safety Gloves	Gloves protect your hands from cuts, burns, abrasions and other injuries.	Good	Sufficient
4. Ear plugs (Hearing)	Ear plugs is necessary when working around loud noise environment	Good	Sufficient



Types of PPE	Description	Condition	Quantity available
protection)			
5. Protective footwear (Boots)	Used to protect against foot injuries caused by falling objects or hot surfaces	Good	Sufficient
6. Dust Mask	Used to protect against dust environment (respiratory protection)	Good	Sufficient
7. Reflective Vests	Help prevent accident by increasing the chances of being seen and reducing the risk of collision	Good	Sufficient

**The Plan of Action:** For implementation of the Occupational Health and Safety Plan (OHS), the Site Management should assign responsibilities to designated persons with a defined time frame of implementation of these measures. The following table describes such action plan which may be termed as OHS Action Plan.

**Table 6.3: Occupational Health & Safety (OHS) Action Plan for Packages of CRDP-II**

Sl.	Concerned Issues	Responsible personnel/entity for Action	Monitoring Indicator	Time Frame/Frequency of Monitoring
1	Preparation of SEMP/EMP	PDSC	Number of SEMP/EMPs	Once before contract award
2	Preparation of Traffic Management Plan (TMP)	Contractor	Number of TMPs	Once during construction
3	Preparation of OHS including checklists	Contractor with support of PDSC	Completion of OHS Plan and Checklists	Once before construction begins
4	Inclusion of safety cost and clauses in BOQ and contracts	PMCU	Inclusion in BOQ and Contracts	Once before contract award
5	Formulation of OHS Plan Committee	PMCU	Existence of Committee	Once before construction begins
6	Pertaining OHS trainings	PMCU/PDSC	Number of Training	Twice, before construction and during construction
7	Supervision of construction works using OHS checklists	PMCU/PDSC	Submission checklist to PMCU	Bi-Weekly
8	Documentation of OHS incidents	Contractor/PDS C/PMCU	Incident register	As required
9	Complying OHS issues	Contractor/PDS C/PMCU	Field visits and checklists	As required
10	Reporting OHS compliances in the SEMR	PDSC/ PMCU	SEMR	Semi Annually

## 7. MONITORING OF ENVIRONMENTAL IMPACTS ON PROJECT SURROUNDINGS (AMBIENT AIR, WATER QUALITY AND NOISE LEVELS)

52 Environmental impacts during the of the sub-projects are mainly due to the construction activities. In CRDP-2 subprojects implementation phase environmental impacts throughout the construction period are not severe because:

- a) Most of the component works are relatively small and involve straight forward construction, so impacts (if any) are mainly localized and not significant;
- b) Most of the predicted impacts are associated with the construction process, and are produced because of the invasive nature of excavation activities and earth movements; and
- c) Subprojects development, being located in the built-up area of the rural and urban regions, will not cause direct impact on biodiversity values.

Identified general condition of surroundings at the project site	Action taken
a) Though noted no notable dust generation at the subproject construction site and in its surrounding areas	The contractor was found to exercise routine dust suppression measures by spraying water intermittently over the dust generating loose soil surfaces, and accordingly maintaining Dust Suppression Log Chart (sample log charts are in Appendix 6)
b) No muddy water was found to escaping site boundaries or any muddy tracks could be seen at road adjacent areas.	Requires no special attention
c) No noticeable erosion and sedimentation issue encountered at construction site	Requires no special attention
d) Secured stockyard was found to exist.	Appended EMP compliance monitoring sample checklists including few random environmental compliance snap shots from field monitoring sites (Appendix 4), and summary of field findings on EMP compliances (Appendix 5) may be seen for overall appraisal of environmental safeguard compliances.
e) Noticed more or less proper stocking and management of construction materials.	
f) Noticed adequate provision of sanitation and water supply facilities at labor camp/site office.	
g) Noticed installation of safety barrier/barricade alongside the vertical cut and excavation of the road under improvement	
h) Noticed installation of regulatory safety/warning signs and signals at the construction sites to avoid risk of accident, and signalman was found to controlling the traffic	
i) Noticed installation of diversions/dedicated pathways for pedestrians.	Occupational Health and safety (OHS) Measures A separate section on occupational health and safety (OHS) covering site security measures, workers' health, site-specific OHS control measures undertaken at worksite /OHS monitoring checklist, PPE inventories, medical and first aid provision, OHS training covering toolbox meeting etc. has been included in Sec. VI.

Identified general condition of surroundings at the project site	Action taken
j) Noticed erection/installation signboard with subproject contract details.	
k) Subprojects construction activities are reported to undertake within the stipulated time space of 8.00 am to 6.00 pm.	

- 53 As per IEE report and SEMR Template (provided as Appendix in IEE Report) and agreed upon with ADB, the environmental monitoring parameters shall include ambient air, water (both surface- & ground-water) and noise level. According to contract document, at the start of the construction, subproject contractors are required to conduct the environmental quality tests for ambient air, surface- & ground-water quality and noise levels of subproject surroundings for assessing the baseline environmental quality of the subproject surrounding areas. With the progress of the construction works of the subproject, the environmental quality will require to be tested semi-annually during the construction period. These tested results will then be compared with the baseline data in order to assess the impact of construction works on project surroundings (ambient air, water quality and noise level).
- 54 For the purpose of environmental baseline data, sampling and analysis of the required environmental parameters of 5 (five) subprojects have been done. The details of sampling date and location are provided in the table here under. Sampling location map showing monitoring sites are displayed in the Figure 6.1 below. For the sake of brevity, not all the lab test results for ambient air and water quality and noise level are included in this report. As sample, only the test results of 2 (two) subprojects for baseline and 1 (one) subproject for end line are presented in Appendix 16 of this report. Further the monitoring plan for environmental quality test of on-going construction packages is given in Appendix 10.

**Table 7.1: Date and Sampling Location of various environmental components of subprojects**

Sl. No	Name of Subproject Road and Package	Sampling Date	Sampling Locations (Coordinates) for various Environmental Components			
			Air	Noise	Surface Water	Ground Water
1	Rupshi GC-Kanchan GC (Rupganj/w-01)	11/08/2023 (Endline)	23°46'55"N 90°31'11"E	23°46'55.77"N 90°31'12.26"E	23°46'51.04"N 90°31'3.41"E	23°46'56.68"N 90°31'11.47"E
2	Porshi GC – Murapara GC (Rupganj/w-04)	13/08/2023 (Baseline)	23°46'45"N 90°30'43"E	23°46'46.055"N 90°30'43.312"E	23°46'50.481"N 90°30'47.553"E	23°46'48.473"N 90°30'45.237"E
3	Bangshinagar WTP to Alraji Textile Mill (Tarabo/w-01)	25/10/2023 (Endline)	23°45'47 "N 90°32'1 "E	23°45'47.357"N 90°32'1.029"E	23°45'47.457"N 90°32'1.119"E	23°45'40.633"N 90°32'1.485"E
4	Dhaka-Aricha Highway to Kalma (Savar/w-01)	20/10/2023 (Endline)	23°51'9"N 90°16'6"E	23°51'8.24"N 90°16'4.43"E	23°51'13.24"N 90°16'18.35"E	23°51'8.56"N 90°16'6.04"E
5	Nayarhat GC to Savar GC (Savar/w-02)	19/10/2023 (Endline)	23°53'6"N 90°14'34"E	23°53'5.61"N 90°14'34.16"E	23°53'5.32"N 90°14'34.30"E	23°53'5.82"N 90°14'35.51"E

Sl. No	Name of Subproject Road and Package	Sampling Date	Sampling Locations (Coordinates) for various Environmental Components			
			Air	Noise	Surface Water	Ground Water
	Nayarhat GC to Savar GC (Savar/w-02)	20/03/2021 (Baseline)	23°53'6"N 90°14'34"E	23°53'5.61"N 90°14'34.16"E	23°53'5.32"N 90°14'34.30"E	23°53'5.82"N 90°14'35.51"E

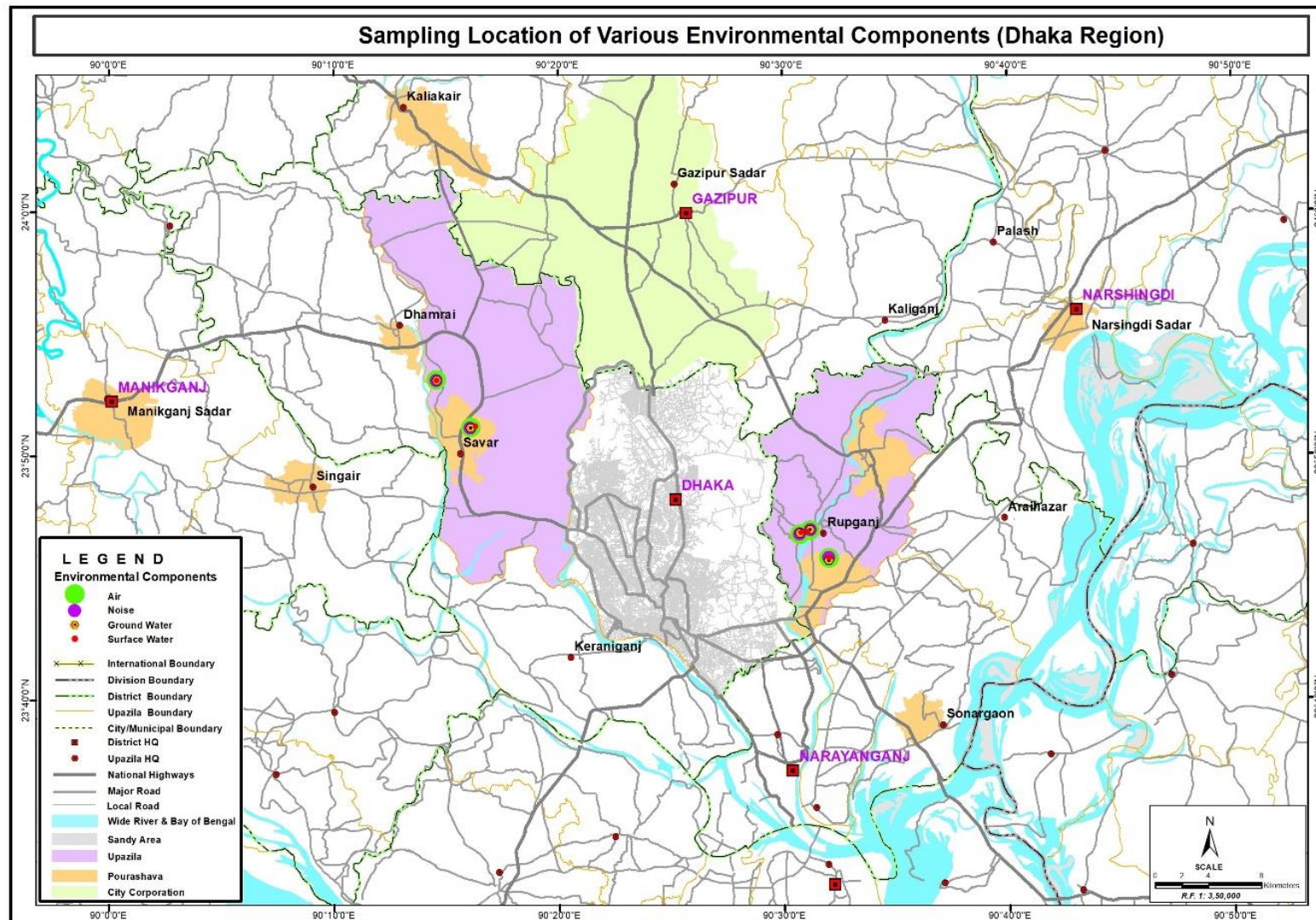


Figure 7-1: Location of the monitoring sites of environmental parameters (Dhaka Region)

## **Analytical results and analysis of the ambient air, water quality and noise levels**

### **a) Air quality**

- 55 To assess the base data (at the start of the subproject construction) of the ambient air quality, certain air pollutant parameters of the selected subproject sites were tested. Ambient air quality monitoring results (baseline data) after the conversion at and around the proposed subproject sites including the time average of each Ambient Air Quality Standards as per Air Pollution Control Rules, 2022 are presented in Table 7.2.
- 56 It is found, by comparing with the standard limit of Bangladesh Air Pollution Control Rules (APCR), 2022, that the gaseous pollutant such as CO remain well within permissible limit in all subproject sites, but the NO<sub>x</sub> at four locations and SO<sub>x</sub> at three locations have recorded somewhat slightly higher values than the permissible limit of APCR 2022 along the subproject alignment. The higher NO<sub>x</sub> and SO<sub>x</sub> values in the selected subproject sites may be due to fossil fuel combustion emissions from the traffic from trucks and vehicles from adjoining highway roads and emissions from nearby industries may also contribute to the effect. The motorized vehicles installed with catalytic converter will reduce the concentration of NO<sub>x</sub> and SO<sub>x</sub> as the converter helps near complete combustion of fuels. Release of treated and controlled industrial emission may help minimize higher concentration of NO<sub>x</sub> and SO<sub>x</sub>. The recorded values for SPM is higher only in Rupganj w-01 and w-04 subproject, PM<sub>2.5</sub> and PM<sub>10</sub> is higher than the set standard in all the 5 (five) subproject sites.



**Table 7.2: Ambient Air Quality Monitoring Results (baseline data) after conversion at and around the proposed subproject site**

Pollutants/ Parameters	Unit	Concentrations of Ambient Air Quality at subproject sites															Ambient Air Quality Standards as per Air Pollution (Control) Rules, 2022 *		WHO Guidelines
		Rupganj/w-01			Rupganj/w-04			Savar/w-01			Savar/w-02			Tarabo/w-01			Value	Duration (time average)	
		Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg			
CO	ppm	0.020	0.036	0.024	0.300	1.160	1.000	0.010	0.030	0.020	0.010	0.030	0.020	0.000	0.010	0.005	5 mg/m <sup>3</sup> (4.5 ppm)	8 hr.	10 µg/m <sup>3</sup>
																	20 mg/m <sup>3</sup> (17.5 ppm)	1 hr.	
CO <sub>2</sub>	ppm	522	690	610	510	681	639	640	662	655	640	682	652	663	675	668	NYS	NYS	NYS
NO <sub>x</sub> (NO+NO <sub>2</sub> )	ppm	0.042	0.093	0.060	0.041	0.088	0.062	0.043	0.065	0.055	0.049	0.053	0.050	0.039	0.048	0.046	40 µg/m <sup>3</sup> (0.021 ppm)	Annual	40 µg/m <sup>3</sup> (1 hr.)
																	80 µg/m <sup>3</sup> (0.043 ppm)	24 hr.	
SO <sub>2</sub>	ppm	0.014	0.048	0.029	0.010	0.050	0.030	0.010	0.040	0.030	0.012	0.032	0.025	0.010	0.040	0.020	80 µg/m <sup>3</sup> (0.03 ppm)	24 hr.	20 µg/m <sup>3</sup> (24 hr.)
																	250 µg/m <sup>3</sup> (0.096 ppm)	1 hr.	
SPM	µg/m <sup>3</sup>	120.1	215.7	175.5	181.1	278.7	251.5	111.1	152.7	144.5	130.1	165.7	154.5	148.1	178.7	164.5	200 µg/m <sup>3</sup>	Annual	
PM <sub>10</sub>	µg/m <sup>3</sup>	88.2	181.8	141.5	125.8	231.8	181.5	90.2	138.8	122.5	122.2	149.8	138.5	127.2	159.8	152.5	50 µg/m <sup>3</sup>	Annual	50 µg/m <sup>3</sup> (Annual)
																	150 µg/m <sup>3</sup>	24 hr.	
PM <sub>2.5</sub>	µg/m <sup>3</sup>	64.1	90.2	79.8	87.6	145.2	99.2	60.1	99.2	86.4	68.1	94.2	77.4	64.1	82.2	75.4	35 µg/m <sup>3</sup>	Annual	25 µg/m <sup>3</sup> (24 hr.)
																	65 µg/m <sup>3</sup>	24 hr.	
Temperature	°C	29	32	31	26	29	27	31	34	32	27	29	26	26	29	27	-	-	-
Relative Humidity	%	81	87	85	79	81	80	52	58	55	64	67	66	72	77	75	-	-	-

## b) Surface and Groundwater Water quality

- 57 This data will constitute the baseline information, which can be referred to in the construction/post construction monitoring at the subproject sites. The indicated surface and ground water test results are presented below in the Tables 7.3&7.4respectively.

### Surface Water

- 58 The test results show that the levels of pH, BOD, 20°C (5 days) levels and total Coliform count of collected surface water samples are within the standard set by ECR-2023, and the parameters COD, Fe, Mn, As, NO<sub>3</sub>-N and Chloride are also found to be within the acceptable limits as per Bangladesh Environmental Conservation Rules 2023\*. Only the DO of the all tested subprojects shows slightly higher results than the standard value.

**Table 7.3: Surface Water quality test results at the proposed subproject sites**

Subproject Site/area	pH	EC μS/cm	DO mg/l	BOD <sub>5d</sub> mg/l	COD (mg/l)	TSS mg/L	TDS mg/L	Fe mg/l	Mn mg/l	As ppb	Turbidity NTU	NO <sub>3</sub> - N mg/l	Cl- mg/l	Total Coliform cfu/100ml
Rupganj/w-01	7.80	101.5	5.48	1.08	4.35	8.27	86	0.091	0.016	<2.0	11.25	0.19	9.72	54
Rupganj/w-04	7.88	91.5	5.35	0.65	3.58	6.27	76	0.019	0.012	<2.0	10.60	0.38	2.26	58
Savar/w-01	7.32	158.5	5.08	1.36	13.35	12.27	233.8	0.088	0.021	<2.0	12.20	4.09	41.74	3.6 x 10 <sup>3</sup>
Savar/w-02	7.22	111.5	5.28	0.90	3.35	11.27	140.8	0.095	0.016	10.27	13.25	4.23	25.05	1.8 x 10 <sup>2</sup>
Tarabo/w-01	7.52	224.5	5.11	1.20	4.26	14.77	288.8	0.026	<0.002	4.56	15.15	<0.50	97.83	2.16 x 10 <sup>3</sup>
<b>Standard values as per Bangladesh Environmental Conservation Rules 2023*</b>	<b>6-9</b>	<b>NYS</b>	<b>≥ 5</b>	<b>≤ 3</b>	<b>25</b>	<b>NYS</b>	<b>1000</b>	<b>NYS</b>	<b>NYS</b>	<b>NYS</b>	<b>NYS</b>	<b>7.0</b>	<b>NYS</b>	<b>5000 or less</b>

\*SRO No. 53/Law/2023 dated 5 March 2023 issued by the Ministry of Environment, Forests and Climate Change on "Environmental Conservation Rules 2023"

### Ground Water

- 59 As per documented results, the tested parameters pH, DO, As, chloride and TDS values of all subproject sites are within the permissible limit as per set standard of ECR, 2023, but Mn level recorded higher value for Rupganj/w-04. The recorded higher Mn value (0.958 ppm) than the ECR-2023 set permissible level (0.400 ppm) may be explained by the fact that the source tube-wells of subproject area are relatively shallow (i.e. having their depths are within the range 100-150m). Mn of these source tube-wells are likely to record values higher than the permissible limit. In this context, the Article "Occurrence of manganese in groundwater of Bangladesh and its implications on safe water supply" may be referred [Journal Civil Engineering (IEB), 38(2) (210) 121-128]. The higher values can supposedly be mitigated by sinking the respective tube well pipes to the depth of >150m. Furthermore, BOD, 20°C (5 days), Fe, nitrate and TDS values of groundwater samples are either nil or within the set standard limit. Additionally, on the basis of BOD levels (Banerji, 1997 & Biney, 1982), it may be mentioned that the tested groundwater sample falls under the category unpolluted (BOD < 4 mg/l).
- 60 As considering ADB's recommendation, tests of Total Coliform (TC) and Fecal Coliform (FC) was performed for all groundwater samples and these findings are included here.



