

# Semi-Annual Environmental and Social Safeguard Monitoring Report

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Project Number: 44212-013  
Semestral Report  
July 2015

## BAN: Coastal Towns Environmental Infrastructure Project (CTEIP)

Prepared by Local Government Engineering Department (LGED) for the People's Republic of Bangladesh and the Asian Development Bank.

## CURRENCY EQUIVALENTS

(as of 30 June 2015)

|               |   |           |
|---------------|---|-----------|
| Currency unit | – | taka (Tk) |
| Tk1.00        | = | \$0.013   |
| \$1.00        | = | Tk77.775  |

## NOTES

- (i) The fiscal year (FY) of the Government of Bangladesh ends on 30 June. FY before a calendar year denotes the year in which the fiscal year ends, e.g., FY2015 ends on June 2015.
- (ii) In this report, "\$" refers to US dollars.

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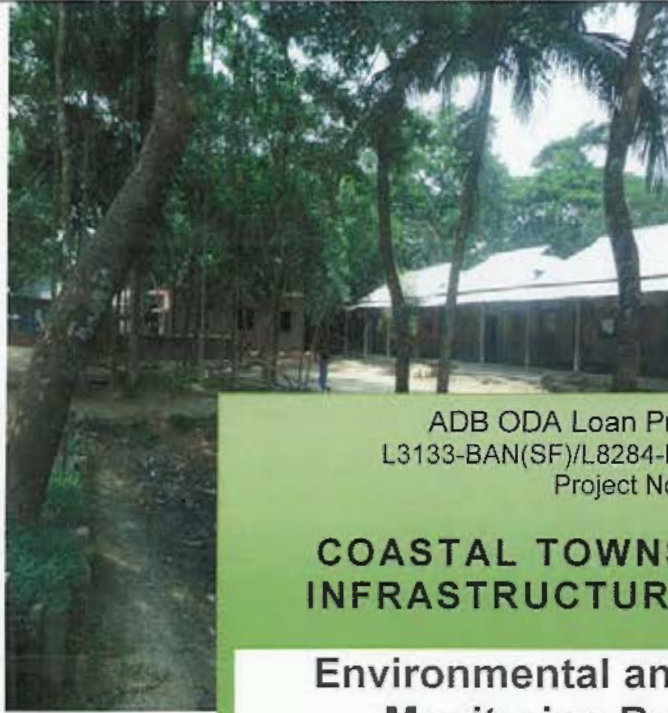
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# LOCAL GOVERNMENT ENGINEERING DEPARTMENT

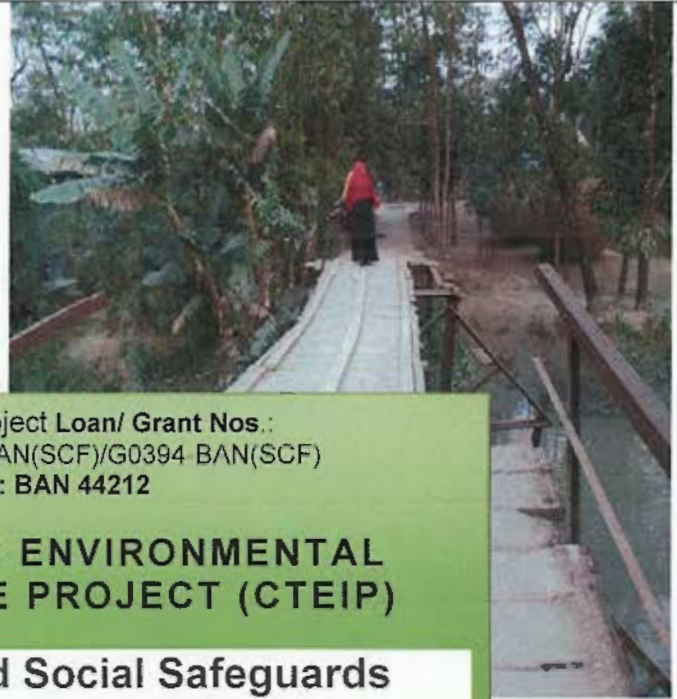
(Ministry of Local Government and Rural Development Cooperatives)

ESSMR-01: July 2015

Bhola Pourashava: Proposed Cyclone Shelter at Darul Ulum Ashrafia Madrasha near Bhola Bus terminal



Barguna Pourashava: Proposed Bridge over Varani canal



ADB ODA Loan Project Loan/ Grant Nos.:  
L3133-BAN(SF)/L8284-BAN(SCF)/G0394 BAN(SCF)  
Project No.: BAN 44212