**Table 7.4: Ground Water quality test results of the proposed subproject sites**

Subproject Site/area	pH	EC (µs/Cm)	DO (mg/l)	BOD <sub>5d</sub> (mg/l)	COD (mg/l)	TSS (mg/l)	TDS (mg/l)	Fe (mg/l)	Mn (mg/l)	As (ppb)	Cl <sup>-</sup> (mg/l)	NO <sub>3</sub> (mg/l)	Turbidity NTU	Fecal Coliform (FC)	Total Coliform (TC)
Rupganj/w-01	7.46	418.7	6.90	nil	nil	nil	345	0.015	0.261	11.41	41.52	<0.50	4.0	0	0
Rupganj/w-04	7.65	386.7	6.80	nil	nil	nil	245	0.006	0.958	<2.0	41.5	1.68	2.5	0	0
Savar/w-01	7.10	122.7	7.19	nil	nil	nil	188.5	0.045	0.29	<2.0	17.99	1.73	2.0	0	0
Savar/w-02	7.14	101.7	6.99	nil	nil	nil	111.5	0.055	0.013	<2.0	2.66	<0.50	2.0	0	0
Tarabo/w-01	7.76	383.7	7.10	Nil	nil	nil	556.5	0.021	0.006	2.45	20.39	<0.50	2.0	0	0
<b>Standard values as per Bangladesh Environmental Conservation Rules 2023*</b>	<b>6.5-8.5</b>	<b>NYS</b>	<b>6.0 or above</b>	<b>NYS</b>	<b>NYS</b>	<b>10</b>	<b>1000</b>	<b>0.3 -1.0</b>	<b>0.4</b>	<b>50.0</b>	<b>250</b>	<b>45.0</b>	<b>5</b>	<b>0</b>	<b>0</b>

\*SRO No. 53/Law/2023 dated 5 March 2023 issued by the Ministry of Environment, Forests and Climate Change on "Environmental Conservation Rules 2023"

## Noise level

- 61 Noise is another potentially threat to the quality of an environment. Noise levels vary at the given locations according to ambient noise. The background noise level at the subproject area is primarily due to the movement of road traffic. The noise level will vary depending on the traffic volume, vehicle type, road surface conditions, and other factors. However, the noise level is likely to become higher after the improvement of the proposed subproject roads and bridges since the movement of increased number of motorized vehicular traffic will take effect.
- 62 The current noise levels along the proposed subproject sites have been measured during day (8am-9am, 12am-1pm & 6pm-7pm) time to identify existing noise level in the subproject area and results are given in the Table 7.5 here below. According to the result of noise level, it is observed that the measured levels of noise at subproject sites (mixed areas- used as residential, commercial and industrial purposes) are more or less within the standard limit set by DoE and Bangladesh Noise Pollution (Control) Rules, 2006. According to WHO Guidelines, human tolerance limit for comfortable hearing is at noise level 75 dBA. In this context, it can be mentioned that the proposed subproject sites are seemingly free from noise disturbances at present. The tested noise level data can be used as a benchmark of noise level, and can be referred to in the construction and post-construction monitoring.

**Table 7.5: Environmental noise level data of subproject sites**

Subproject sites	Time						Daytime dB(A) Leq	Bangladesh Noise Pollution Control Rules, 2006	
	0800 - 0900		1200 -1300		1800 - 1900			Residential Area	Mixed Area
	Min dBA	Max dBA	Min dBA	Max dBA	Min dBA	Max dBA			
Rupganj/w-01	43.5	66.1	45.2	71.6	44.7	70.4	53.11	50 dBA at Day Time and 40 dBA at Night time	60 dBA at Day Time and 50 dBA at Night Time
Rupganj/w-04	42.5	68.1	44.2	73.6	43.7	72.4	55.74		
Savar/w-01	44.5	65.1	46.2	70.6	47.7	72.4	54.20		
Savar/w-02	44.5	62.1	45.2	68.6	44.7	67.4	53.40		
Tarabo/w-01	47.5	65.1	47.2	67.7	46.7	67.5	53.85		

*Note: According to the Bangladesh Noise Pollution (Regulation and Control) Rules, 2006, acceptable sound levels are 55 decibels (dBA) for day time (6 am to 9 pm), and 45 dBA for night time (9 pm to 6 am) in residential areas; 50 dBA for day time and 40 dBA for night in quiet places; 60 dBA for day time and 50 dBA for night in mixed areas; 70 dBA for day time and 60 dBA for night in commercial areas; and 75 dBA for day time and 70 dBA for night in industrial areas.*

- 63 It is practical to point out here that Night time noise measurement has purposely been excluded, as the movement of motorized vehicular traffics in the nighttime is very limited in the subproject area, and in consequent, nighttime traffic will not cause any significant noise pollution. As the road construction subproject site is adjacent to the mixed areas, therefore the noise level monitored is compared with the mixed category of the National standard of DoE. It is relevant here to point out that no construction work was undertaken at subproject sites during night time.
- 64 The results of the day time measured noise level in the subproject areas range between 53.11 to 55.74dBALeq (as per Leq calculation). From the measured data, it appears that the sound level is almost equivalent to continuous sound level 60 dBA at Daytime, and this agrees well with DoE's recommended noise level for mixed areas. Thus, it can be concluded that the subproject area/s appears to be free from noise disturbances at present.

**Comparison between Baseline Environmental Quality Data (ambient air, water quality and noise levels) and the corresponding Monitoring Results of end line (at conclusion of construction phase) of Savar/w-02 subproject site**

- 65 For the purpose of environmental quality data of end period of construction phase, sampling and analysis of the required environmental parameters has been done. The details of sampling date and location are provided in the table here under:

Sl. No	Name of subproject Roads	Sampling date	Sampling Locations (Coordinates) for various Environmental Components			
			Air	Noise	Surface Water	Ground Water
1.	Nayarhat GC to Savar GC (Savar/w-02)	20/03/2021 (Baseline) 19/10/2023 (Endline)	23°53'6"N 90°14'34"E	23°53'5.61"N 90°14'34.16"E	23°53'5.32"N 90°14'34.30"E	23°53'5.82"N 90°14'35.51"E

a) **Air quality**

- 66 Ambient Air Quality Monitoring Technique used during end of construction phase is the same as that of Baseline Monitoring Technique. Ambient air quality monitoring data (baseline data) and their corresponding monitoring results at the end period of construction phase of proposed subproject sites after the conversion including the time average of each standard are presented in Table 7.6 and reference for the amended air quality standard of ECR-2023 are presented in the table below.

***Table 7.6: Environmental Air Quality Baseline Data and their corresponding Monitoring Results after conversion of proposed subproject sites***

Pollutants/ Parameters	Unit	Concentrations of Ambient Air Quality at subproject site Savar/w-02						Ambient Air Quality Standards as per Air Pollution (Control) Rules, 2022 *		WHO Guidelines
		Baseline			Endline			Value	Duration (time average)	
		Min	Max	Avg	Min	Max	Avg			
CO	ppm	0.012	0.036	0.023	0.010	0.030	0.020	5 mg/m <sup>3</sup> (4.5 ppm)	8 hr.	10 µg/m <sup>3</sup>
								20 mg/m <sup>3</sup> (17.5 ppm)	1 hr.	
CO <sub>2</sub>	ppm	626	667	646	640	682	652	NYS	NYS	NYS
NOx (NO+NO <sub>2</sub> )	ppm	0.041	0.044	0.043	0.049	0.053	0.050	40 µg/m <sup>3</sup> (0.021 ppm)	Annual	40 µg/m <sup>3</sup> (1 hr.)
								80 µg/m <sup>3</sup> (0.043 ppm)	24 hr.	
SO <sub>2</sub>	ppm	0.018	0.032	0.021	0.012	0.032	0.025	80 µg/m <sup>3</sup> (0.03 ppm)	24 hr.	20 µg/m <sup>3</sup> (24 hr.)
								250 µg/m <sup>3</sup> (0.096 ppm)	1 hr.	
SPM	µg/m <sup>3</sup>	97	112	105	130.1	165.7	154.5	200 µg/m <sup>3</sup>	Annual	
PM <sub>10</sub>	µg/m <sup>3</sup>	87	98	93	122.2	149.8	138.5	50 µg/m <sup>3</sup>	Annual	50 µg/m <sup>3</sup> (Annual)
								150 µg/m <sup>3</sup>	24 hr.	
PM <sub>2.5</sub>	µg/m <sup>3</sup>	51	69	+57	68.1	94.2	77.4	35 µg/m <sup>3</sup>	Annual	25 µg/m <sup>3</sup> (24 hr.)
								65 µg/m <sup>3</sup>	24 hr.	
Temperature	°C	29	32	31	27	29	26	-	-	-
Relative Humidity	%	40	46	42	64	67	66	-	-	-

- 67 Taking into account the conversion data of the real-time data, a comparison has been made between baseline environmental air quality data and their corresponding Monitoring data of end line (at the conclusion of construction phase) to assess any impact of subproject construction on ambient air quality of subproject site Savar W-02. The recorded baseline and end line air quality data for CO, CO<sub>2</sub>, SO<sub>2</sub> and SPM are more or less similar and fall within the set standard of Air Pollution (Control) Rules, 2022. On the other hand, NO<sub>x</sub>, PM<sub>2.5</sub> and PM<sub>10</sub> yielded somewhat higher values for end line but within the permissible limit. The noted higher values of NO<sub>x</sub>, PM<sub>2.5</sub> and PM<sub>10</sub> are presumably temporary impact from subproject construction activities. Now, based on the above indicators and their recorded results, it may be mentioned that the subproject construction yielded negligible impact on the overall ambient air quality of subproject environment.

**b) Surface and Groundwater Water quality**

- 68 Sampling procedure including sample preservation Technique used during end of construction phase is the same as that of baseline monitoring technique. The indicated surface and ground water quality test results are presented below in the **Tables 7.7&7.8** respectively.

**Surface water:**

- 69 The test results show that the levels of pH, BOD, 20°C (5 days) levels and total Coliform count of collected surface water samples are within the standard set by ECR-2023, and the parameters COD, Fe, Mn, As, NO<sub>3</sub>-N & Chloride are also found to be within the acceptable limits set by ECR-2023 standards. Only DO shows slightly higher values than standard limit. From the Table 6.7 it is evident that due to construction work TSS, TDS and turbidity of the surface water increased than baseline condition, which may be settled down after full completion of construction work.

**Table 7.7: Environmental Surface water Quality Baseline Data and their corresponding Monitoring Results (end period of construction phase) of proposed subproject sites**

Subproject Site/area	pH	EC μS/cm	DO mg/l	BOD <sub>5d</sub> mg/l	COD (mg/l)	TSS mg/L	TDS mg/L	Fe mg/l	Mn mg/l	As ppb	Turbidity NTU	NO <sub>3</sub> - N mg/l	Cl- mg/l	Total Coliform cfu/100ml
Baseline	7.16	101.7	5.20	0.53	3.18	7.12	136.6	<2.0	<2.0	4.52	10.68	4.84	8.22	1.2 x 10 <sup>2</sup>
Endline	7.22	111.5	5.28	0.90	3.35	11.27	140.8	0.095	0.016	10.27	13.25	4.23	25.05	1.8 x 10 <sup>2</sup>
<b>Standard values as per Bangladesh Environmental Conservation Rules 2023*</b>	<b>6-9</b>	<b>NYS</b>	<b>≥ 5</b>	<b>≤ 3</b>	<b>25</b>	<b>NYS</b>	<b>1000</b>	<b>NYS</b>	<b>NYS</b>	<b>NYS</b>	<b>NYS</b>	<b>7.0</b>	<b>NYS</b>	<b>5000 or less</b>

**Ground Water**

- 70 As per documented results, the tested parameters pH, DO, As, chloride and TDS values are within the permissible limit as per set standard of ECR-2023. Further BOD, 20°C (5 days), COD, Fe, Mn, nitrate and TDS values of groundwater samples are either nil or within the set standard limits as per Standard values of Bangladesh Environmental Conservation Rules 2023 (ECR, 2023).
- 71 Comparison between baseline ground water quality data and their corresponding monitoring data of end line (at the conclusion of construction phase) of the Savar W-02 subproject sites provides very similar results and well within the DoE set standard values. Therefore, it can be concluded that subproject construction works have no impact on the ground water quality

of the subproject environment.

**Table 7.8: Environmental Ground Water Quality Baseline Data and their corresponding Monitoring Results (end period of construction phase) of proposed subproject sites**

Subproject Site/area	pH	EC (µs/Cm)	DO (mg/l)	BOD <sub>5d</sub> (mg/l)	COD (mg/l)	TSS (mg/l)	TDS (mg/l)	Fe (mg/l)	Mn (mg/l)	As (ppb)	Cl <sup>-</sup> (mg/l)	NO <sub>3</sub> (mg/l)	Turbidity NTU	Fecal Coliform (FC)	Total Coliform (TC)
Baseline	7.06	99.8	7.12	nil	1.02	nil	99.5	<2.0	<2.0	3.12	6.58	nil	-	-	-
Endline	7.14	101.7	6.99	nil	nil	nil	111.5	0.055	0.013	<2.0	2.66	<0.50	2.0	0	0
Standard values as per Bangladesh Environmental Conservation Rules 2023*	6.5-8.5	NYS	6.0 or above	NYS	NYS	10	1000	0.3 - 1.0	0.4	50.0	250	45.0	5	0	0

### Noise level

- 72 Sampling procedure including monitoring duration employed during end of construction phase is same as that of baseline monitoring technique. The identified noise levels in the subproject area during end of construction phase are given in the Table 7.9 below. As per noise level data, it is found that the measured levels of noise at subproject site (mixed areas-used as residential, commercial and industrial purposes) are more or less within the standard limit set by DoE and Bangladesh Noise Pollution (Control) Rules, 2006. According to WHO Guidelines, human tolerance limit for comfortable hearing is at noise level 75dBA. In this context, it can be mentioned that the proposed subproject sites are seemingly free from noise disturbances.

**Table 7.9: Environmental Noise Level Baseline Data and their corresponding Monitoring Results (end period of construction phase) of proposed subproject sites**

Subproject sites	Time						Daytime dB(A) Leq	Bangladesh Noise Pollution Control Rules, 2006	
	0800 - 0900		1200 -1300		1800 - 1900			Residential Area	Mixed Area
	Min dBA	Max dBA	Min dBA	Max dBA	Min dBA	Max dBA			
Baseline	48.5	59.7	52.4	69.2	50.4	67.0	-	50 dBA at Day Time and 40 dBA at Night time	60 dBA at Day Time and 50 dBA at Night Time
Endline	44.5	62.1	45.2	68.6	44.7	67.4	53.40		

**Note:** According to the Bangladesh Noise Pollution (Regulation and Control) Rules, 2006, acceptable sound levels are 55decibels (dBA) for day time (6 am to 9 pm), and 45 dBA for night time (9 pm to 6 am) in residential areas; 50 dBA for day time and 40 dBA for night in quiet places; 60 dBA for day time and 50 dBA for night in mixed areas; 70 dBA for day time and 60 dBA for night in commercial areas; and 75 dBA for day time and 70 dBA for night in industrial areas.

- 73 As the road construction subproject site is adjacent to the mixed areas, therefore the noise level monitored is compared with the mixed category of the National standard of DoE. It is relevant here to point out that no construction work was undertaken at subproject sites during night time.
- 74 Comparison between baseline environmental quality data (ambient air, water quality and noise levels) and their corresponding monitoring results of end period of construction phase of SavarW-02 subproject sites provides more or less similar results. Therefore, it can be



concluded that subproject construction works have no significant effect on the overall environmental quality.



Surface water sample collection



Noise level monitoring



Ground water sample collection



In-situ water sample data collection

**Figure 7-2: Environmental monitoring data collection from site**

## 8. GRIEVANCE REDRESS MECHANISM

- 75 Within 12 months after the Effective Date, LGED has prepared a Grievance Redress Mechanism, acceptable to ADB, and established a special committee to receive and resolve complaints/grievances or act upon reports from stakeholders on misuse of funds and other irregularities, including grievances due to resettlement. The special committee is to
- make public of the existence of this Grievance Redress Mechanism,
  - review and address grievances of stakeholders of the Project, in relation to either the Project, any of the service providers, or any person responsible for carrying out any aspect of the Project; and
  - proactively and constructively responding to them.
- 76 Second CRDP has adopted the grievance redress mechanism (GRM) as that of the first CRDP. The GRM is being implemented in three levels (for details, IEE Report may be consulted). Exercising this participatory process/mechanism, all views of the people/stakeholders are adequately reviewed and suitably incorporated in the project design. The GRM provides redress for grievance arising from resettlement, compensation and environmental impact during subproject implementation. Other aspects of the GRM are being progressively complied with.
- 77 The Grievance Redress Committees (GRC) have been formed on June 07, 2020 vide memo no.46.068.005.00.00.018.2020-455 in local governments where subprojects are under construction. This Office order in Bangla (Appendix 3) outlines the composition and capacity of GRC to address project-related issues/complaints.

### GRC functioning at CRDP-2 sites for resolving the complaints 1st Level GRC (at Local Level)

Sl.	Members	Designation	Responsibility/Scope of work of 1st Level GRC
1	Assistant Engineer of concerned PIU	Chairman	<ul style="list-style-type: none"> <li>Document the grievances of affected persons (AP) and resolved these through continuous interactions,</li> <li>Once the grievances of AP is received/reported, these to be resolved within 7(seven) days of receipt of the complaint,</li> <li>Make aware the Aps regarding land acquisition, structures acquisition, livelihood impacts, entitlements, and various assistances related to the above,</li> <li>All grievances will be documented with full information of the person and issue,</li> <li>Resolved grievances and other related records and minutes of meeting are to preserve properly, and make the Project Director aware this through the Mayor.</li> </ul>
2	Consultant of CRDP-II (Safeguard Specialist)	Member	
3	Environmental/Social Safeguard Focal Officer of concerned PIU	Member Secretary	

### 2nd Level GRC (at Local Level)

Sl.	Members	Designation	Responsibility/Scope of work of 2nd Level GRC
1	Chief Executive Officer/Secretary of concerned PIU	Chairman	<ul style="list-style-type: none"> <li>Provide support to affected persons on problems arising from</li> <li>land acquisition (temporary or permanent),</li> </ul>

Sl.	Members	Designation	Responsibility/Scope of work of 2nd Level GRC
2	Representative of the Mayor of concerned PIU	Member	asset acquisition and eligibility for entitlements, compensation and assistance, <ul style="list-style-type: none"> <li>• If any affected person's claim of loss is valid under the context of statutory laws pertaining to relocation, the committee must help the complainant in being recompensed by the project authority,</li> <li>• Record grievances of affected persons, categorize and prioritize them and provide solutions within 30 days from receipt of grievance from the first level,</li> <li>• Report to the aggrieved parties about developments regarding their grievances and decisions of the GRC,</li> <li>• The progress of resolve and decisions made by GRC related to the grievances of the complainant must be informed to the PD through the Mayor of the Pourashavas,</li> <li>• The GRC must hold at least two meetings a month. The number of meetings held maybe increased or decreased based on the existing number of unresolved cases and making discussion with the PD.</li> </ul>
3	Representative of Affected Persons of concerned PIU	Member	
4	Official Representative of the land registry department	Member	
5	Official Representative of the DOE Divisional Office	Member	
6	Town planner of the Pourashava or City Corporation	Member	
7	Environmental/social safeguard Focal Officer of concerned Pourashava	Member Secretary	

- 78 In connection to the GRC committee established and functioning at CRDP-2 sites, as a sample, Rupganj GRC is displayed in Appendix 9.

**Measures undertaken to publicize the GRM among the local people reside in the project area:**

- 79 The measures undertaken to publicize the GRM among the local people reside in the project area are as follows:
- The contact numbers of key personnel of project Safeguard Team (consists personnel from PMCU, PIU and Consultants) who are assigned to safeguarding project issues, are posted in the project areas and at PMCU and PIU notice boards.
  - All grievances are being documented, with full information of the affected person, in a register. The register will kept/available at the project site.
  - The project signboards contain the necessary contact information (i.e. email address, contact number, etc.) of the nodal person responsible for assisting grievance readdressing for the project
  - The GRM among the local people are discussed at the focal group discussion meeting
- 80 Prepared Sample grievance redress form for the project has been included in the Appendix 7. The IEE reports of subprojects also include this Sample grievance redress form.



## **9. COMPLAINTS RECEIVED DURING SUBPROJECT IMPLEMENTATION**

- 81 No complaint was received from the community or from any individual of the community at the construction site. However, during monitoring field visits, in some cases poor initiative was noticed in suppressing dust pollution by spraying plentiful water on dry surfaces of construction sites. Taking into consideration this issue, contractor's site engineer/supervisor was suggested to use dust suppression log chart to demonstrate routine spraying of water on dry surfaces at construction sites.

## 10. SAFEGUARD STATUS OF THE SUBPROJECTS

### Awareness campaign on Integrated Solid Waste Management (SWM) in KCC

- 82 The following activities were performed to complete the total process of awareness campaign on SWM in 7 Wards of KCC during the period of July to December 2023:
- 83 A series of meetings were held with KCC representatives to agree on the proposed implementation plan. The honorable Mayor of KCC gave his clearance to work in 10 selected Wards # 5, 10, 21, 12, 13, 9,16,17,18, and 22. The activities performed in the awareness campaign in this reporting period is summarized in the following table:

**Table 10.1: Activities Performed in Awareness Campaign in Selected Wards of KCC**

Phase	Period	Ward #	Area	Activities		
				HH Visit	School	Market
IV	Jul-Aug 2023	18	Sonadanga	5,774	3	2
		22	Snoadanga N	5,833	3	1
V	Sep-Oct 2023	24	Nirala	6,579	3	1
		26	Bagmara	5,930	2	-
		27	Dolkhola	5,890	2	-
VI	Nov-Dec 2023	30	Chanmari	5,903	1	1
		31	Labanchara	6,000	-	1
	Total	7 Wards		41,909	14	6

- 84 Awareness campaign on SWM in KCC was conducted at 7 Wards from July to December 2023 with total participants of 369 including 112 females and 257 males. List of the participants for orientation workshop is given in Appendix 12.
- 85 Details of these conducted awareness programme during July to December 2023 period with the name of activities and the date of implementation as well as the number of participants attending is presented in following table:

**Table 10.2: Details of community awareness campaign imparted during Jul-Dec 2023**

No.	Title of events	Ward No.	Date	Number of Participants Attended		
				Male	Female	Total
1	Orientation Workshop at ward level	22	08/08/2023	20	08	28
		18	09/08/2023	24	02	26
		24	02/10/2023	26	3	29
		27	03/10/2023	26	6	32
		26	04/10/2023	28	11	39
		30	05/12/2023	21	5	26
		31	04/12/2023	29	2	31
2	Training for Campaign Facilitators and Supervisors	18 & 22	12/08/2023	02	20	22
		24, 26 & 27	07/10/2023	-	31	31
		30 & 31	07/12/2023	-	22	22

No.	Title of events	Ward No.	Date	Number of Participants Attended		
				Male	Femal e	Total
3	Training for Wastes Collectors and Supervisors	18 & 22	13/08/2023	21	02	23
		24, 26 & 27	05/10/2023	38	-	38
		30 & 31	06/12/2023	22	-	22
Total				257	112	369

Few photographs from the awareness campaign conducted during Jun-Dec 2023 on SWM in KCC/W-01 is displayed hereunder:



Orientation workshop at 04.10.2023



School level awareness campaign at 19.10.2023



Campaign facilitators orientation at 07.10.2023



Word level orientation campaign at 02.10.2023

**Figure 10-1: Awareness campaign on SWM in KCC**

## **Environmental issues discussed in awareness campaign of KCC**

86 The consultants of ICCD have discussed about the project and its objectives to the participants in the awareness campaign on SWM in KCC, which has also covered the following topics of environment:

- What is waste and types of waste,
- Problems caused by the unmanaged waste,
- What will be the consequences if wastes are not managed properly,
- How can wastes need to be thrown away (after segregation, preferable),
- Concept of 3R is also shared and explained to the participants.

## **Tree plantation**

87 An Orientation Session was held at office of Executive Engineer, LGED, Dhaka on 6th November 2023 for three Packages of Tree Plantation at Savar Upazila. Two contractors, concerned staff from LGED District and Upazila as well as PDS2 Consultant: total 09 (Nine) participants attended the Orientation Session. Orientation covered General Issues, Contractual Conditions and Specification for Tree Plantation.

88 An Orientation Session was held at PMCU, CRDP2, LGED, Dhaka on 30th November 2023 for 12(Twelve) Packages of Tree Plantation at Savar Pourashava, Rupganj and Araihasar Upazila. Four contractors, concerned PMCU and PDS2 Consultant: total 10(Ten) participants attended the Orientation Session. Orientation covered General Issues, Contractual Conditions and Specification for Tree Plantation. The participants had exchange of views with Deputy Project Director (DPD) and Project Director (PD) of CRDP2, LGED.



**Figure 10-2: Orientation session on tree plantation in LGED office**

Attendance of orientation session and details of the tree plantation has been attached in Annex 15 & Table 10.3.

## ***Status of Tree Plantation Program under CRDP-2***

89 Up to December 2023, RFQ for tree plantation for 17 packages has been approved on 11.09.2023 by project office. Contract has been awarded for 15 packages for Savar and Narayanganj area, except 2 packages of GCC. Details of the tree plantation has been summarized in the following table.

**Table 10.3: Details of the tree plantation**

Package No.	Tree Plantation Locations (Chainage)	No of Trees
Araihasar - RFQ-1	i) Binaichar- Kamrangirchar Road. (Ch.0- 3434m) (Road ID # 367024082) ii) Mukandi-AraihasarNarsinghdi R&H Road. (Ch.0-1500m) & Link-01 (Ch.0-250m) (Road ID # 367024004) iii) Laskardi - Langardi Bazar Road (Ch.0-2200m) (Road ID # 367024072)	1,836

Package No.	Tree Plantation Locations (Chainage)	No of Trees
	iv) Dhuptara – Buntim Pullah Road (Ch. 0 - 3007m) (Road ID # 367024077)	
Araihaazar - RFQ-2	i) Araihaazar (at Araihaazar-Narsingdi RHD) to Purinda Bazar (at Dhaka-Sylhet High Way) via Gaziparamorh, Kamranirchar Bazar, Naogaon, Tekpara Madrasa (Ch.0-8140m) (Road ID # 367022006)	2,443
Araihaazar - RFQ-3	i) Uzangobindir more to Fausha (Ch.0 - 2960m) (Road ID # 367024073) ii) Improvement of road from Kalibari to Monohordi. (Ch.0 - 1375m) (Road ID # 367025084) including 3370m link road iii) Duptara RHD to Panchrukhi (RHD) via Girda road (Ch.0 - 3335m) (Road ID # 367023002) including 3640m link road	1,996
Araihaazar - RFQ-4	i) BoroBinarchar RHD to Pakundia Bridge via Monohordi, Baliapara GC (Ch.0 - 6013m) (Road ID # 367022007) ii) Probhakardi RHD to Farida Bazar via Shilmandi road (Ch.0 - 1916m) (Road ID # 367022009) iii) Monohordi to Laskardi Bazar road (Ch.0 - 1053m) (Road ID # 367024096) iv) Bialapara GC to EidBardi RHD (Ch.0 - 3530m) (Road ID # 367022002) v) Fausha Bazar to Tilchandi Bazar (Ch.0 - 4972m) (Road ID # 367024079)	1,740
Araihaazar - RFQ-5	i) Gopaldi GC to Mollarchar RHD (Ch.0 - 3700m) (Road ID # 367022005) including 1925m link road.	2,361
Araihaazar - RFQ-6	i) Uchitpura GC to Gopaldi GC via ManikpurBishnandi (Ch.0 - 9000m) (Road ID # 367022003)	2,928
Araihaazar - RFQ-7	i) Uchitpura GC to Gopaldi GC via Manikpur Bishnandi (Ch.9000 - 10130m) (Road ID # 367022003) including 4125m link road. ii) Noapara - Abdullapur via Bailarkandi Road (Ch. 0-1635m) (Road ID # 367024065)	2,265
Rupganj - RFQ-1	i) Kanchan GC - Sornakhali bazar - Chanpara RHD road (Ch.0-7300m) (Road ID # 367682003) ii) Borpa RHD to Mohajanpur UP Road (Ch-0-5020m) (Road ID # 367682010) iii) Murapara to Mohishvita Road (Ch.0-4780m) (Road ID # 367682007)	2,304
Rupganj - RFQ-2	i) Porshi GC – Murapara GC via Rupganj Road (Ch. 3000 – 7200m) (Road ID # 367682001,367682011)	2,526
Rupganj - RFQ-3	i) Tree Plantation of Porshi GC – Murapara GC via Rupganj Road (Ch. 7200 – 13640m) (Road ID # 367682001,367682011)	2,590
Rupganj - RFQ-4	i) Rupganj Deboi-Beldi bazar-Kaligonj Road (Ch. 0-4375m) (Road ID # 367682002)	2,118
SavarPou - RFQ-1	i) Birulia road to Dharanda Church (Ch.0-770m) ii) RajashanSufiaBekary to Gashmohol Bridge (Ch.0-2175m) iii) Dhaka-Aricha Highway near Langol Office to GoirAkra (ISKON). (Ch.0-1020m)	794
Savar - RFQ-1	i) Balivadhra GC - Dhamshona UP - Simulia UP Road (Ch. 770-6180m) (Road ID # 326723025) ii) Polashbari - Kaichabari - Dogortoli Road (Ch.0-3950m) (Road ID # 326724096) iii) Kaliakoir-Chakulia Via Kalampur road (Ch.0-4144m) (Road ID	1,350



Package No.	Tree Plantation Locations (Chainage)	No of Trees
	# 326724093)	
Savar - RFQ-2	i) Dhaka Aricha RHD at Dairy Farm Gate-Pathalia UP Office Kasipur and Monohor Road (Ch.1071-5738m) (Road ID # 326723024) ii) Nayarhat GC to Savar GC Road. (Ch.0-8515m) (Road ID # 326722004)	2,586
Savar - RFQ-3	i) Dhaka-Aricha (RHD) at 22 Mile to Shimulia GC via Nalam (Ch.0 - 7807m) (Road ID # 326722005)	2,930



Plantation started in SavarW-04 package in Polashbari - Kaichabari - Dogortoli Road (Ch.0-3950m) (Road ID # 326724096)






**Figure 10-3: Locations for tree plantation under CRDP-2 subprojects**

## 11. SUMMARY OF KEY ISSUES AND REMEDIAL ACTIONS

- 90 No notable issues were noticed both from field visits and discussions with individuals of the community at the construction site. If by chance, any issues are noticed at construction sites, these are being resolved immediately through strict monitoring by our field engineers/supervisor.

Some observations from the site visits have been displayed in the following table:

Package	Observations	Images
Savar	Road widening work with hard shoulder has been completed preserving the old trees.	
Araihaazar	Road sign has been installed at one side of the road.	
Araihaazar	Road safety pillars is installed properly.	

## **12. PROJECT STRATEGY AGAINST COVID-19 H&S GUIDELINES**

- 91 Project strategy against COVID-19 H&S Guidelines that have been shared by ADB with PMCU. Meanwhile BRM of ADB transmitted Health and Safety Guidance on COVID-19 and these documents have been handed over to the contractors and to the relevant project staff.
- 92 As contractors are required to prepare subproject site-specific COVID-19 H&S Plans, the PMCU assisted the contractors to prepare these site-specific plans. Various government issued circulars and guidance were reviewed in preparing these site-specific COVID-19 Health & Safety Plans. However, implementation of overall environmental works of subproject contracts are being ensured through strict adherence to site-specific environmental health & safety plan. Site Specific H&S Plans of eight sample packages were shared with ADB on 22nd July 2020 and received approval of these by ADB on 3rd August 2020.
- 93 Now, the prerequisites suggested by ADB including their recommendations related to the Site Specific COVID 19 H&S Plans are being followed by the contractors at the construction sites. To ensure the proper implementation of the recommended COVID-19 H&S protocols, staffs have been assigned both from PMU and from contractors. They are monitoring the COVID-19 H&S issues in the construction sites according with the guidance of the concerned PMCU staff and consultants. The BRM of ADB provided template have been adopted by the project to monitor and record the COVID-19 H&S issues in the work sites. The adopted template and some examples of monitoring records have been included in Appendix 8. Some photographs on preventive measures practicing at the worksite against spread of COVID-19 infection are displayed at the end of the said Appendix.



### 13. CONCLUSIONS AND RECOMMENDATIONS

- 94 Environmental mitigation measures related to subprojects are being implemented in line with the Environmental Safeguard Framework. By and large performance is satisfactory. Contractors are required to mitigate environmental impacts, and environmental compliance for their mitigation is being monitored by the environmental specialists and PIU staff. Where mitigation measures are lacking, contractors are urged to improve their performance. The GRM has been outlined for being implementation with GRCs formed at local level.
- 95 The Active areas for improvement for subprojects under implementation include the following:
- Overall improvement of environmental performance needs to be ensured on most contracts through strict adherence to site-specific environmental health & safety plan.
  - Workers need to be well equipped and adapted with Personal Protective Equipment (PPE) at all times within the construction worksites.
  - While the housing and sanitary facilities for workers are up-to-standard, there is still room for further improvement.
  - Except the KCC-SWM package, the rest of the subprojects are of more or less small sizes; hence, formal public consultation is not warranted. Affected parties can and do directly approach site supervisors to remedy a particular problem or inconvenience. It is to mention that targeted stakeholders and local people living along the SWM subproject area shall be consulted during construction phase to inform the package activities and receive public grievances.
  - PIUs need to post notices regarding the grievance redress mechanism and the ability of an affected party to seek redress on an environmental issue.
  - Some community safety issues are sometimes only partially addressed by contractors. At some locations improved barricades need to be erected around open excavations where the public has frequent access.
  - Temporary access to homes, educational and religious institutions, businesses and offices needs to be constructed firmly for subprojects under implementation.
  - Posting of adequate number of regulatory signs/signals and flagmen is required as these are deficient in few construction sites. These elements shall assist safe traffic flow and pedestrian.
  - Contractors need to remove stockpiled materials that are no longer in use from the worksite; and reduce material losses from trucks hauling sand and spoil by covering loads and removing materials from tires and truck underbodies before transport. Contractors need to be more willing to dedicate labor time for cleaning roadway surfaces.

However, some important site-specific areas/issues that are commonly encountered for improvement of subprojects under implementation, and these are summarized in the following table 13.1:

**Table 13.1: Corrective Action Plan for July to December 2023**

Sl.	Safeguard Issues	Recommended Corrective Measures	Responsibility	Timeframe
1.	OHS management	Mandatory for the construction work force to using PPE when at work	Contractor/PIU/PDSC	During construction
2	Community safety	Construct proper barricade/safety barrier around excavated sites to avoid accident/injury	Contractor/PIU/PDSC	During construction
3	Dust control	Ensure proper arrangements for water spraying periodically at	Contractor/PIU/PDSC	During construction

Sl.	Safeguard Issues	Recommended Corrective Measures	Responsibility	Timeframe
		construction sites to suppress dust pollution		
4	Labour camp facilities	Site facilities (worksite camp with sufficient water supply and sanitation) to be established at safe distance from communities	Contractor/PIU/PDSC	During construction
5	OHS management	Proper arrangements of first aid and fire fighting equipment at work force camp and site office	Contractor/PIU/PDSC	During construction

- 96 The PMCU has been making sincere efforts in improving environmental awareness of the need for mitigation measures among the PIUs and construction contractors. The compliance status of recommended routine action plan to take effect at construction sites has been outlined in Table 13.2 below:

**Table 13.2: Compliance Status of recommended Action Plan**

Sl.	Recommendation	Compliance status	Responsible Entity	Period of Action Plan
1	Ensure quality and timely implementation of infrastructure improvement works	Complied	PMCU, PIU, PDSC, Contractor's Environmental H&S Supervisor	During construction period
2	Make it mandatory for the construction work force to using PPE when at work	Complied	PMCU, PIU, PDSC, Contractor's Environmental H&S Supervisor	During construction period
3	Construct proper barricade/safety barrier around excavated sites to avoid accident/injury	Complied	PMCU, PIU, PDSC, Contractor's Environmental H&S Supervisor	During work around the excavated section
4	Ensure proper arrangements for water spraying periodically at construction sites to suppress dust pollution	Complied	PMCU, PIU, PDSC, Contractor's Environmental H&S Supervisor	During construction period
5	Stock piles of construction materials (sand, brick chips and stone chips) are to be covered with poly ethylene sheets to avoid being airborne	Complied	PMCU, PIU, PDSC, Contractor's Environmental H&S Supervisor	During construction period
6	Site facilities (worksite camp with sufficient water supply and sanitation) to be established at safe distance from communities	Complied	PMCU, PIU, PDSC, Contractor's Environmental H&S Supervisor	Before commencement of construction work
7	Proper arrangements of firefighting equipment at work force camp and site office	Complied	Contractor's Site Engineer Supervisor/ Environmental H&S Supervisor	During construction period
8	Ensure strong measures to minimizing the potential risk of COVID-19 infection among the field work force so that construction work can continue safely	Complied	PMCU, PIU, PDSC, Contractor's Environmental H&S Supervisor	During construction period
9	Prepare Hand washing posters and to be displayed at work sites and labor	Complied	PMCU, PIU, PDSC, Contractors Environmental	During construction

Sl.	Recommendation	Compliance status	Responsible Entity	Period of Action Plan
	camps		H&S Supervisor	period
10	Periodic meetings to be held between the construction representative and local elite to avoid possible social conflict	Complied	PMCU, PIU, PDSC, Contractor's Environmental H&S Supervisor	During construction period

**Appendix 1:Renewal of Environmental Clearance Certificate (ECC) for B-Category subprojects under CRDP-2**

Government of the People's Republic of Bangladesh  
**Department of Environment**  
Head Office, Paribesh Bhaban  
E-16 Agargaon, Dhaka-1207  
[www.doe.gov.bd](http://www.doe.gov.bd)

Memo No: DoE/Clearance/5194/2013/৪৭

Date: 19 /07/2023

**Subject: Renewal of Environmental Clearance for Second City Region Development Project (CRDP-2), Local Government Engineering Department.**

Ref: Your application dated 05/03/2023.

With reference to your above application, the Department of Environment hereby renews the Environmental Clearance for the Second City Region Development Project (CRDP-2) subject to fulfilling the terms and conditions stated in the Environmental Clearance issued on 10.02.2019 vide memo no. DoE/Clearance/5194/2013/53.

2. This renewal is valid until 09 February, 2024. For further renewal an application along with a) the renewal fees (as per the ECR, 2023) b) VAT on renewal fees (in separate Treasury Chalan) and c) all associated documents shall be submitted to the Head Office of DoE with a copy to Dhaka Regional/Khulna Divisional Office at least 30 days ahead of expiry date.

  
(Masud Iqbal Md. Shameem)  
Director (Environmental Clearance)  
Phone: 222218342

**Project Director**

Second City Region Development Project (CRDP-2)  
Local Government Engineering Department  
LGED Bhaban, Agargaon  
Sher-E-Bangla Nagar, Dhaka.

**Copy Forwarded to :**

- 1) Director, Department of Environment, Dhaka Regional/ Khulna Divisional Office, Dhaka/ Khulna
- 2) Assistant Director, Office of the Director General, Department of Environment, Head Office, Dhaka.

**Appendix 2: Renewal  
of Environmental  
Clearance Certificate  
(ECC) for Solid  
Waste Management  
in KCC under CRDP-**

**2**



গণপ্রজাতন্ত্রী বাংলাদেশ সরকার  
পরিবেশ অধিদপ্তর  
খুলনা জেলা কার্যালয়  
বয়রা, খুলনা।  
[www.doe.gov.bd](http://www.doe.gov.bd)

পরিবেশগত ছাড়পত্র নবায়ন  
ছাড়পত্র নং: ২৩-১০৪১৬৬-১১১

পরিবেশগত ব্যবস্থাপনা নিশ্চিতকরণ সাপেক্ষে সংযুক্ত শর্তে নিম্নবর্ণিত প্রতিষ্ঠান/প্রকল্পের অনুকূলে পরিবেশগত ছাড়পত্র নবায়ন প্রদান করা হলো :

প্রতিষ্ঠান/প্রকল্পের নাম	Khulna City Corporation Solid Waste Management : under Second City Region Development Project (CRDP-II)
উদ্যোক্তার নাম	: Khulna City Corporation
সনাক্তকরণ নং	: ১৪৮৮৯১
প্রতিষ্ঠান/প্রকল্পের কার্যক্রম	: Other
প্রতিষ্ঠান/প্রকল্পের শ্রেণী	: Red
প্রতিষ্ঠান/প্রকল্পের ঠিকানা	: Scholua, Dumuria, Khulna.
প্রদানের তারিখ	: ০২/০৮/২০২৩ খ্রি.
মেয়াদ উত্তীর্ণের তারিখ	: ১৬ অগাস্ট ২০২৪



এ ছাড়পত্র সনদের সাথে পৃথকভাবে সংযুক্ত প্রদত্ত শর্তাবলী যথাযথভাবে প্রতিপালন করতে হবে,  
অন্যথায় ছাড়পত্র বাতিল/অতিপূরণ আদায়সহ যে কোন আইনানুগ ব্যবস্থা গ্রহণ করা হবে।

বিঃদ্রঃ এটি একটি সিস্টেম জেনারেটেড ছাড়পত্র এবং এতে কোনোরূপ স্বাক্ষরের প্রয়োজন নেই।

ছাড়পত্রটি যাচাই করতে ভিজিট করুন: [https://ecc.doe.gov.bd/certificate\\_verification](https://ecc.doe.gov.bd/certificate_verification)  
Page 1 of 4

১. This Environmental C management facility in a Upazila of Khulna.

২. This Environmental C

Name of Activities
a. Sanitary Landfill
b. Compost Plant
c. Leachate Treatment P
d. Biogas Plant
e. Waste Plastic to Fuel

৩. The detailed design a changes in design the pr

৪. Project Proponent ma of the project.

৫. Project Proponent ma which shall also include devices.

৬. The activity under co health or will have dama

৭. Proper and adequate and operation period of t

৮. Environment friendly of habitats of any flora a

৯. Construction works sl of local lives.

১০. Proper and adequate proposed project period.

১১. In order to control no working during sensitive

১২. Proper and adequate that no habitat of any flo

১৩. All the required mitig response plan are to be s

১৪. To control dust, spraying of water over the earthen materials should be carried out from time to time.

১৫. Storage area for soils and other construction materials shall be carefully selected to avoid disturbance of the natural drainage.

১৬. Adequate considerations should be given to facilitate drainage system for run-off water from rain.

১৭. Adequate facilities should be ensured for silt trap to avoid clogging of drain/canal/water bodies.

১৮. Construction material should be properly disposed-off after the construction work is over.

১৯. Leachate and Rainwater runoff the landfill should be collected and treated in the leachate treatment plant and reused..

২০. A piezometer well shall be installed in the project site to monitor the ground water. The information of the ground water quality should be submitted to the DoE.

২১. No hazardous waste should be handled in the premise

২২. Green belt shall be developed around the project area.

২৩. All activities (pre-construction, construction and post-construction stage) should be implemented according to EMP clearly listed in the EIA report.

২৪. The project authority should provide all sort of logistics support to DOE and other relevant agencies for monitoring environment related items/events.

২৫. The feed to the pyrolysis reactor should be devoid of dirt and the feeding arrangement to the reactor should be mechanized.

২৬. The initial heating of the reactor should be done by liquid fuel or gas. The flue gas should be released through a chimney of at least 30 meters height.

২৭. Excess pyro gas if any should be stored or flared at a minimum height of 30 meters.

২৮. Adequate instrument for measurement and control of temperature and pressure along with safety interlocks should be provided.

২৯. Removal of carbon should be done through mechanized system.

৩০. Environmental Monitoring Reports according to specific format specified in the EIA Report shall be made available to Khulna Divisional Office of the Department of Environment on a quarterly basis during the construction period of the project.

৩১. 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.

৩২ . The results of any monitoring required to be conducted under this EIA report must be recorded.

৩৩ . In case of any emergency, the following information shall immediately be reported to Khulna Divisional Office, Khulna 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

e) Current operations (abandoning the site, firefighting, etc.)

৩৪ . 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.

৩৫ . No activity of cutting/razing/ dressing of hill is endorsed under this approval of EIA.

৩৬ . Re-vegetation and replantation under green belt activities shall be undertaken according to those mentioned in the EIA report.

৩৭ . This Environmental Clearance is valid for one year from the date of issuance and the project authority shall apply for renewal to the Khulna Divisional Office of the Department of Environment in Khulna at least 30(thirty) days of expiry.

৩৮ . Violation of any of the above conditions shall render this approval void.

This Environmental Clearance has been issued with the approval of the appropriate authority.



**Appendix 3:  
Grievance Redress  
Committees (GRC) –  
Office Order**



গণপ্রজাতন্ত্রী বাংলাদেশ সরকার  
স্থানীয় সরকার, পল্লী উন্নয়ন ও সমবায় মন্ত্রণালয়  
স্থানীয় সরকার বিভাগ  
উন্নয়ন ২ শাখা  
www.lgd.gov.bd

শেখ হাসিনার মূলনীতি  
গ্রাম শহরের উন্নতি

স্মারক নং- ৪৬.০৬৮.০০৫.০০.০০.০১৮.২০২০-৪৫৫

তারিখ: ২৪ জ্যৈষ্ঠ ১৪২৭  
০৭ জুন ২০২০

**অফিস আদেশ**

স্থানীয় সরকার প্রকৌশল অধিদপ্তর কর্তৃক বাস্তবায়নাধীন “দ্বিতীয় নগর অঞ্চল উন্নয়ন” প্রকল্পের আওতায় পৌরসভা, সিটি কর্পোরেশন ও এলজিইডি পর্যায়ে অভিযোগ নিরসন কার্যক্রম দ্রুত ও নিয়মানুগভাবে বাস্তবায়নের লক্ষ্যে নিম্নরূপ অভিযোগ নিরসন কমিটি (Grievance Redress Committee) গঠন করা হলো:

**(i) পৌরসভা পর্যায়ে:**

**অভিযোগ নিরসন কমিটি ও নিষ্পত্তি প্রক্রিয়া:**

অভিযোগ নিরসন প্রক্রিয়া ৩টি স্তরে বাস্তবায়িত হবে। পৌরসভা পর্যায়ে প্রাথমিক ও দ্বিতীয় স্তরে এবং প্রকল্প পর্যায়ে তৃতীয় স্তর।

**প্রথম স্তর:**

প্রাথমিক স্তরে থাকবে অভিযোগকারীর সহজে যোগাযোগের সুযোগ ও অভিযোগসমূহ দ্রুত সমাধানের ব্যবস্থা। এ স্তরে PIU-প্রধান (পৌরসভার মেয়র) সংশ্লিষ্ট PIU এর একজন কর্মকর্তাকে ফোকাল পার্সন হিসেবে নিয়োজিত করবেন। ফোকাল পার্সন ক্ষতিগ্রস্তের অভিযোগ গ্রহণ এবং দ্রুত নিরসনের উদ্যোগ গ্রহণ করবেন। ক্ষতিগ্রস্তদের যোগাযোগের সুবিধার জন্য ফোকাল পার্সনের মোবাইল নম্বর উপ-প্রকল্প এলাকার গুরুত্বপূর্ণ স্থানে বুলিয়ে দিতে হবে। ক্ষতিগ্রস্ত ব্যক্তি/ব্যক্তিবর্গের কাছ থেকে লিখিত অভিযোগ প্রাপ্তির পর ফোকাল পার্সন বিষয়টি অবিলম্বে প্রাথমিক স্তরে গঠিত কমিটিতে (কমিটির কার্যপরিধির ২নং দায়িত্বের নিরিখে) উপস্থাপন করবেন।

**প্রথম স্তরের স্থানীয় অভিযোগ নিরসন কমিটি:**

- (১) নির্বাহী প্রকৌশলী/সহকারী প্রকৌশলী, সংশ্লিষ্ট পৌরসভা ----- সভাপতি
- (২) সিআরডিপি-২ প্রকল্পের কনসালটেন্ট (সেডগার্ড এক্সপার্ট) ----- সদস্য
- (৩) পরিবেশ/সামাজিক সুরক্ষা ফোকাল কর্মকর্তা, সংশ্লিষ্ট পৌরসভা ----- সদস্য-সচিব

**প্রথম স্তরের স্থানীয় অভিযোগ নিরসন কমিটির কার্যপরিধি:**

- (১) ক্ষতিগ্রস্ত ব্যক্তির অভিযোগ গ্রহণ এবং পারস্পরিক আলোচনার ভিত্তিতে তা নিরসন করা,
- (২) অভিযোগকারীর অভিযোগ গ্রহণের ৭ দিনের মধ্যে অভিযোগ নিষ্পত্তিকরণের ব্যবস্থা করা,
- (৩) ভূমি এবং/অথবা অবকাঠামো (Structures) অধিগ্রহণ, জীবিকা অর্জনের ওপর প্রভাব, প্রাপ্য ক্ষতিপূরণ (Entitlements) এবং বিভিন্ন সহযোগিতা সম্পর্কে ক্ষতিগ্রস্তদের অবহিত করা,
- (৪) অভিযোগকারী ব্যক্তির অভিযোগ সংক্রান্ত যাবতীয় তথ্যাবলী লিপিবদ্ধ করা,
- (৫) অভিযোগ নিষ্পত্তি সংক্রান্ত যাবতীয় রেকর্ড ও সভার কার্যবিবরণী যথাযথভাবে সংরক্ষণ এবং মেয়র এর মাধ্যমে প্রকল্প পরিচালককে অবহিত করা।

**দ্বিতীয় স্তর:**

প্রাথমিক স্তরে কোনো অভিযোগ অমীমাংসিত থাকলে প্রাথমিক স্তরে গঠিত কমিটির সদস্য-সচিব (ফোকাল পার্সন) মেয়রের মাধ্যমে পৌরসভায় গঠিত দ্বিতীয় স্তরের স্থানীয় অভিযোগ নিরসন কমিটি-এর নিকট অভিযোগটি সত্তর লিখিতভাবে জানাবেন। মেয়রের লিখিত পত্র প্রাপ্তির পর দ্বিতীয় স্তরের অভিযোগ নিরসন প্রক্রিয়া শুরু হবে।

**দ্বিতীয় স্তরের স্থানীয় অভিযোগ নিরসন কমিটি:**

- (১) প্রধান নির্বাহী কর্মকর্তা/ সচিব, সংশ্লিষ্ট পৌরসভা----- সভাপতি
- (২) পৌরসভা মেয়র এর প্রতিনিধি, সংশ্লিষ্ট পৌরসভা----- সদস্য
- (৩) ক্ষতিগ্রস্ত ব্যক্তিবর্গের প্রতিনিধি, সংশ্লিষ্ট পৌরসভা -----সদস্য
- (৪) স্থানীয় ভূমি রেজিস্ট্রি দপ্তরের প্রতিনিধি----- সদস্য
- (৫) পরিবেশ অধিদপ্তরের বিভাগীয় দপ্তরের প্রতিনিধি ----- সদস্য
- (৬) নগর পরিকল্পনাবিদ, সংশ্লিষ্ট পৌরসভা----- সদস্য
- (৭) পরিবেশ/সামাজিক সুরক্ষা ফোকাল কর্মকর্তা, সংশ্লিষ্ট পৌরসভা----- সদস্য-সচিব

চলমান-২

#### দ্বিতীয় স্তরের স্থানীয় অভিযোগ

- (১) এ পর্যায়ে প্রকল্পে শুধুমাত্র ভৌত পরিমাণ
- (২) ক্ষতিগ্রস্ত ব্যক্তির অভিযোগ সহযোগিতা করা,
- (৩) ক্ষতিগ্রস্তদের অভিযোগ
- (৪) অভিযোগকারীর অভিযোগ
- (৫) অভিযোগকারীর অভিযোগ পরিচালককে অবহিত
- (৬) অভিযোগ নিরসন কমিটি পরিচালকের সাথে আ

#### তৃতীয় স্তর:

দ্বিতীয় স্তর পর্যায়ে স্থানীয় (মেয়র) বিষয়টি দ্রুত প্রকল্প ও সুপারিশসমূহের ভিত্তিতে নিরসন কমিটির কার্যক্রম শু

#### তৃতীয় স্তরের প্রকল্প পর্যায়ের

- (১) প্রকল্প পরিচালক, সিআ
- (২) প্রতিনিধি, ভূমি মন্ত্রণালয়
- (৩) প্রতিনিধি, পরিবেশ অধিদপ্তর
- (৪) পরিবেশ/সামাজিক সুরক্ষা
- (৫) প্রকল্পে ক্ষতিগ্রস্ত ব্যক্তির
- (৬) পরিবেশ/সামাজিক সুরক্ষা

#### তৃতীয় স্তরের প্রকল্প পর্যায়ের

- (১) পরিবেশ/সামাজিক কমিটিতে উপস্থাপন
- (২) প্রকল্প পর্যায়ে অভিযোগ
- (৩) প্রকল্প পর্যায়ে অভিযোগ
- (৪) পরিবেশ/সামাজিক এবং সভার কার্যবিবরণী
- (৫) পরিবেশ/সামাজিক পর্যালোচনাপূর্বক প্রণয়ন

#### (ii) সিটি কর্পোরেশন পর্যায়

#### অভিযোগ নিরসন কমিটির:

দ্বিতীয় নগর অঞ্চল উন্নয়ন ক্ষতিগ্রস্তদের পক্ষ থেকে বেগঠনের বাধ্যবাধকতা রয়েছে হলে গঠিত 'অভিযোগ নিরসন প্রক্রিয়া প্রকল্পের সুরক্ষা (Sa) বা ব্যক্তিগত অভিযোগ সাংস্কৃতিক বৈষম্যহীনভাবে যাতে তাদের কোনও অর্থ বা যথাসময়ে সঠিক ও বিস্তারিত

অভিযোগ নিরসন কমিটি ও নি  
অভিযোগ নিরসন প্রক্রিয়া ৩টি  
তৃতীয় স্তর।

প্রাথমিক স্তর:

প্রাথমিক স্তরে থাকবে অভিযো  
প্রধান সংশ্লিষ্ট PIU-এর এক  
অভিযোগ গ্রহণ এবং দ্রুত নি  
মোবাইল নম্বর উপ-প্রকল্প এ  
অভিযোগ প্রাপ্তির পর ফোকা  
নিরিখে) উপস্থাপন করবেন।

প্রথম স্তরের স্থানীয় অভিযোগ

- (১) নির্বাহী প্রকৌশলী/সহকারী
- (২) সিআরডিপি-২ প্রকল্পের ক
- (৩) পরিবেশ/সামাজিক সুরক্ষা

প্রথম স্তরের স্থানীয় অভিযোগ

- (১) ক্ষতিগ্রস্ত ব্যক্তির অ
- (২) অভিযোগকারীর অ
- (৩) ভূমি এবং অবকা  
(Entitlements)
- (৪) অভিযোগকারী ব্যক্তি
- (৫) অভিযোগ নিষ্পত্তি  
ব্যবস্থাপক (PIU-প্র

দ্বিতীয় স্তর:

প্রাথমিক স্তরে কোনো অভিযো  
ব্যবস্থাপক (PIU-প্রধান) - এর  
অভিযোগটি লিখিতভাবে জানা

দ্বিতীয় স্তরের স্থানীয় অভিযোগ

- (১) প্রধান নির্বাহী কর্মকর্তা/সচি
- (২) মেয়র এর প্রতিনিধি, সংশ্লি
- (৩) ক্ষতিগ্রস্ত ব্যক্তিবর্গের প্রতিনি
- (৪) স্থানীয় ভূমি রেজিস্ট্রি দপ্তরে
- (৫) পরিবেশ অধিদপ্তরের বিভা
- (৬) নগর পরিকল্পনাবিদ, সংশ্লি
- (৭) পরিবেশ/সামাজিক সুরক্ষা

দ্বিতীয় স্তরের স্থানীয় অভিযোগ

- (১) এ পর্যায়ে প্রকল্পে ক্ষতিগ্র  
Physical Quantity
- (২) ক্ষতিগ্রস্ত ব্যক্তির অভি  
সহযোগিতা করা,
- (৩) ক্ষতিগ্রস্তদের অভিযোগস
- (৪) অভিযোগকারীর অভিযো
- (৫) অভিযোগকারীর অভিযো  
(PIU-প্রধান), সিটি কপে
- (৬) অভিযোগ নিরসন কমিটি  
পরিচালকের সাথে আলে

#### তৃতীয় স্তর:

দ্বিতীয় স্তর পর্যায়ে স্থানীয় অভিযোজন (PIU-প্রধান) বিষয়টি দ্রুত প্রকল্প প্রতিবেদন ও সুপারিশসমূহের ভিত্তিতে নিরসন কমিটির কার্যক্রম শুরু করে।

#### তৃতীয় স্তরের প্রকল্প পর্যায়ের অভিযোগ

- (১) প্রকল্প পরিচালক, সিআরডিপি-
- (২) প্রতিনিধি, ভূমি মন্ত্রণালয় -----
- (৩) প্রতিনিধি, পরিবেশ অধিদপ্তর-
- (৪) পরিবেশ/সামাজিক সুরক্ষা ফোর্স
- (৫) প্রকল্পে ক্ষতিগ্রস্ত ব্যক্তি/ব্যক্তিবর্গের প্র
- (৬) পরিবেশ/সামাজিক সুরক্ষা ক

#### তৃতীয় স্তরের প্রকল্প পর্যায়ে অভিযোগ

- (১) পরিবেশ/সামাজিক সুরক্ষা কমিটিতে উপস্থাপন করা
- (২) প্রকল্প পর্যায়ে অভিযোগ
- (৩) প্রকল্প পর্যায়ে অভিযোগ
- (৪) পরিবেশ/সামাজিক সুরক্ষা এবং সভার কার্যবিবরণী
- (৫) পরিবেশ/সামাজিক সুরক্ষা পর্যালোচনাপূর্বক প্রয়োজন

#### (iii) এলজিইডি পর্যায়ে:

#### অভিযোগ নিরসন কমিটির প্রয়োজন

দ্বিতীয় নগর অঞ্চল উন্নয়ন প্রকল্পে ক্ষতিগ্রস্তদের পক্ষ থেকে কোন অভিযোগ রয়েছে। প্রকল্পের আওতায় উপ-প্রকল্প নিরসন কমিটি' অভিযোগ গ্রহণ ও (Safeguard) সংক্রান্ত শর্ত বা অভিযোগ স্বচ্ছ এবং যথাসম্ভব স্ব-বৈষম্যহীনভাবে বাস্তবায়ন করতে তাদের কোনও অর্থ ব্যয়ের প্রয়োজন যথাসময়ে সঠিক ও বিস্তারিতভাবে

#### অভিযোগ নিরসন কমিটি ও নিষ্পত্তি

অভিযোগ নিরসন প্রক্রিয়া তিনটি

তৃতীয় স্তর।

#### প্রথম স্তর:

এলজিইডি'র উপজেলা পর্যায়ে প্রাথমিক সমাধানের ব্যবস্থা। এ স্তরে উপজেলা নিয়োগিত করবেন। ফোকাল পার্সন যোগাযোগের সুবিধার জন্য ফোকাল ক্ষতিগ্রস্ত ব্যক্তি/ব্যক্তিবর্গের কাছ থেকে অভিযোগ নিরসন কমিটিতে (কমিটির কার্যপরিধির ২

#### প্রথম স্তরের স্থানীয় অভিযোগ নিরসন

- (১) উপজেলা প্রকৌশলী/ উপজেলা
- (২) সিআরডিপি-২ প্রকল্পের কনসাল্ট্যান্ট
- (৩) পরিবেশ/সামাজিক সুরক্ষা ফোর্স



**প্রথম স্তরের স্থানীয় অভিযোগ নিঃ**

- (১) ক্ষতিগ্রস্ত ব্যক্তির অভিঃ
- (২) অভিযোগকারীর অভিঃ
- (৩) ভূমি এবং / অথবা অঃ (Entitlements) এবং
- (৪) অভিযোগকারী ব্যক্তির
- (৫) অভিযোগ নিষ্পত্তি সংঃ কর্তৃক নির্বাহী প্রকৌশলী

**দ্বিতীয় স্তর:**

প্রাথমিক স্তরে কোনো অভিযোগ অভিযোগ নিরসন কমিটি-এর নিঃ দ্বিতীয় স্তরের অভিযোগ নিরসন ও

**তৃতীয় স্তরের প্রকল্প পর্যায়ে অভিযোগ নিরসন কমিটির কার্যপরিধি:**

- (১) পরিবেশ/সামাজিক সুরক্ষা কর্মকর্তা অভিযোগ ও পূর্ববর্তী স্তরের সিদ্ধান্তসমূহ প্রকল্প পর্যায়ে অভিযোগ নিরসন কমিটিতে উপস্থাপন করবেন,
- (২) প্রকল্প পর্যায়ে অভিযোগ নিরসন কমিটি অভিযোগ গ্রহণের সাত দিনের মধ্যে সভা আহ্বান করবে, প্রকল্প পর্যায়ে অভিযোগ নিরসন কমিটি পনেরো দিনের মধ্যে সিদ্ধান্ত প্রদান করবে,
- (৩) প্রকল্প পর্যায়ে অভিযোগ নিরসন কমিটি পনেরো দিনের মধ্যে সিদ্ধান্ত প্রদান করবে,
- (৪) পরিবেশ/সামাজিক সুরক্ষা কর্মকর্তা প্রকল্প পর্যায়ে অভিযোগ নিরসন কমিটির সভার সিদ্ধান্তসমূহ লিপিবদ্ধ করবেন এবং সভার কার্যবিবরণী জারি করবে,
- (৫) পরিবেশ/সামাজিক সুরক্ষা কর্মকর্তা প্রকল্প পর্যায়ে অভিযোগ নিরসন কমিটির সিদ্ধান্ত বাস্তবায়নের অগ্রগতি পর্যালোচনাপূর্বক প্রয়োজনীয় ব্যবস্থা গ্রহণ করবে।

(জেসমিন পারভীন)

উপসচিব

ফোন: ৯৫৭৫৫৬৭

**দ্বিতীয় স্তরের স্থানীয় অভিযোগ নিঃ**

- (১) উপজেলা নির্বাহী কর্মকর্তা
- (২) উপজেলা নির্বাহী কর্মকর্তা
- (৩) ক্ষতিগ্রস্ত ব্যক্তিবর্গের প্রঃ
- (৪) স্থানীয় ভূমি রেজিস্ট্রার
- (৫) পরিবেশ অধিদপ্তরের বিঃ
- (৬) এলজিইডি'র নির্বাহী প্রঃ
- (৭) পরিবেশ/সামাজিক সুরক্ষা কর্মকর্তা

**বিতরণ (কার্যার্থে):**

- ১। সচিব, ভূমি মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা (একজন উপযুক্ত প্রতিনিধি প্রেরণের অনুরোধসহ);
- ২। মহাপরিচালক, পরিবেশ অধিদপ্তর, আগারগাঁও, ঢাকা (বিভাগীয় কার্যালয়ের একজন উপযুক্ত প্রতিনিধি সংশ্লিষ্ট অভিযোগ নিরসন কমিটিতে প্রেরণের অনুরোধসহ);
- ৩। প্রধান প্রকৌশলী, স্থানীয় সরকার প্রকৌশল অধিদপ্তর, আগারগাঁও, ঢাকা;
- ৪। প্রধান নির্বাহী কর্মকর্তা/সচিব, -----সিটি কর্পোরেশন-----;
- ৫। পরিচালক, বিভাগীয় কার্যালয়, পরিবেশ অধিদপ্তর, -----বিভাগ;
- ৬। মেয়র, -----পৌরসভা-----জেলা (একজন উপযুক্ত প্রতিনিধি প্রেরণের অনুরোধসহ);
- ৭। প্রকল্প পরিচালক, সিআরডিপি, এলজিইডি, আগারগাঁও, ঢাকা;
- ৮। উপজেলা নির্বাহী অফিসার, -----উপজেলা,-----জেলা;
- ৯। প্রধান নির্বাহী কর্মকর্তা/সচিব, -----পৌরসভা,-----জেলা;
- ১০। নির্বাহী প্রকৌশলী/সহকারী প্রকৌশলী, -----সিটি কর্পোরেশন,-----;
- ১১। পরিবেশ/সামাজিক সুরক্ষা কর্মকর্তা, -----সিটি কর্পোরেশন,-----;
- ১২। নগর পরিকল্পনাবিদ, -----সিটি কর্পোরেশন,-----;
- ১৩। নির্বাহী প্রকৌশলী/সহকারী প্রকৌশলী, -----পৌরসভা,-----জেলা;
- ১৪। সেভ গার্ড এক্সপার্ট, এমডিএস কনসালটেন্ট;
- ১৫। পরিবেশ/সামাজিক সুরক্ষা কর্মকর্তা, -----পৌরসভা,-----জেলা;
- ১৬। সাব-রেজিস্ট্রার, স্থানীয় ভূমি রেজিস্ট্রার (একজন উপযুক্ত প্রতিনিধি প্রেরণের অনুরোধসহ);
- ১৭। নগর পরিকল্পনাবিদ, -----পৌরসভা,-----জেলা;
- ১৮। পরিবেশ/সামাজিক সুরক্ষা কর্মকর্তা, -----সিটি কর্পোরেশন,-----;
- ১৯। প্রকল্পে ক্ষতিগ্রস্ত ব্যক্তিবর্গের একজন প্রতিনিধি;
- ২০। পরিবেশ/পুনর্বাসন সুরক্ষা কর্মকর্তা, সিআরডিপি, এলজিইডি, আগারগাঁও, ঢাকা;
- ২১। পরিবেশ/সামাজিক সুরক্ষা কর্মকর্তা, -----সিটি কর্পোরেশন,-----;
- ২২। উপজেলা প্রকৌশলী/সহকারী প্রকৌশলী, -----উপজেলা,-----জেলা;
- ২৩। পরিবেশ/সামাজিক সুরক্ষা কর্মকর্তা, -----উপজেলা,-----জেলা।

**দ্বিতীয় স্তরে স্থানীয় অভিযোগ নিঃ**

- (১) এ পর্যায়ে প্রকল্পে ক্ষতিগ্রস্ত ব্যক্তির (Physical Quantity) নিঃ
- (২) ক্ষতিগ্রস্ত ব্যক্তির অভিযোগ সহযোগিতা করা,
- (৩) ক্ষতিগ্রস্তদের অভিযোগসমূহ
- (৪) অভিযোগকারীর অভিযোগ
- (৫) অভিযোগকারীর অভিযোগ প্রকল্প পরিচালক-কে অবহিত
- (৬) অভিযোগ নিরসন কমিটি মঃ পরিচালকের সাথে আলোচন

**তৃতীয় স্তর:**

দ্বিতীয় স্তর পর্যায়ে স্থানীয় অভিযোগ সংশ্লিষ্ট জেলা বিষয়টি দ্রুত প্রকল্পে প্রতিবেদন ও সুপারিশসমূহের ভিত্তিতে নিরসন কমিটির কার্যক্রম শুরু করবে।

**তৃতীয় স্তরের প্রকল্প পর্যায়ের অভিযোগ নিঃ**

- (১) প্রকল্প পরিচালক, সিআরডিপি
- (২) প্রতিনিধি, ভূমি মন্ত্রণালয়
- (৩) প্রতিনিধি, পরিবেশ অধিদপ্তর
- (৪) পরিবেশ/সামাজিক সুরক্ষা কর্মকর্তা
- (৫) প্রকল্পে ক্ষতিগ্রস্ত ব্যক্তিবর্গের
- (৬) পরিবেশ/সামাজিক সুরক্ষা কর্মকর্তা

স্মারক নং- ৪৬.০৬৮.০০৫.০০.০০.০১৮.২০২০-৪৫৫

**অনুলিপি:**

- ১। মাননীয় মন্ত্রীর একান্ত সচিব, স্থানীয় সরকার, পল্লী উন্নয়ন ও সমবায় মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।
- ২। সিনিয়র সচিব মহোদয়ের একান্ত সচিব, স্থানীয় সরকার বিভাগ, বাংলাদেশ সচিবালয়, ঢাকা।
- ৩। অফিস কপি/মান্ডার কপি।

তারিখ: ২৪ জ্যৈষ্ঠ ১৪২৭  
০৭ জুন ২০২০

(জেসমিন পারভীন)

উপসচিব

**English Translation of GRC Formation**  
**Office Order**  
Peoples Republic of Bangladesh  
Local Government, Rural Development & Cooperatives  
Ministry Local Government Division

24Jaistha,1427

Ref:46.068.005.00.018.2020.455

Date:07June,2020

Office Order

Under the Second City Region Development Project, where LGED is the implementing/executing agency, Grievance Redress Committees (GRCs) have been formed at Pourashava, City Corporation and LGED levels to redress the reported grievances resulting from the subproject implementation. These Committees are to redress the reported grievances in a procedural basis and it is being done in a quick and timely fashion.

**(i) At Pourashava Level:**

***Grievance Redress Committee (GRC) and Grievance Redress Mechanism (GRM):***

The GRM will be implemented in three levels. First and Second Levels shall involve at Pourashava and the Third at Project Level.

**First Level:** The first level and most accessible and immediate venue for the fastest resolve of grievances is the PIU. At this level, PIU Head (Mayor of Pourashava) shall appoint/nominate an Officer from the concerned PIU as Focal Person. The Focal Person will document the grievances of the affected persons and will take initiative for quick resolution. The contact cell phone number of the Focal Person will be posted at important places of the project areas. After receiving the written complaints from the project affected person/s, the Focal Person shall immediately place it to the First Level Committee (as per committee's work-clause No. 2).

**First Level Grievance Redressal committee (at Local Level):**

- 1) Executive Engineer/Assistant Engineer of concerned PIU----- Chairman
- 2) Consultant of CRDP-II (Safeguard Expert/Specialist----- Member
- 3) Environmental/Social Safeguard Focal Officer of concerned PIU----- Member Secretary

**Scope of Work of First Level Grievance Redressal Committee (at Local Level)**

- 1) Document the grievances of affected persons(AP) and resolved these through continuous interactions,
- 2) Once the grievances of AP is received/reported, these to be resolved within 7 (seven) days of receipt of the complaint,
- 3) Make aware the APs regarding land acquisition, structures acquisition, livelihood impacts, entitlements, and various assistances related to the above,
- 4) All grievances will be documented with full information of the person and issue,
- 5) Resolved grievances and other related records and minutes of meeting are to preserve properly, and make the Project Director aware this through the Mayor.

**Second Level:** If the grievance remains unresolved at First Level of Pourashava, the Member Secretary (Focal Person/Officer) of the First Level, through the Mayor, shall refer the case/issue with written documentation to the Second Level GRC formed at Pourashava Level. The Mayor, after receiving a written letter containing the above fact, shall activate the Second Level of the GRM.

**Second Level Grievance Redressal committee (at Local Level):**

- 1) Chief Executive Officer/Secretary of concerned Pourashava----- Chairman
- 2) Representative of the Mayor of concerned Pourashava ----- Member
- 3) Representative of Affected Persons of concerned Pourashava----- Member
- 4) Official Representative of the land registry department----- Member
- 5) Official Representative of the DOE Divisional Office----- Member

- 6) Town planner of the Pourashava or City Corporation Member
- 7) Environmental/social safeguard Focal Officer of concerned Pourashava ----- Member

**Scope of Work of Second Level Grievance Redressal Committee (at Local Level)**

- 1) Provide support to affected persons on problems arising from land acquisition (temporary or permanent), asset acquisition and eligibility for entitlements, compensation and assistance,
- 2) If any affected person's claim of loss is valid under the context of statutory laws pertaining to relocation, the committee must help the complainant in being recompensed by the project authority,
- 3) Record grievances of affected persons, categorize and prioritize them and provide solutions within 30 days from receipt of grievance from the first level,
- 4) Report to the aggrieved parties about developments regarding their grievances and decisions of the GRC,
- 5) The progress of resolve and decisions made by GRC related to the grievances of the complainant must be informed to the PD through the Mayor of the Pourashova,
- 6) The GRC must hold at least two meetings a month. The number of meetings held may be increased or decreased based on the existing number of unresolved cases and making discussion with the PD.

**Third Level:** Should the grievance still remain unresolved, the Project Manager (the Mayor) of concerned Pourashava will activate the third level of the GRM by informing quickly the Project Director who will, based on review of the local GRC minutes and consultation with the local GRC Chair (the Mayor), activate the Third Level GRC.

**Third Level Grievance Redressal committee (at Project Level):**

- 1) Project Director, CRDP-II Secretary of concerned Pourashava----- Chairman
- 2) Representative from Land Ministry -concerned Pourashava ----- Member
- 3) Representative from Department of Environment (DOE)----- Member
- 4) Environmental/social safeguard Focal Officer of concerned Pourashava -----Member
- 5) Representative of Affected Persons of concerned Pourashava----- Member
- 6) Environmental/social safeguard Focal Officer from CRDP-II -----Member Secretary

**Scope of Work of Third Level Grievance Redressal Committee at Project Level**

- 1) The Environmental and/or Social Safeguards Officer of the PMCU will be responsible for processing and placing all papers related to the grievances and earlier decisions before the Project Level GRC
- 2) A meeting shall be convened within 7 (seven) days just after receiving the complaint at the Project Level,
- 3) The GRC at Project Level will conveyed decision within 15(fifteen) days of the receipt of the complaint,
- 4) Environment/Social Safeguard Officer at Project Level shall record the decision taken at the GRC meeting and issuing minutes of the meeting/s,
- 5) Environment/Social Safeguard Officer at Project Level, after discussion with, shall take necessary actions regarding the progress of the implementation of the decisions taken by the GRC

**(ii) At City Corporation Level: Necessity of Grievance Redressal Committee (GRC)**

During the implementation of CRDP-II, if any private property/asset (temporary/permanent) gets damaged and if any grievances are raised by the affected persons, then in order to resolve such issues, it becomes mandatory/compulsory to form a GRC at City Corporation



Level. The formed GRC would play an effective role in receiving and resolving the grievances/complaints raised by the affected persons that may cause from the implementation of projects and subprojects of the City Corporation. The process of resolving so and so complaints would be considered as a part of policies relating to safeguard of the project. In this process, the grievances of aggrieved person or persons must be addressed and resolved in a transparent and timely manner. The process to be implemented should not be gender sensitive and should be free from any cultural biases. It should be ensured that in this form of resolve, the affected persons can easily accept the process of achieving the resolve and they do not require spending any money for it. The affected persons must gradually be given accurate and elaborate information on this process of grievances redressing.

#### **Grievance Redressal Committee and Settlement Process**

The grievances redress process will be implemented at 3 (three) levels. The First and Second Levels will be addressed at City Corporation Level and the Third at Project Level.

**First Level:** At the First Level, the complainant/AP shall have easy accessibility to the venue and a fastest resolve of grievances system. In this stage, the PIU Head shall appoint an Officer of the concerned PIU as a focal person of the project. The focal person will receive complaints from the victims and make an effort for prompt grievance redress. In order to provide ease of communication, the focal person's mobile number needs to be put up in an important place of the project area. Upon receipt of a written complaint/s from the victim or persons, the Focal Person shall immediately refer the matter to the committee formed at the primary level (as per scope of work no. 2 of the Committee in terms of responsibility)

#### **First Level Local Grievance Redressal committee**

- 1) Executive Engineer/Assistant Engineer of concerned City Corporation -----Chairman
- 2) Project Consultant (Safeguard Expert)of CRDP-II ----- Member
- 3) Environmental/Social Safeguard Focal Person of concerned City Corporation  
Member Secretary

#### **Scope of work of the First Level Grievance Redressal Committee (at Local Level)**

- 1) Upon receipt of the complaints from the affected/aggrieved person, grievances are being resolved through discussions
- 2) Once the grievances of AP is received/reported, these are to be resolved within 7(seven) days of receipt of the complaint,
- 3) Inform the affected persons about land acquisition, structures acquisition, livelihood impacts, entitlements, and about various assistance/collaboration,
- 4) All the information related to the complaint of the complainant is recorded,
- 5) To preserve properly all records and minutes of meetings related to grievance redressal and inform the Project Director through the Project Manager (Head of PIU).

**Second Level:** If the grievance remains unresolved at First Level, the Member Secretary (Focal Person/Officer) of the First Level, through the Project Manager (Head of PIU) shall refer the case/issue with written documentation to the Second Level GRC formed at City Corporation Level. The Mayor, after receiving a written letter containing the above fact, shall activate the Second Level of the GRM.

#### **Second Level Grievance Redressal committee (at Local Level):**

- 1) Chief Executive Officer/Secretary of concerned City Corporation: *Chairman*
- 2) Representative of the Mayor of concerned City Corporation: *Member*
- 3) Representative of Affected Persons of concerned City Corporation: *Member*
- 4) Official Representative of the land registry department: *Member*
- 5) Official Representative of the DOE Divisional Office: *Member*
- 6) Town planner of the Pourashava or City Corporation: *Member*
- 7) Environmental/social safeguard Focal Officer of concerned City Corporation: *Member*

### **Scope of Work of Second Level Grievance Redressal Committee (at Local Level)**

- 1) Provide support to affected persons on problems arising from land acquisition (temporary or permanent), asset acquisition and eligibility for entitlements, compensation and assistance,
- 2) If any affected person's claim of loss is valid under the context of statutory laws pertaining to relocation, the committee must help the complainant in being recompensed by the project authority
- 3) Record grievances of affected persons, categorize and prioritize them and provide solutions within 30 days from receipt of grievance from the first level
- 4) Report to the aggrieved parties about developments regarding their grievances and decisions of the GRC.
- 5) The progress of resolve and decisions made by GRC related to the grievances of the complainant must be informed to the PD through the Project Manager (Head of PIU) of City Corporation.
- 6) The GRC must hold at least two meetings a month. The number of meetings held may be increased or decreased based on the existing number of unresolved cases and making discussion with the PD.

**Third Level:** Should the grievance still remain unresolved at second level, the Project Manager (Head of PIU) will inform the Project Director quickly. The Project Director will activate the third level of the GRC at the project level based on review of the local GRC minutes and consultation with the Head of PIU.

### **Third Level Grievance Redressal committee (at Project Level):**

- 1) Project Director, CRDP-II .....Chairman
- 2) Representative from Land Ministry -----Member
- 3) Representative from Department of Environment (DOE) ----- Member
- 4) Environmental/social safeguard Focal Officer of concerned Pourashava ----- Member
- 5) Representative of Affected Persons ----- Member
- 6) Environmental/social safeguard Focal Officer from CRDP-II -----Member Secretary

### **Scope of Work of Third Level Grievance Redressal Committee at Project Level**

- 1) The Environmental and/or Social Safeguards Officer of the PMCU will be responsible for processing and placing all papers related to the grievances and earlier decisions before the Project Level GRC
- 2) A meeting shall be convened within 7 (seven) days just after receiving the complaint at the Project Level,
- 3) The GRC at Project Level will be conveyed decision within 15 (fifteen) days of the receipt of the complaint,
- 4) Environment/Social Safeguard Officer at Project Level shall record the decisions taken at the GRC meeting and issuing minutes of the meeting/s,
- 5) Environment/Social Safeguard Officer at Project Level, after discussion with, shall take necessary actions regarding the progress of the implementation of the decisions taken by the GRC

### **(iii) At LGED Level:**

#### **Necessity of Grievance Redressal Committee (GRC)**

During the implementation of CRDP-II, if any private property/asset (temporary/permanent) gets damaged and if any grievances are raised by the affected persons, then in order to resolve such issues, it becomes mandatory/ compulsory to form a GRC. The formed GRC would play an effective role in receiving and resolving the grievances/complaints raised by the affected persons that may cause from the implementation of projects and subprojects. The process of resolving so and so

complaints would be considered as a part of policies relating to safeguard of the project. In this process, the grievances of aggrieved person or persons must be addressed and resolved in a transparent and timely manner. The process to be implemented should not be gender sensitive and should be free from any cultural biases. It should be ensured that in this form of resolve, the affected persons can easily accept the process of achieving the resolve and they do not require spending any money for it. The affected persons must gradually be given accurate and elaborate information on this process of grievances redressing.

### **Grievance Redressal Committee and Settlement Process**

The grievances redress process will be implemented at 3 (three) levels. The First and Second Levels will be addressed at Upazila Level and the Third at Project Level.

**First Level:** At the First Level, the complainant/AP shall have easy accessibility to the venue and a fastest resolve of grievances system. In this stage, the Upazila Engineer shall appoint a Sub Assistant Engineer of the concerned PIU as a focal person of the project. The focal person will receive complaints from the victims and make an effort for prompt grievance redress. In order to provide ease of communication, the focal person's mobile number needs to be put up in an important place of the project area. Upon receipt of a written complaint/s from the victim or persons, the Focal Person shall immediately refer the matter to the committee formed at the primary level (as per scope of work no. 2 of the Committee in terms of responsibility)

#### **First Level Local Grievance Redressal committee**

- 1) Executive Engineer/Assistant Engineer of concerned City Corporation: *Chairman*
- 2) Project Consultant (Safeguard Expert) of CRDP-II: *Member*
- 3) Environmental/Social Safeguard Focal Person of concerned City Corporation: *Member-Secretary*

#### **Scope of work of the First Level Grievance Redressal Committee (at Local Level)**

- 1) Upon receipt of the complaints from the affected/aggrieved person, grievances are being resolved through discussions,
- 2) Once the grievances of AP is received/reported, these are to be resolved within 7(seven) days of receipt of the complaint,
- 3) Inform the affected persons about land acquisition, structures acquisition, livelihood impacts, entitlements, and about various assistance/collaboration,
- 4) All the information related to the complaint of the complainant is recorded,
- 5) To preserve properly all records and minutes of meetings related to grievance redressal and inform the Project Director by the Upazila Engineer through the Executive Engineer, LGED, of concerned district.

**Second Level:** If any complaint is unresolved at the primary level, the Upazila Engineer will report the complaint in writing to the second level local grievance redressal committee formed at the upazila level. After receiving the written letter from the Upazila Engineer, the second level grievance redressal process will start.

#### **Second level local grievance redressal committee**

- 1) Upazila Nirbahi(Executive) Officer----- Chairman
- 2) Representative of Upazila Nirbahi(Executive) Officer of concerned Upazila ----- Member
- 3) Representative of aggrieved/affected person of concerned City Corporation----- Member
- 4) Representative of the local Land Registry Office ----- Member
- 5) Representative of Divisional DOE Office----- Member
- 6) Representative of Office of Executive Engineer of concerned District ----- Member
- 7) Environmental/Social Safeguard Officer of concerned District ----- Member Secretary

### **Scope of the second level local grievance redressal committee**

- 1) At this stage, it is to assess the amount of loss (physical quantity only) in the acquisition of assets (permanent / temporary) of the affected persons in the project, and to assist in obtaining compensation
- 2) To assist in obtaining compensation from the project authorities, if the victim's complaint is covered by the Rehabilitation Policy,
- 3) To resolve the grievances of the victims/AP on priority basis by sorting them according to type within 1 month,
- 4) To inform the complainant about the progress of the complaint and the decision of the committee,
- 5) To inform the Project Director through the Upazila Nirbahi (Executive) Officer about the progress of the complainant's complaint and the decisions of the Redressal Committee.
- 6) The grievance redressal committee will meet at least twice a month. The number of monthly meetings can be reduced or increased based on the number of unresolved complaints and in consultation with the Project Director.

**Third Level:** In the second stage, if any grievance remains unresolved in the local grievance redressal committee, the Executive Engineer of concerned District will immediately inform the project director. The Project Director will initiate the activities of the third level grievance redressal committee formed at the project level in consultation with the Executive Engineer on the basis of the report and recommendations of the local grievance redressal committee.

### **Third level local grievance redressal committee**

- 1) The Project Director of CRDP-II: *Chairman*
- 2) Representative of Land Ministry: *Member*
- 3) Representative of Department of environment: *Member*
- 4) Environmental/Social Safeguard Focal Person, concerned Upazila: *Member*
- 5) Representative of Project Affected Persons: *Member*
- 6) Environmental/Social Safeguard Focal Person, CRDP-II: *Member- Secretary*

### **Scope of the Third Level local grievance redressal committee**

- 1) The Environment / Social Safeguard Officer will present the grievances and previous level decisions to the grievance redressal committee.
- 2) At the Project Level, the grievance redressal committee will convene a meeting within 7 days of receiving the grievance
- 3) At the Project Level, the grievance redressal committee will provide decision within 15 days
- 4) The Environment / Social Safeguard Officer, at the Project Level, will record the decisions of the grievance redressal committee meeting and issue the minutes of the meeting.
- 5) The Environmental/Social Safeguard Officer, at the Project Level, will take necessary steps after discussing the progress of implementation of the decision of the grievance redressal committee.

### **Signature**

(Jesmin Parvin)

Deputy Secretary

Phone: 9575567

**Distribution (inaction)**

- 1) Secretary, Land Ministry, Bangladesh Secretariate, Dhaka (With a request to send a suitable representative)
- 2) Director General, Department of Environment, Agargaon, Dhaka (With the request to send a suitable representative of the Divisional Office to the concerned grievance redressal committee)
- 3) Chief Engineer, Local Government Engineering Department, Agargaon, Dhaka
- 4) Chief Executive Officer/Secretary, City Corporation
- 5) Director, Divisional Office, Department of Environment Division
- 6) Mayor, Pourashava District (With a request to send a suitable representative)
- 7) Project Director, CRDP-II, Local Government Engineering Department, Agargaon, Dhaka
- 8) Upazila Nirbahi Officer, Upazila District
- 9) Chief Executive Officer/Secretary, Pourashava District
- 10) Executive Engineer/Assistant Engineer City Corporation-
- 11) Environmental/Social Safeguard Officer, City Corporation-
- 12) Urban Planner, City Corporation
- 13) Executive Engineer/Assistant Engineer, Pourashava, District
- 14) Safeguard Expert, MDS Consultant
- 15) Environmental/Social Safeguard Officer, Pourashava, District
- 16) Sub-Register, Local Land Registry Office (With a request to send a suitable representative)
- 17) Urban Planner, Pourashava, District
- 18) Environmental/Social Safeguard, City Corporation
- 19) Representative from project affected persons
- 20) Environmental/Resettlement Safeguard Officer, CRDP-II, LGED, Dhaka
- 21) Environmental/Social Safeguard Officer, City Corporation
- 22) Upazila Engineer/Assistant Engineer, Upazila, District
- 23) Environmental/Social Safeguard Officer, Upazila, District

Reference no.-46.068.005.00.00.018.2020.455

Date: 24 Jaistha 1427  
07 June 2020

**Copy to:**

1. Private Secretary to the Hon'ble Minister, Ministry of Local Government, Rural Development and Cooperatives, Bangladesh Secretariat, Dhaka
2. Private Secretary to Senior Secretary, Department of Local Government, Bangladesh Secretariat, Dhaka
3. Office Copy/ Master Copy

**Signature**

(Jesmin Parvin)  
Deputy Secretary

#### Appendix 4: EMP compliance monitoring checklist Table:

##### Site-specific EMP Compliance Status (Savar W-02)

EMP Compliance Checklist Second City Region Development Project (CRDP-II) : CRDP-II/LGED/DHAKA/SAVAR/NCB/2018/W-02						Date: 02/12/2023
Road Name: Nayarhat GC to Savar GC						
Sl No.	Environmental Issues / Aspects	Activity / Inspection items	Status of compliance (Tick ✓)			Remarks (i.e. specify location, site conditions, problem observed, possible cause of nonconformity and / or proposed corrective/ preventative actions)
			Yes	No	N/A	
1	Construction camps	• Obtaining approval	✓			
		• Erection of signboard in Bangla and English with project details	✓			
		• Install accommodation facilities for workers	✓			
		• Drainage channels installation	✓			
		• Supply of safe drinking water	✓			
		• Supply of adequate sanitation	✓			
2	Deployment of Environment and Safety Supervisor	• Deployment one full-time Environment health and Safety officer by the contractor to oversee and comply environmental safeguards	✓			
3	Fuel storage areas	• Install hardstand/raised platform with polyethylene on the top	✓			
		• Firefighting equipment installation	✓			

SI No.	Environmental Issues / Aspects	Activity / Inspection items	Status of compliance (Tick ✓)			Remarks (i.e. specify location, site conditions, problem observed, possible cause of nonconformity and / or proposed corrective/ preventative actions)
			Yes	No	N/A	
		<ul style="list-style-type: none"> <li>Regular checks on physical condition</li> </ul>	✓			
4	Access road construction	<ul style="list-style-type: none"> <li>Obtaining approval</li> </ul>	✓			
		<ul style="list-style-type: none"> <li>Construction of culverts if needed</li> </ul>	✓			
5	Earthworks	<ul style="list-style-type: none"> <li>Agreeing on disposal of spoil earth/soils</li> </ul>	✓			
		<ul style="list-style-type: none"> <li>Prevention of erosion/dust due to transporting /carrying earth</li> </ul>	✓			
6	Workers' Health and safety	<ul style="list-style-type: none"> <li>Development of Health and Safety Plan</li> </ul>	✓			
		<ul style="list-style-type: none"> <li>Train all staff in health and safety</li> </ul>	✓			
		<ul style="list-style-type: none"> <li>Considering prevention and control of COVID-19 at worksite</li> </ul>	✓			
		<ul style="list-style-type: none"> <li>Provision of PPE (gloves, masks, helmets, gum boots, goggles etc.) and ensuring their use</li> </ul>	✓			
		<ul style="list-style-type: none"> <li>Installation of first aid facilities at work site/camps with adequate stock</li> <li>Provide separate sanitation facilities for male &amp; female if needed</li> </ul>	✓			
		<ul style="list-style-type: none"> <li>Provision of safe drinking water to work force (arsenic free)</li> </ul>	✓			
7	Public Safety	<ul style="list-style-type: none"> <li>Notify the community people about the construction activities in the areas</li> </ul>	✓			
		<ul style="list-style-type: none"> <li>Installation of dedicated pathways for pedestrians</li> </ul>	✓			
		<ul style="list-style-type: none"> <li>Installation of Regulatory safety signs and signals</li> </ul>	✓			
		<ul style="list-style-type: none"> <li>Limitation of construction vehicles at public roads during peak hours.</li> </ul>	✓			



SI No.	Environmental Issues / Aspects	Activity / Inspection items	Status of compliance (Tick ✓)			Remarks (i.e. specify location, site conditions, problem observed, possible cause of nonconformity and / or proposed corrective/ preventative actions)
			Yes	No	N/A	
8	Protection of Cultural//Archaeological Properties	<ul style="list-style-type: none"> <li>Providing measures to protect cultural properties</li> </ul>	✓			
9	Water Supply	<ul style="list-style-type: none"> <li>Providing construction camps /site office with potable water through installing tube wells</li> </ul>	✓			
		<ul style="list-style-type: none"> <li>Ensuring that there are no tube wells sitting near any sanitation facilities as to avoid water pollution.</li> </ul>	✓			
		<ul style="list-style-type: none"> <li>Maintaining the distance of water source (ground /surface water from a soak pit at minimum 15m.</li> </ul>	✓			
		Maintaining the drainage from the tube well diverting into the drainage system of the camp area.	✓			
10	Sanitation	<ul style="list-style-type: none"> <li>Providing suitable sanitation facilities for the workforce.</li> <li>Ensuring the location plan of the latrine at least 50 meter away from the accommodation facility.</li> <li>Providing separate latrines for the use of women.</li> <li>Installing treatment facilities (i.e. septic tank, soak pits etc.) for sewerage of toilet and camp site wastes.</li> <li>Arranging disposal of wastewater from washrooms, kitchens, s, etc. via the camp area's drainage system.</li> </ul>	✓			
11	Waste	<ul style="list-style-type: none"> <li>Provision of containers to store separately non-hazardous/hazardous solid waste</li> </ul>	✓			
		<ul style="list-style-type: none"> <li>Proper disposal of generated wastes at approved disposal sites</li> </ul>	✓			

SI No.	Environmental Issues / Aspects	Activity / Inspection items	Status of compliance (Tick ✓)			Remarks (i.e. specify location, site conditions, problem observed, possible cause of nonconformity and / or proposed corrective/ preventative actions)
			Yes	No	N/A	
12	Dust Control	• Covering or wetting of dusty materials	✓			
		• Dust suppression by wetting surfaces	✓			
		• Impose speed limits	✓			
13	Water and Hydrology	• Preventing wastes, soil, etc. entering in the water system by waste collection, revegetation and dust suppression etc.	✓			
14	Flora and Fauna	• Agreeing with local authorities on tree felling	✓			
		• Avoid/prevent un-necessary tree/vegetation cutting and clearing	✓			
		• Ensuring sufficient free flow in the construction work for fish migration	✓			
		• Prevent disturbance of animals	✓			
15	Complaints and Environmental Incidents	• Complaints received from the public or other stakeholders will be registered and recorded and be brought to the attention of the Site Engineer.	✓			
		• All environmental incidents occurring on the site will be recorded and be brought to the attention of the Site Engineer.	✓			
		• Action will be taken within 7 working days.	✓			

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



PDS Consultant/Site Supervision Engineer



Environmental Officer (PIU)



Contractor's Health & Safety Officer

## Appendix 5: Photographs from Field

As regards the overall environmental safeguard compliances at subproject construction site are displayed here below.



Package Name: CRDP-II/LGED/CHALNA/NCB/2021/W-01



Package Name: CRDP-II/LGED/MONGLA/NCB/2021/W-01



Package Name: CRDP-II/LGED/GCC/NCB/2020/W-03





# Appendix 6: Dust Suppression Log Chart

## LOCAL GOVERNMENT ENGINEERING DEPARTMENT Second City Region Development Project (CRDP-2)

Khulna City Corporation, Khulna

### Dust Suppression Log Chart

(ধুলা নিয়ন্ত্রণ কার্যক্রমের লগচার্ট)

Name of sub-project: CRDP-II/LGED/KCC/NCB/2021/W-01	
Scheme name of sub-project: Approach Road at KUET (Length-1185m)	
District: Khulna	Division: Khulna

Month: November, 2023

Sl. No.	Date	Period of spraying water			Signature of the contractor's representative	Signature of the supervising engineer
		Morning	Mid-day	Afternoon		
1	02-11-2023		✓		Sabbir	
2	04-11-2023	✓		✓	Sabbir	
3	06-11-2023		✓		Sabbir	
4	07-11-2023	✓			Sabbir	
5	09-11-2023			✓	Sabbir	
6	11-11-2023	✓			Sabbir	
7	12-11-2023		✓		Sabbir	
8	14-11-2023		✓		Sabbir	
9	15-11-2023		✓		Sabbir	
10	17-11-2023	✓			Sabbir	
11	18-11-2023	✓		✓	Sabbir	
12	19-11-2023	✓			Sabbir	
13	21-11-2023		✓		Sabbir	
14	22-11-2023		✓		Sabbir	
15	24-11-2023	✓			Sabbir	
16	25-11-2023			✓	Sabbir	
17	26-11-2023	✓		✓	Sabbir	
18	27-11-2023		✓		Sabbir	
19	29-11-2023		✓		Sabbir	
20	30-11-2023	✓		✓	Sabbir	

## Appendix 7: Sample Grievance Redress Form

(To be available in Bangla and Other Local Language, if any)

The \_\_\_\_\_ Project welcomes complaints, queries and comments regarding project implementation. We encourage persons with grievance to provide their name and contact information to enable us to get in touch with you for clarification and feedback.

Should you choose to include your personal details but want that information to remain confidential, please inform us by writing/typing\*(CONFIDENTIAL)\*above your name. Thank you

<b>Date</b>		<b>Place of registration</b>			
<b>Contact Information/Personal Details</b>					
<b>Name</b>		<b>Gender</b>	<input type="checkbox"/> Male <input type="checkbox"/> Female	<b>Age</b>	
<b>Home Addresss</b>					
<b>Village/Town</b>					
<b>District</b>					
<b>Phone no.</b>					
<b>E-mail</b>					
<b>Complaint/Suggestion/Comment/Question</b> Please provide the details (who, what, where and how) of your grievance below: If included as attachment/note/letter, please tick here:					
<b>How do you want us to reach you for feedback or update on your comment/grievance?</b>					

### FOR OFFICIAL USE ONLY

<b>Registered by:</b> (Name of Official registering grievance)	
<b>Mode of communication:</b> <input type="checkbox"/> Note/Letter <input type="checkbox"/> E-mail <input type="checkbox"/> Verbal/Telephonic	
<b>Reviewed by:</b> (Names/Positions of Official (s) reviewing grievance)	
<b>Action Taken:</b>	
<b>Whether Action Taken Disclosed:</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Means of Disclosure:</b>	



## Appendix 8: COVID-19 Health & Safety Plan Monitoring Checklist

(EHS COVID-19 Response Guidance, ADB Bangladesh Resident Mission Template)

Package Name:

Road Name:

Month / Year:

A. Environmental Health and Safety Checklist			
Sl.	Checklist	Number/Quantity	Remarks
1	Number of workers & employees available at site		
2	Health check-up/screening completed for all workers/employee/visitors		
3	Washbasin, sanitizer dispenser at site		
4	Stock of soap, sanitizer, disinfectants, PPEs (masks, hand gloves, boots) available at site		
5	Number of cleaning staff employed		
6	Number of covered bins with COVID sign at the site		

B. Daily Monitoring: COVID -19 protocols (worksite and campsite)					
Sl.	Checklist	Observation		Corrective Action Plan	Time frame to comply
		Yes	No		
1	Medical professional is available on call				
2	Contractor's EHS officer is available at site				
3	Entrance protocol: 6 ft distance maintained?				
4	Disinfectant spray used at site entry at hands and under shoes				
5	Workers & employees are using mask, gloves and shoes				
6	Workers & employees are washing their hands				
7	Used PPEs (masks, gloves) are disposed in covered bin				
8	Social distancing: workers & employees maintaining social distancing all the time				
9	Vehicle protocol: vehicle disinfection protocol followed				
10	Tools/machinery: wiped to disinfect before and after sharing/working				
11	Disinfecting work area (worksite/ common surfaces, toilets etc.) are disinfected i) before worksite opened in the morning, ii) before lunch and iii) after closing for the day				
12	Trash bins are covered and used for disposal of PPEs (masks, gloves)				

## COVID-19 Health & Safety Plan Monitoring Checklist

(EHS COVID-19 Response Guidance, ADB Bangladesh Resident Mission template)

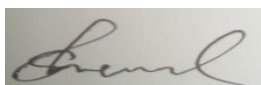
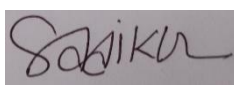
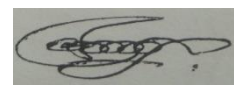
Package Name: - CRDP-II/LGED/JASHORE/NCB/2021/W-01

Month / Year: November - 2023

A. Environmental Health and Safety Checklist			
Sl.	Checklist	Number/Quantity	Remarks
1	Number of workers & employees available at site	15 nos.	
2	Health check-up/screening completed for all workers/employee/visitors	15 nos.	
3	✓ Washbasin, sanitizer dispenser at site	2 nos.	
4	Stock of soap, sanitizer, disinfectants, PPEs (masks, hand gloves, boots) available at site	Available at site.	
5	Number of cleaning staff employed	01 nos	
6	Number of covered bins with COVID sign at the site	02 nos.	


B. Daily Monitoring: COVID -19 protocols (worksite and campsite)					
Sl.	Checklist	Observation		Corrective Action Plan	Time frame to comply
		Yes	No		
1	Medical professional is available on call	✓			
2	Contractor's EHS officer is available at site	✓			
3	Entrance protocol: 6 ft distance maintained?	✓			
4	Disinfectant spray used at site entry at hands and under shoes	✓			
5	Workers & employees are using mask, gloves and shoes	✓			
6	Workers & employees are washing their hands	✓			
7	Used PPEs (masks, gloves) are disposed in covered bin	✓			
8	Social distancing: workers & employees maintaining social distancing all the time	✓			
9	Vehicle protocol: vehicle disinfection protocol followed	✓			
10	Tools/machinery: wiped to disinfect before and after sharing/working	✓			
11	Disinfecting work area (worksite/ common surfaces, toilets etc.) are disinfected i) before worksite opened in the morning, ii) before lunch and iii) after closing for the day	✓			
12	Trash bins are covered and used for disposal of PPEs (masks, gloves)	✓			

\*Attach photos, additional information as required

## Appendix 9: Sample GRC Committee established and functioning (Rupganj GRC)

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার  
স্থানীয় সরকার প্রকৌশল অধিদপ্তর  
উপজেলা প্রকৌশলীর কার্যালয়  
রূপগঞ্জ, নারায়ণগঞ্জ।



শেখ হাসিনার মূলনীতি  
গ্রাম শহরের উন্নতি

স্মারক নং- ৪৬.০২.০০০.৬৭.৬৮.১৪.২০-৫৫৯ তারিখ : ৩০/০৯/২০২০ইং

### অফিস আদেশ

স্থানীয় সরকার প্রকৌশল অধিদপ্তর কর্তৃক বাস্তবায়নধীন “দ্বিতীয় নগর অঞ্চল উন্নয়ন” প্রকল্পের আওতায় এলজিইডি’র উপজেলা পর্যায়ে অভিযোগ নিরসন কার্যক্রম দ্রুত ও নিয়মানুগভাবে বাস্তবায়নের লক্ষ্যে নিম্নরূপ অভিযোগ নিরসন কমিটি (Grievance Redress Committee) গঠন করা হলো।

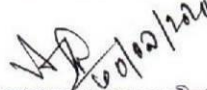
সূত্র : স্মারক নং-৪৬.০৬৮.০০৫.০০.০০.০১৮.২০২০-৪৫৫ তারিখ: ০৭-০৬-২০২০ ইং।

#### প্রথম স্তরের স্থানীয় অভিযোগ নিরসন কমিটি :

- ১। জনাব মীর কায়ছার রিজভী, উপজেলা সহকারী প্রকৌশলী, উপজেলা রূপগঞ্জ, জেলা নারায়ণগঞ্জ- সভাপতি।
- ২। জনাব মোঃ আব্দুল্লাহ আল ফারুক, সিআরডিপি-২ প্রকল্পের কনসালটেন্ট ( সেভগার্ড এক্সপার্ট)-সদস্য।
- ৩। জনাব মোঃ শামীম দেওয়ান, কমিউনিটি অগ্রানাইজার, উপজেলা রূপগঞ্জ, নারায়ণগঞ্জ (পরিবেশ/সামাজিক সুরক্ষা ফোকাল কর্মকর্তা) - সদস্য সচিব।

#### কমিটির কার্য পরিধি :

- ১। ক্ষতিগ্রস্ত ব্যক্তির অভিযোগ গ্রহণ এবং পারস্পরিক আলোচনার ভিত্তিতে তা নিরসন করা,
- ২। অভিযোগকারীর অভিযোগ গ্রহণের ৭ দিনের মধ্যে অভিযোগ নিষ্পত্তিকরণের ব্যবস্থা করা,
- ৩। ভূমি এবং / অথবা অবকাঠামো (Structures) অধিগ্রহণ, জীবিকা অর্জনের ওপর প্রভাব, প্রাপ্য ক্ষতি পূরণ (Entitlements) এবং বিভিন্ন সহযোগিতা সম্পর্কে ক্ষতিগ্রস্তদের অবহিত করা,
- ৪। অভিযোগকারী ব্যক্তির অভিযোগ সংক্রান্ত যাবতীয় তথ্যাবলী লিপিবদ্ধ করা,
- ৫। অভিযোগ নিষ্পত্তি সংক্রান্ত যাবতীয় রেকর্ড ও সভার কার্যবিবরণী যথাযথভাবে সংরক্ষণ এবং উপজেলা প্রকৌশলী কর্তৃক নির্বাহী প্রকৌশলী, এলজিইডি, নারায়ণগঞ্জ জেলা এর মাধ্যমে প্রকল্প পরিচালক-কে অবহিত করা।

  
(মোহাম্মদ এনায়েত কবীর)  
উপজেলা প্রকৌশলী  
রূপগঞ্জ, নারায়ণগঞ্জ।  
ফোন : ৭৬৫০০৫০

#### অনুলিপি সদয় অবগতির জন্য :-

- ১। তত্ত্বাবধায়ক প্রকৌশলী, এলজিইডি, নারায়ণগঞ্জ অঞ্চল, নারায়ণগঞ্জ।
- ২। প্রকল্প পরিচালক, সিআরডিপি-২, এলজিইডি, আগারগাঁও, ঢাকা-১২০৭।
- ৩। নির্বাহী প্রকৌশলী, এলজিইডি, নারায়ণগঞ্জ।
- ৪। উপজেলা নির্বাহী অফিসার, রূপগঞ্জ, নারায়ণগঞ্জ।
- ৩। জনাব মোঃ আব্দুল্লাহ আল ফারুক, সিআরডিপি-২ প্রকল্পের কনসালটেন্ট ( সেভগার্ড এক্সপার্ট) সদস্য।
- ৫। জনাব, মোঃ শামীম দেওয়ান, কমিউনিটি অগ্রানাইজার ও পরিবেশ/সামাজিক সুরক্ষা ফোকাল কর্মকর্তা, উপজেলা রূপগঞ্জ, নারায়ণগঞ্জ।

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার  
স্থানীয় সরকার প্রকৌশল অধিদপ্তর  
উপজেলা প্রকৌশলীর কার্যালয়  
রূপগঞ্জ, নারায়ণগঞ্জ।



শেখ হাসিনার মূলনীতি  
গ্রাম শহরের উন্নতি

স্মারক নং- ৪৬.০২.০০০.৬৭.৬৮.১৪.২০-৫৬০

তারিখঃ ৩০/০৯/২০২০ইং

অফিস আদেশ

স্থানীয় সরকার প্রকৌশল অধিদপ্তর কর্তৃক বাস্তবায়নাধীন “দ্বিতীয় নগর অঞ্চল উন্নয়ন” প্রকল্পের আওতায় এলজিইডির উপজেলা পর্যায়ে অভিযোগ নিরসন কার্যক্রম দ্রুত ও নিয়মানুগভাবে বাস্তবায়নের লক্ষ্যে নিম্নরূপ অভিযোগ নিরসন কমিটি (Grievance Redress Committee) গঠন করা হলো।

সূত্রঃ স্মারক নং-৪৬.০৬৮.০০৫.০০.০১৮.২০২০-৪৫৫

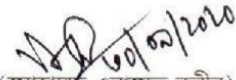
তারিখঃ ০৭-০৬-২০২০ ইং।

দ্বিতীয় স্তরের স্থানীয় অভিযোগ নিরসন কমিটি :

- ১। জনাব শাহ নুসরাত জাহান, উপজেলা নির্বাহী কর্মকর্তা, উপজেলা রূপগঞ্জ, জেলা নারায়ণগঞ্জ- সভাপতি।
- ২। জনাব আফিফা খান, সহকারী কমিশনার ( ভূমি), উপজেলা রূপগঞ্জ, জেলা নারায়ণগঞ্জ -সদস্য।
- ৩। জনাব আরমানুজ্জামান, স্বর্ণখালী বাজার, ভোলাব, রূপগঞ্জ, নারায়ণগঞ্জ(ক্ষতিগ্রস্ত ব্যক্তিবর্গের প্রতিনিধি)-সদস্য।
- ৪। জনাব এস, এম শফিউল বারি, সাব-রেজিস্টার, উপজেলা রূপগঞ্জ, নারায়ণগঞ্জ- সদস্য।
- ৫। জনাব আব্দুল গফুর, পরিদর্শক, পরিবেশ অধিদপ্তর, নারায়ণগঞ্জ- সদস্য।
- ৬। জনাব মালা বেগম, সহকারী প্রকৌশলী, এলজিইডি, নারায়ণগঞ্জ- সদস্য।
- ৭। জনাব মোঃ আব্দুল মালেক, উপ-সহকারী প্রকৌশলী, এলজিইডি, উপজেলা রূপগঞ্জ, নারায়ণগঞ্জ (পরিবেশ/সামাজিক সুরক্ষা কর্মকর্তা)- সদস্য সচিব।

কমিটির কার্য পরিধি :

- ১। এ পর্যায়ে প্রকল্পে ক্ষতিগ্রস্ত ব্যক্তিদের সম্পদ অধিগ্রহণে (স্থায়ী-অস্থায়ীভাবে) ক্ষতির পরিমাণ (ক্ষতিগ্রস্ত ভৌত পরিমাণ-Physical Quantity) নির্ধারণ এবং ক্ষতিপূরণ প্রাপ্তিতে সহযোগিতা করা,
- ২। ক্ষতিগ্রস্ত ব্যক্তির অভিযোগ পুনর্বিনীতি নীতিমালার আওতাভুক্ত হলে প্রকল্প কর্তৃপক্ষের মাধ্যমে ক্ষতিপূরণ প্রাপ্তিতে সহযোগিতা করা,
- ৩। ক্ষতিগ্রস্তদের অভিযোগসমূহ ধরণ অনুযায়ী বিন্যাস করে অগ্রাধিকার ভিত্তিতে ১ মাস সময়ের মধ্যে সমাধান করা,
- ৪। অভিযোগকারী অভিযোগ বিষয়ে অগ্রগতি এবং কমিটির সিদ্ধান্ত অভিযোগকারীকে অবহিত করা,
- ৫। অভিযোগকারীর অভিযোগ বিষয়ে অগ্রগতি এবং নিরসন কমিটির সিদ্ধান্তসমূহ উপজেলা নির্বাহী কর্মকর্তা-এর মাধ্যমে প্রকল্প পরিচালক-কে অবহিত করা,
- ৬। অভিযোগ নিরসন কমিটি মাসে অন্ততঃ ২ বার সভায় বসবে। অমীমাংসিত অভিযোগের সংখ্যার ভিত্তিতে এবং প্রকল্প পরিচালকের সাথে আলোচনা করে মাসিক সভার সংখ্যা হ্রাস বা বৃদ্ধি করা যাবে।

  
(মোহাম্মদ এনায়েত কবীর)  
উপজেলা প্রকৌশলী  
রূপগঞ্জ, নারায়ণগঞ্জ।  
ফোন : ৭৬৫০০৫০

অনুলিপি সদয় অবগতির জন্য :-

- ১। তত্ত্বাবধায়ক প্রকৌশলী, এলজিইডি, নারায়ণগঞ্জ অঞ্চল, নারায়ণগঞ্জ।
- ২। প্রকল্প পরিচালক, সিআরডিপি-২, এলজিইডি, আগারগাঁও, ঢাকা-১২০৭।
- ৩। নির্বাহী প্রকৌশলী, এলজিইডি, নারায়ণগঞ্জ।
- ৪। উপজেলা নির্বাহী অফিসার, রূপগঞ্জ, নারায়ণগঞ্জ।
- ৩। জনাব মোঃ আব্দুল্লাহ আল ফারুক, সিআরডিপি-২ প্রকল্পের কনসালটেন্ট (সেভগার্ড এক্সপার্ট) সদস্য।
- ৫। জনাব, মোঃ আব্দুল মালেক, উপ-সহকারী প্রকৌশলী ও পরিবেশ/সামাজিক সুরক্ষা ফোকাল কর্মকর্তা, উপজেলা রূপগঞ্জ, নারায়ণগঞ্জ।

## Appendix 10: Monitoring Plan for Environmental Quality Tests of On-Going Construction Packages

Sl. No.	Name of the subprojects	Sampling Date	Remarks
1	Balivadhra GC - Dhamshona UP - Simulia UP Road ( <b>SAVAR/W-04</b> )	(01/04/2022)	Reported as EBLS & EELS on SEMR (January-June 2022)
2	Road from Binairchar to Kamrangir Char ( <b>ARAIHAZAR/ W-01</b> )	(08/04/2022)	Reported as EBLS & EELS on SEMR (January-June 2022)
3	RHD Araihaazar bazar - AraihaazarPurinda Road ( <b>ARAIHAZAR/W-02</b> )	(09/04/2022)	Reported as EBLS & EELS on SEMR (January-June 2022)
4	Jarun Road and East Enayetpur Road ( <b>GCC/W-02</b> )	(25/06/2022)	Reported as EBLS & EELS on SEMR (July-Dec 2022)
5	Borpa RHD –Mohajampur UP Road( <b>RUPGANJ/W-03</b> )	(06/08/2022)	Reported as EBLS & EELS on SEMR (July-Dec 2022)
6	IUT to Icharkandi Road ( <b>GCC/W-01</b> )	(09/01/2023)	Reported as EBLS & EELS on SEMR (January-June 2023)
7	DC Banglo Road ( <b>JASSORE/W-01</b> )	(16/06/2023)	Test report submitted
8	Rupshi GC-Kanchan GC via Murapara GC Road( <b>RUPGANJ/W-01</b> )	(11/08/2023)	Test report submitted
9	Porshi GC- Murapara GC via Rupganj Road ( <b>Rupganj/w-04</b> )	(13/08/2023)	Test report submitted
10	Nayarhat GC to Savar GC Road ( <b>SAVAR/W-02</b> )	(19/10/2023)	Test report submitted
11	Dhaka-Aricha highway at Savar Bazar bus stand- Kalma via Savar UP Road( <b>SAVAR/W-01</b> )	(20/10/2023)	Test report submitted
12	Zirabo to Toyebpur Road via Yearpur and Toyebpur to Norshingapur Bazar Road ( <b>SAVAR/W-07</b> )	(21/10/2023)	Report pending
13	Bangshinagar Water Treatment Plant to Alraji Textile Mill Road ( <b>TARABO/W-01</b> )	(25/10/2023)	Test report submitted
14	Masriki Jute Mill to Kendua Khal Road ( <b>KANCHON/W-01</b> )	(26/10/2023)	Report pending
15	( <b>SONARGAON /W-01</b> )	(29/12/2023)	Laboratory work is going on
16	( <b>RUPGANJ/W-02</b> )	(30/12/2023)	Laboratory work is going on
17	( <b>JIKORGACHA /W-01</b> )	tentative date 12.01.24	Planning to do Field survey soon
18	( <b>NOWAPARA /W-01</b> )	tentative date 12.01.24	Planning to do Field survey soon

## Appendix 11: Site/Task-specific Occupational Health & Safety (OHS) Compliance Monitoring Checklist

<b>OHS Compliance Checklist</b> <b>Second City Region Development Project (CRDP-2)</b> <b>Scheme name of sub-project:</b> CRDP-II/LGED/MONGLA/NCB/2021/W-01	<b>Date &amp; Sign:</b> <b>Month: December-2023</b>
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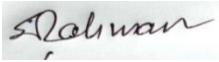
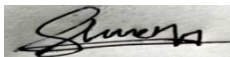
OHS Measure	Monitoring Items	Compliance Status		
		Put Tick (✓)		
		Yes	No	N/A
1. Personal Protective Equipment (PPE)	• Are all workers wearing appropriate PPE, such as hard hats, safety glasses, gloves, high-visibility clothing, and steel-toed boots?	✓		
	• Is there an adequate supply of PPE available on-site?	✓		
	• Are workers trained in the proper use and maintenance of PPE?	✓		
2. Traffic Management Plan	• Is a traffic management plan in place and being followed?	✓		
	• Are detours, temporary traffic lights, signage, and warnings set up as per the plan?	✓		
	• Are workers and pedestrians following the traffic management plan?	✓		
3. Machinery Safety	• Are all machinery and equipment on-site regularly inspected and maintained?	✓		
	• Are workers trained and certified to operate the machinery and equipment?	✓		
	• Are all machinery and equipment being used in accordance with manufacturer guidelines and safety procedures?	✓		
4. Manual Handling	• Are lifting equipment, such as cranes and hoists, being used for heavy lifting tasks?	✓		
	• Are workers trained in proper lifting techniques?	✓		
	• Are workers avoiding manual lifting when it exceeds safe weight limits?	✓		
5. Dust Control	• Is water spraying/sprinkling method is used to dampen down dust?	✓		
	• Are workers wearing respiratory protection when necessary?	✓		
6. Noise Control	• Are noise control measures, such as sound barriers and mufflers, in place and functioning properly?	✓		
	• Are workers wearing appropriate hearing protection when exposed to excessive noise?	✓		
7. First Aid	• Is a properly stocked first aid kit available on-site?	✓		
	• Are workers trained in basic first aid procedures?	✓		



OHS Measure	Monitoring Items	Compliance Status		
		Put Tick (✓)		
		Yes	No	N/A
	<ul style="list-style-type: none"> <li>Are incidents and injuries recorded and reported, and appropriate first aid provided?</li> </ul>	✓		
8. Environmental Control	<ul style="list-style-type: none"> <li>Is waste disposal being done in compliance with environmental regulations?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Are measures in place to prevent pollution, such as proper storage and handling of materials?</li> </ul>	✓		
9. Hazardous Materials Control	<ul style="list-style-type: none"> <li>Are hazardous materials properly stored, labeled, and handled on-site?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Are workers trained in the safe handling and disposal of hazardous materials?</li> </ul>	✓		
10. Excavation and Trenching	<ul style="list-style-type: none"> <li>Has a competent person inspected the excavation and determined if protective systems are necessary?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Is the excavation area barricaded or otherwise protected from workers and equipment?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Are all workers trained in excavation and trenching safety?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Are workers required to wear hard hats, safety glasses, gloves, high visibility vests, safety boots, and other PPE?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Are all electrical systems properly grounded and protected from damage?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Has the atmosphere in the trench been tested for toxic gases and is adequate ventilation provided?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Has the excavation been inspected regularly for signs of instability or collapse?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Are workers prohibited from entering the trench when equipment is operating nearby?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Are materials and equipment stored away from the edge of the excavation to prevent falls or collapses?</li> </ul>	✓		
11. Scaffolding	<ul style="list-style-type: none"> <li>Has a qualified and competent person inspected the scaffolding and determined it is safe to use?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Is the scaffolding properly anchored and tied off to the building or structure?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Are guardrails, mid-rails, and toe-boards in place on all open sides and ends of the scaffold?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Is the scaffolding regularly inspected, including before each use?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Are workers required to wear hard hats, safety glasses, gloves, high visibility vests, safety boots, and other PPE?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Is the scaffold being used only for its intended purpose?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Is the scaffold properly loaded and balanced to prevent overloading or instability?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Are workers prohibited from working on the scaffold during high winds or other adverse weather conditions?</li> </ul>	✓		



OHS Measure	Monitoring Items	Compliance Status		
		Put Tick (✓)		
		Yes	No	N/A
	<ul style="list-style-type: none"> <li>Are materials and equipment stored away from the edge of the scaffold to prevent falls or collapses?</li> </ul>	✓		
12. Piling	<ul style="list-style-type: none"> <li>Is the type of pile suitable for the soil conditions and the load requirements?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Has determined the pile length required for the load-bearing capacity of the soil?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Is the pile spacing/alignment, correct?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Is it ensured that the piles are driven to the required depth?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Has carried out pile load tests to verify the load-bearing capacity of the piles and their suitability for the work?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Is it ensured that the piles are protected from damage during installation and that they are not overloaded?</li> </ul>	✓		
	<ul style="list-style-type: none"> <li>Is it ensured that safety measures are in place and that workers are trained in the proper use of equipment and safety procedures?</li> </ul>	✓		

<p align="center"><b><u>Site Supervision Engineer</u></b></p> <p>Signature: </p> <p>Date: 30.12.2023</p>	<p align="center"><b><u>Contractor's Health &amp; Safety Officer</u></b></p> <p>Signature: </p> <p>Date: 30.12.2023</p>
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### **Accident/Incident/Nearmiss Record Form**

(Reporting by Contractor to PDS Environmental Consultant and PIU & PMCU/ Environmental Consultant)

(Attach Photograph of the accident/incident site)

Name of the Contractor or his  
Representative:  
Contact no:

<b>Project Name:</b>	
<b>Subproject/Scheme Name:</b>	
<b>Place of occurrence</b>	
<b>Date of occurrence</b>	
<b>Details of what happened</b>	
<b>Cause of incident</b>	
<b>Remarks</b>	

**Appendix 92: List of Participants at Orientation Workshops on Awareness Campaign of SWM in KCC at Ward Level**

**Second City Region Development Project (CRDP-2)**  
**Awareness Campaign on SWM in KCC**  
**Orientation Workshop at ward level**

Venue: Ward Councilor's Office, KCC, Khulna.

Ward No-30

Date: 05 December 2023

**Attendance Sheet**

Sl. No.	Name of Participants	Designation	Mobile No	Signature
1.	শ্রী. শ্রী. (ব্রজেন কুমার) (ক)	জি. ডি. অফিসার	০২০১২-৬৮০৮৮৮	[Signature]
2.	Adv. Jesum Perumjoly	Councilor	০১৭১১ ৫৪৮২৬২	[Signature]
3.	Md. Anisur Rahman	CEO	০১৭১১৭৮১৫৫১	[Signature]
4.	Arbina Sikder	Elite Person	০১৭৪৭৪৮১৮২১	Arbina
5.	মোঃ জামেউল হক	২০' নং পল্লী ৬৬ নং ৩২ নং	০১৭৬৭৫৪৮৬২	[Signature]
6.	KADSHIK KUMAR BORMAN	Head Teacher	০১৭১০-৭০২৬৬৫	[Signature]
7.	শ্রী. ব্রজেন কুমার হুমায়ুন	ইক্সপ্লোজিভ স্টেশন মাস্টার	০১৭২১-৫৮২১২০	[Signature]
8.	শ্রী. নীলজয় ডিমার	ইক্সপ্লোজিভ স্টেশন মাস্টার	০১৫৫৮৭১২১৭২	[Signature]
9.	শ্রী. আব্দুল হক মাস্টার	ইক্সপ্লোজিভ স্টেশন মাস্টার	০১৭৬২-৪০৩৪৭৭	[Signature]
10.	আব্দুল-আলিম-রাহমান	Elite Person	০২৭১২-২৮৩৭৭৮	[Signature]
11.	জাহিদ হুমায়ুন	সার্বভৌম	০১৭১৬৭০৮৬৩৭	[Signature]
12.	আব্দুল হুমায়ুন হুমায়ুন	ইক্সপ্লোজিভ স্টেশন মাস্টার	০২৭১৬৭০৮৬৩৭	[Signature]
13.	আব্দুল হুমায়ুন হুমায়ুন	ইক্সপ্লোজিভ স্টেশন মাস্টার	০১৭১১-১৬৭৮১৮	[Signature]
14.	বি. ব্রজেন কুমার হুমায়ুন	ইক্সপ্লোজিভ স্টেশন মাস্টার	০১৭১৬৭০৮৬৩৭	[Signature]
15.	এস. এম. ব্রজেন কুমার	ইক্সপ্লোজিভ স্টেশন মাস্টার	০১৭১০-৮৬১৮১০	[Signature]
16.	আব্দুল হুমায়ুন হুমায়ুন	ইক্সপ্লোজিভ স্টেশন মাস্টার	০১৭১৬৭০৮৬৩৭	[Signature]
17.	শ্রী. ব্রজেন কুমার	ইক্সপ্লোজিভ স্টেশন মাস্টার	০২৭১২-২৮৩৭৭৮	[Signature]
18.	শ্রী. ব্রজেন কুমার হুমায়ুন	ইক্সপ্লোজিভ স্টেশন মাস্টার	০১৭১৬৭০৮৬৩৭	[Signature]
19.	শ্রী. ব্রজেন কুমার হুমায়ুন	ইক্সপ্লোজিভ স্টেশন মাস্টার	০১৭১৬৭০৮৬৩৭	[Signature]
20.	শ্রী. ব্রজেন কুমার হুমায়ুন	ইক্সপ্লোজিভ স্টেশন মাস্টার	০১৭১৬৭০৮৬৩৭	[Signature]
21.	শ্রী. ব্রজেন কুমার হুমায়ুন	ইক্সপ্লোজিভ স্টেশন মাস্টার	০১৭১৬৭০৮৬৩৭	[Signature]
22.	Atmamoni Pova	ইক্সপ্লোজিভ স্টেশন মাস্টার	০১৭১৫ ৩৪৩৭৪৮	[Signature]
23.	শ্রী. ব্রজেন কুমার হুমায়ুন	ইক্সপ্লোজিভ স্টেশন মাস্টার	০১৭৩৭ ৩১৮৫০৫	[Signature]
24.	শ্রী. ব্রজেন কুমার হুমায়ুন	ইক্সপ্লোজিভ স্টেশন মাস্টার	০১৬২১৫৮৩৬৮৬	[Signature]
25.	শ্রী. ব্রজেন কুমার হুমায়ুন	ইক্সপ্লোজিভ স্টেশন মাস্টার	০১৭১২-৬৭৭৭৭৭	[Signature]

**Second City Region Development Project (CRDP-2)**  
**Awareness Campaign on SWM in KCC**  
**Orientation Workshop at ward level**

Venue: Ward Councilor's Office, KCC, Khulna.

Ward No-30

Date: 05 December 2023

**Attendance Sheet**

Sl. No.	Name of Participants	Designation	Mobile No	Signature
26.	সহকারী নগর প্রকৌশলী	সহকারী প্রকৌশলী	01916-051930	[Signature]
27.	স্বাস্থ্য পরিদপ্তর	স্বাস্থ্য পরিদপ্তর	01718973411	[Signature]
28.	স্বাস্থ্য পরিদপ্তর	স্বাস্থ্য পরিদপ্তর	01915827167	[Signature]
29.	স্বাস্থ্য পরিদপ্তর	স্বাস্থ্য পরিদপ্তর	01715213329	[Signature]
30.	স্বাস্থ্য পরিদপ্তর	স্বাস্থ্য পরিদপ্তর	02-55266-0800	[Signature]
31.	স্বাস্থ্য পরিদপ্তর	TL	01714066289	[Signature]
32.	M. Sakhawāt Hossain	TS	01711-248312	[Signature]
33.	Udd. Arifur Hoque	Facilitator	01716158363	[Signature]
34.				
35.				
36.				
37.				
38.				
39.				
40.				

**Appendix 103: List of Participants at Training on Awareness Campaign of SWM in KCC for Facilitators and Supervisors**

**Second City Region Development Project (CRDP-2)**

**Training on Awareness Campaign on SWM in KCC**

**Participants: Campaign Facilitators and Supervisors**

Venue: Office of ward Councilor, Ward No- 30, KCC, Khulna.

Ward No- 30, 31

Date: 07 December 2023

**Attendance Sheet**

Sl. No.	Name of Participants	Designation	Mobile No	Signature
1.	প্রোগ্রামার (মোনা)	অফিসিয়াল-৩	০২৭৩০২০১৬৭২	মোনা
2.	সহ-প্রোগ্রামার (সিদ্দিক)	অফিসিয়াল-৩	০৩৩৩৮-৬৬০২৮৮	সিদ্দিক
3.	প্রোগ্রামার (আবুল কালাম)	অফিসিয়াল-৩	০২৭৩৩ ৯৮ ২৫৬	আবুল কালাম
4.	প্রোগ্রামার (আবুল কালাম)	অফিসিয়াল-৩	০১৭১৮-৭৭৭২৭২	আবুল কালাম
5.	প্রোগ্রামার (আবুল কালাম)	অফিসিয়াল-৩	০১৭১৮-৭৭৭২৭২	আবুল কালাম
6.	অফিসিয়াল-৩	অফিসিয়াল-৩	০১৭১৮-৭৭৭২৭২	অফিসিয়াল-৩
7.	অফিসিয়াল-৩	অফিসিয়াল-৩	০১৭১৮-৭৭৭২৭২	অফিসিয়াল-৩
8.	অফিসিয়াল-৩	অফিসিয়াল-৩	০১৭১৮-৭৭৭২৭২	অফিসিয়াল-৩
9.	অফিসিয়াল-৩	অফিসিয়াল-৩	০১৭১৮-৭৭৭২৭২	অফিসিয়াল-৩
10.	অফিসিয়াল-৩	অফিসিয়াল-৩	০১৭১৮-৭৭৭২৭২	অফিসিয়াল-৩
11.	অফিসিয়াল-৩	অফিসিয়াল-৩	০১৭১৮-৭৭৭২৭২	অফিসিয়াল-৩
12.	অফিসিয়াল-৩	অফিসিয়াল-৩	০১৭১৮-৭৭৭২৭২	অফিসিয়াল-৩
13.	অফিসিয়াল-৩	অফিসিয়াল-৩	০১৭১৮-৭৭৭২৭২	অফিসিয়াল-৩
14.	অফিসিয়াল-৩	অফিসিয়াল-৩	০১৭১৮-৭৭৭২৭২	অফিসিয়াল-৩
15.	অফিসিয়াল-৩	অফিসিয়াল-৩	০১৭১৮-৭৭৭২৭২	অফিসিয়াল-৩
16.	অফিসিয়াল-৩	অফিসিয়াল-৩	০১৭১৮-৭৭৭২৭২	অফিসিয়াল-৩
x 17.	অফিসিয়াল-৩	অফিসিয়াল-৩	০১৭১৮-৭৭৭২৭২	অফিসিয়াল-৩
18.	অফিসিয়াল-৩	অফিসিয়াল-৩	০১৭১৮-৭৭৭২৭২	অফিসিয়াল-৩
x 19.	অফিসিয়াল-৩	অফিসিয়াল-৩	০১৭১৮-৭৭৭২৭২	অফিসিয়াল-৩
x 20.	অফিসিয়াল-৩	অফিসিয়াল-৩	০১৭১৮-৭৭৭২৭২	অফিসিয়াল-৩

## Second City Region Development Project (CRDP-2)

### Training on Community Awareness Campaign on SWM in KCC

Participants: Campaign Facilitators and Supervisors

Venue: Office of ward Councilor, Ward No- 30, KCC, Khulna.

Ward No- 30, 31

Date: 07 December 2023

### Attendance Sheet

Sl. No.	Name of Participants	Designation	Mobile No	Signature
21.	সালমা খান্ন	ডপং ওয়ার্ড আ: মোহাম্মদ হোসেন	01750141363	সালমা
22.	সুন্না আক্তার	ডপং ওয়ার্ড	01725662665	সুন্না
23.	মোহা: তানিয়া আক্তার	ডপং ওয়ার্ড	01628651326	তানিয়া
24.	সুন্না আক্তার	ডপং ওয়ার্ড	01700-822565	সুন্না
25.	মোহা: আয়শা আক্তার	ডপং ওয়ার্ড	01327406972	আয়শা
26.	ফারজানা আক্তার মাকী	ডপং ওয়ার্ড	017070443541	মাকী
27.	মো: আমরুল ইসলাম	ডপং ওয়ার্ড	01767548620	আমরুল
28.	ফারজানা আক্তার মিতা	ডপং	01752503158	মিতা
29.	সালমা আক্তার	UMDP	01580900611	Saima
30.	লিমা আক্তার	ডপং ওয়ার্ড আ: মোহাম্মদ হোসেন	017075144105	Lima
31.	ইমো হাবিবা মাকী	"	01783029012	Habiba
32.	ফারজানা সুখি	"	01985365806	Juthe
33.	সারফার	Support staff	02224609809	Sarfar
34.	মো: আমরুল হোসেন	"	01715213323	Amrul
35.	আব্দুল হাকিম	TL	01214066289	Abdul

36. M Sakhaewal Hossain TS -01211248312

37. Md. Arifur Chowdhury Facilitator -01216158363



**Appendix 114: List of Participants at on SWM in KCC for Waste Collectors**

**Second City Region Development Project (CRDP-2)**

**Training on Awareness Campaign on SWM in KCC**

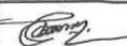



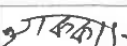
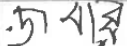

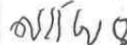


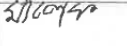
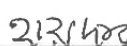
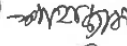
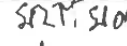

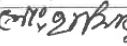

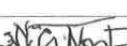

**Participants: Waste Collectors**

Venue: Office of ward Councilor, Ward No-30, KCC, Khulna.

Ward No- 30, 31

Date: 06 December 2023

**Attendance Sheet**

Sl. No.	Name of Participants	Designation	Mobile No	Signature
১.	শেখ মোঃ দেলওয়ার হোসেন	কনঃ সুপারভাইজার	০১৭১৭৭৪৪২৪২	
২.	মোঃ আলী আকবর	কনঃ সুপারভাইজার	০১৯১৫৯৯৫৯৮১	
৩.	মোঃ জাহাঙ্গীর হোসেন	বজ্য সংগ্রহকারী	০১৩০১৬৮৭৬৪৬	
৪.	মোঃ জাসিম খান	বজ্য সংগ্রহকারী	০১৯২২৩৬৯৮৭৫	
৫.	মোঃ জহর খান	বজ্য সংগ্রহকারী	০১৯৩৫৬৮৫৭৭৭	
৬.	আককাছ শেখ	বজ্য সংগ্রহকারী	০১৯৮২১৫৩১১১	
৭.	মোঃ আঃ জব্বার খান	বজ্য সংগ্রহকারী	০১৮৮৪৯০৫২৫৫	
৮.	আমির হোসেন	বজ্য সংগ্রহকারী	০১৯৩০৩৩৮০৭৭	
৯.	মোঃ নাহির আকন	বজ্য সংগ্রহকারী	০১৯৯৩৬৩৪৮২৮	
১০.	মোঃ বেলাল ফরাজী	বজ্য সংগ্রহকারী	০১৯৩৫৪৫৮৭০৯	
১১.	মোঃ ইসমাইল হোসেন	বজ্য সংগ্রহকারী	০১৯২০২৮৪৬৫৫	
১২.	মোঃ আঃ মালেক	বজ্য সংগ্রহকারী		
১৩.	মোঃ হায়দার	বজ্য সংগ্রহকারী	০১৯১৬০৩০০২৩	
১৪.	শাহজাহান/মোঃ গামাল	বজ্য সংগ্রহকারী	০১৭২৪৪৫৩১৫৩	
১৫.	মোঃ মহসিন	কনঃ সুপারভাইজার	০১৯৫০৬২৮৮১৩	
১৬.	মোঃ শাহিদুল ইসলাম	কনঃ সুপারভাইজার	০১৭৮৭৫৪৪৬০	
১৭.	মোঃ হাফিজুর রহমান	বজ্য সংগ্রহকারী	০১৯৩৫৩৫৮৫১৩	
১৮.	মোঃ আনোয়ার	বজ্য সংগ্রহকারী	০১৯১৩০৭৩৬৭৩	
১৯.	মোঃ আঃ খালেক	বজ্য সংগ্রহকারী	০১৯৩৮২৩৭৬৭৫	
২০.	মোঃ জাহাঙ্গীর	বজ্য সংগ্রহকারী	০১৯১৩২৬২৯৮৩	

## Second City Region Development Project (CRDP-2) Training on Community Awareness Campaign on SWM in KCC

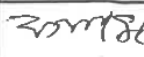
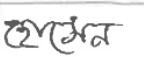

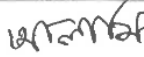
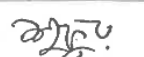

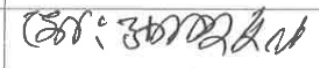
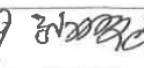
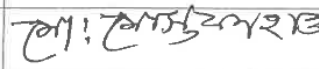

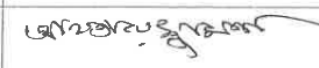
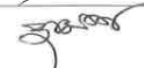
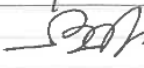
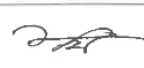
### Participants: Waste Collectors

Venue: Office of ward Councilor, Ward No-30, KCC, Khulna.

Ward No- 30, 31

Date: 06 December 2023

### Attendance Sheet

Sl. No.	Name of Participants	Designation	Mobile No	Signature
২১.	মোঃ কালাম	বর্জ্য সংগ্রহকারী	০১৩২৩৯০৭৯৬৬	
২২.	মোঃ হোসেন	বর্জ্য সংগ্রহকারী	০১৯৮৭২৬২৭৫৬	
২৩.	মোঃ মোরশেদ	বর্জ্য সংগ্রহকারী	০১৯০৬৪৭৫৩৯৪	
২৪.	মোঃ আলামিন	বর্জ্য সংগ্রহকারী	০১৯১২৯৪৯৪৬৪	
২৫.	মোঃ শুকুর	বর্জ্য সংগ্রহকারী	০১৯৫০৬১৯৫৬৪	
২৬.	মোঃ মনিরুল	বর্জ্য সংগ্রহকারী	০১৯৪৪৩৩৯৪৭২	
২৭.			০১৯১৫৬০৭৪০৭	
২৮.			০১৭১৫২১৩৩২৭	
২৯.		TL	০১২১৫০৬৬২৪৭	
৩০.	M. Sakawat Hossain	TS	০১২১১-২৫৪৩১২	
৩১.	Md. Ariful Haque	Facilitator	০১২১৫১৫৪৩৬৩	
৩২.				
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**Appendix 125: List of Participants at Orientation on Tree Plantation of CRDP-2  
Subproject Packages**

**Second City Region Development Project(CRDP2)**




**Orientation on Tree Plantation**

Venue: Office of Executive Engineer, LGED, Dhaka

Date : 06.11.2023

**ATTENDANCE**

Sl. No.	Name, Designation & Posting	E-Mail Address & Cell Phone No.	Signature
1.			
2.	Hanif Mohammad Mondol Sr. AE LGED, Dhaka	murnhidym@gmail.com 01711-950356	
3.	SM Samin Ishraq, AE, LGED-Dhaka Xero office	samin25ishrak@gmail.com 01646857517	
4.	MURIZ HUSSAIN PME/DIC, PDS, CRDP & LAED	murizhussain@yahoo.com	
5.	Engr. S. Alam Talukder Procurement Specialist	0171134415	
6.	Mohammed Mobarak Hossain Municipal Engineer PDS consultant, CRDP, LGED	01763198597 mmobarakh1955@gmail.com	

Sl. No.	Name, Designation & Posting	E-Mail Address & Cell Phone No.	Signature
7.	Md. Kamrul Islam SPE, Savar	0171-145967 itiputo@yahoo.com	
8.	Md. Kamrul Hossain M/S SEAM Enterprise Package: RFQ-01, 03	01712999383	
9.	Md. Sabir Ahammed M/S SK Enterprise Package: RFQ-02	0168 2711965	
10.			
11.			
12.			
13.			
14.			
15.			

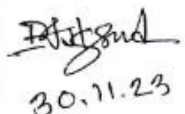

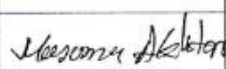
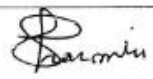
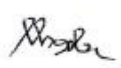
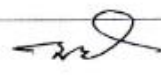
## Second City Region Development Project(CRDP2)


### Orientation on Tree Plantation

Venue: PMCU, CRDP2, LGED, Dhaka

Date : 30.11.2023

#### ATTENDANCE

Sl. No.	Name Of Contractor / Firm & Package No.	E-Mail Address & Cell Phone No.	Signature
1.	Omega Traders	Omega traders 20 15@gmail.com 01740-586154 WP: 01878672725	 30.11.23.
2.	A.B. Siddge BANDHAN SOCIETY 07,08,09,10	bandhansociety@yahoo. 01710971225	
3.	Mst. Masuma Akhter Panna ALOKA POTHY 02,03,11	masuma.panna@gmail. com 01756155550	
4.	Sharminkabis Bina. Zhvmka Bangladesh. 04,05,06,12	zhvmkabinaed@gmail 01711133673.	
5.	Md. Shafiqul Islam SWMS & additional charge Arailhagan. PDS-2, CRDP-2, LGED	shafique1765@gmail.com Mobile no. 01712-743429	
6.	Md. Shamsuddin Hossain Project Manager Co-ordinating PDS-2, CRDP-2, LGED	Shamsuddin3010@gmail.com 01716419445	

Sl. No.	Name Of Contractor / Firm & Package No.	E-Mail Address & Cell Phone No.	Signature
7.	MUNIR HUSSAIN PME/IDCL	Munir Hussain 01742 Ghar. com 01716932671	
8.	Mohammad Mobarak Hossain ME/PDSC2/CRDP/LGED	Mmobarakh1955@ Gmail. com	
9.			
10.			
11.			
12.			
13.			
14.			
15.			



## Appendix 136: Sample Laboratory test results for ambient air, surface and ground water quality and noise level

মৃত্তিকা, পানি ও পরিবেশ বিভাগ  
ঢাকা বিশ্ববিদ্যালয়, ঢাকা ১০০০, বাংলাদেশ



Department of Soil  
Water and Environment

University of Dhaka, Dhaka-1000, Bangladesh

Date: 04.04.2021

### Surface Water Quality Test Report

Sample supplied by

Engr. Md. Nur-E-Alam Jiqu

Project Manager

SEL-UDC JV

NAVANA Yusuf Infinity (Level-10), Bir Uttam A.K. Khandakar Road

16-Mohakhali C/A, Dhaka-1212

**Name of Road Construction Subproject Site:** Road from Nayarhat GC to Savar GC under the package No. CRDP-II/ LGED/ DHAKA/ SAVAR/NCB/2018/W-02 of Second City Region Development Project

**Service Rendered** : Environmental Quality Test for a road construction site

**Sample Title** : Surface Water Sample from a nearby pond (SW)

**Sampling Date** : 20/03/2021

**Date of Testing** : 21/03/2021 - 04/04/2021

**Geographical**

**Coordinates** : 23°53'5.32"N and 90°14'34.30"E

#### Analytical Results:

The results of analysis of Surface Water Sample from a nearby pond are given below:

Table 1. Analytical Results of Surface Water (SW) Sample

Sample Location	Test Parameters	Units	Results	Methods
Nearby Pond from Nayarhat GC to Savar GC Road (23°53'5.32"N and 90°14'34.30"E)	pH	-	7.16	pH meter
	EC	(µS/cm)	101.7	EC meter
	DO	(mg/L)	5.20	DO meter(Hanna HI98193)
	BOD <sub>5days</sub>	(mg/L)	0.53	DO meter(Hanna HI98193)
	COD	(mg/L)	3.18	Chemical method
	TSS	(mg/L)	7.12	Gravimetric method
	TDS	(mg/L)	136.6	TDS Multimeter
	Iron (Fe)	(mg/L)	<0.20	AAS
	Manganese (Mn)	(mg/L)	<0.20	AAS
	Arsenic (As)	(ppb)	4.52	HG-AAS (APHA 3114)
	Turbidity	NTU	10.68	Turbidity meter
	NO <sub>3</sub> -N	(mg/L)	4.84	Kjeldahl method
	Cl <sup>-</sup>	(mg/L)	8.22	Titrimetric method
	Total coliform	(cfu/100 ml)	1.2 x 10 <sup>2</sup>	Membrane filtration method

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### Ground Water Quality Test Report

Sample supplied by

Engr. Md. Nur-E-Alam Jiqu

Project Manager

SEL-UDC JV

NAVANA Yusuf Infinity (Level-10), Bir Uttam A.K. Khandakar Road

16-Mohakhali C/A, Dhaka-1212

**Name of Road Construction Subproject Site:** Road from Nayarhat GC to Savar GC under the package No. CRDP-II/ LGED/ DHAKA/ SAVAR/NCB/2018/W-02 of Second City Region Development Project

**Service Rendered** : Environmental Quality Test for a road construction site

**Sample Title** : Ground Water Sample from nearby Tubewell (GW)

**Sampling Date** : 20/03/2021

**Date of Testing** : 21/03/2021 - 04/04/2021

**Geographical**

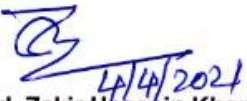
**Coordinates** : 23°53'5.82"N and 90°14'35.51"E

#### Analytical Results:

The results of analysis of Ground Water Sample from nearby Tubewell are given below:

#### 1. Analytical Results of Ground Water Sample from nearby Tubewell (GW)

Sample Location	Test Parameters	Units	Results	Methods
Nearby Tube well from from Nayarhat GC to Savar GC Road (23°53'5.82"N and 90°14'35.51"E)	pH	-	7.06	pH meter
	EC	( $\mu$ S/cm)	99.8	EC meter
	DO	(mg/L)	7.12	DO meter(Hanna HI98193)
	BOD <sub>5days</sub>	(mg/L)	Nil	DO meter(Hanna HI98193)
	COD	(mg/L)	1.02	Chemical method
	TSS	(mg/L)	Nil	Gravimetric method
	TDS	(mg/L)	99.5	TDS Multimeter
	Iron (Fe)	(mg/L)	<0.20	AAS
	Manganese (Mn)	(mg/L)	<0.20	AAS
	Arsenic (As)	(ppb)	3.12	HG-AAS (APHA 3114)
	Chloride (Cl <sup>-</sup> )	(mg/L)	6.58	Titrimetric method
	Nitrate (NO <sub>3</sub> -N)	(mg/L)	Nil	Kjeldahl method

  
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### Ambient Air Quality Test Report

Sample supplied by

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Project Manager

SEL-UDC JV

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16-Mohakhali C/A, Dhaka-1212

**Name of Road Construction Subproject Site:** Road from Nayarhat GC to Savar GC under the package No. CRDP-II/ LGED/ DHAKA/ SAVAR/NCB/2018/W-02 of Second City Region Development Project

**Service Rendered** : Environmental Quality Test

**Sample Title** : Air Quality Monitoring (AQ) Near Road Construction Subproject Site

**Sampling Date** : 20/03/2021

**Geographical**

**Coordinates** : 23°53'60"N and 90°14'34"E

#### Analytical Results:

The test results of ambient air quality analysis are given below:

Description of Parameters	Unit	Concentration of Ambient Air Quality Parameters			DoE (Urban Standards)	DoE Duration	WHO guidelines ( $\mu\text{g}/\text{m}^3$ )
		Min	Max	Avg.			
Carbon Monoxide (CO)	ppm	0.012	0.036	0.023	35 ppm	1 hour	-
					9 ppm	8 hours	
Carbon Dioxide (CO <sub>2</sub> )	ppm	626	667	646	-		-
Nitrogen Dioxide (NO <sub>2</sub> )	ppm	0.041	0.044	0.043	0.053 ppm	Annual	40 (1 hr)
Sulphur Dioxide (SO <sub>2</sub> )	ppm	0.018	0.032	0.021	0.14 ppm	(24 hr)	20 (24 hr)
					0.03 ppm	Annual	
Suspended Particulate Matter (SPM)	$\mu\text{g}/\text{m}^3$	97	112	105	200 $\mu\text{g}/\text{m}^3$	Annual	
Particulate Matter (PM <sub>10</sub> )	$\mu\text{g}/\text{m}^3$	87	98	93	150 $\mu\text{g}/\text{m}^3$	24 hours	50 (Annual)
Particulate Matter (PM <sub>2.5</sub> )	$\mu\text{g}/\text{m}^3$	51	69	57	65 $\mu\text{g}/\text{m}^3$	24 hours	25 (24 hrs)
Lead (Pb)	$\mu\text{g}/\text{m}^3$	bdl	bdl	bdl	0.5 $\mu\text{g}/\text{m}^3$	Annual	-
Temperature	°C	29	32	31	-	-	-
Relative Humidity	%	40	46	42	-	-	-

bdl-below detection limit

  
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## Noise Quality Test Report

Sample supplied by

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Project Manager

SEL-UDC JV

NAVANA Yusuf Infinity (Level-10), Bir Uttam A.K. Khandakar Road

16-Mohakhali C/A, Dhaka-1212

**Name of Road Construction Subproject Site:** Road from Nayarhat GC to Savar GC under the package No. CRDP-II/ LGED/ DHAKA/ SAVAR/NCB/2018/W-02 of Second City Region Development Project

**Service Rendered** : Environmental Quality Test for a road construction site

**Sample Title** : Noise level monitoring (NL) near road construction site

**Sampling Date** : 20/03/2021

**Temperature** : 31°C

**Relative Humidity** : 42%

**Geographical**

**Coordinates** : 23°53'5.61"N and 90°14'34.16"E

### Analytical Results:

The results of noise level monitoring are given below:

Sampling Locations	Geographical Co-ordinates	Time	Min dBA	Max dBA	DOE Standard for Noise (Schedule # 4, Rule #12; ECR 1997)	
					Residential Area	Mixed Area
Nearby Road from Nayarhat GC to Savar GC road (CRDP-II/ LGED/ DHAKA/ SAVAR/NCB/2018/W-02)	23°53'5.61"N and 90°14'34.16"E	0800-0900	48.5	59.7	50 dBA at Day Time	60 dBA at Day Time
		1200-1300	52.4	69.2	and 40 dBA at Night	and 50 dBA at Night
		1800-1900	50.4	67.0	Time	Time

\*According to the Noise Pollution (Regulation and Control) Rules, 2006, acceptable sound levels are 55 decibels (dBA) for daytime – 6am to 9pm – and 45 decibels for night – 9pm to 6am – in residential areas; 50 decibels for daytime and 40 decibels for night in quiet places; 60 decibels for daytime and 50 decibels for night in mixed areas; 70 decibels for daytime and 60 decibels for night in commercial areas; and 75 decibels for daytime and 70 decibels for night in industrial areas.

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**Ambient Air Quality Monitoring Technique:**

**SPM, PM<sub>10</sub> and PM<sub>2.5</sub>:** Particulate matters (SPM, PM<sub>10</sub> and PM<sub>2.5</sub>) were determined with a real time particle mass counters instrument AEROCET, Model 531, USA. Portable laser particle counters were also used for the comparison of the particulate matters (PM<sub>10</sub> and PM<sub>2.5</sub>). High Volume Air Sampler Method was also employed for the collection of SPM.

**NO<sub>x</sub>, SO<sub>x</sub> and CO etc.:** Direct measurement of NO<sub>x</sub>, SO<sub>x</sub> and CO etc. was conducted on a spot over a period of 8-hrs by using an instrument named Aeroquel Gas Analyser equipped with NO<sub>x</sub>, SO<sub>x</sub> and CO sensors (Model: 500, New Zealand).

**Ambient Air Quality Monitoring Technique:**

A sound level meter/noise level meter was used to quickly determine the ambient noise level in the road construction site. The specification of sound level meter was: TES 1350A; Range: Low 35-100dB, High 65-130dB.

**Methods for Water Analysis:**

Water (both Surface and ground water) samples were collected in suitable locations of the study sites following standard collection protocol. The various parameters as requested in Water samples were determined following standard methods as mentioned in the above table.

  
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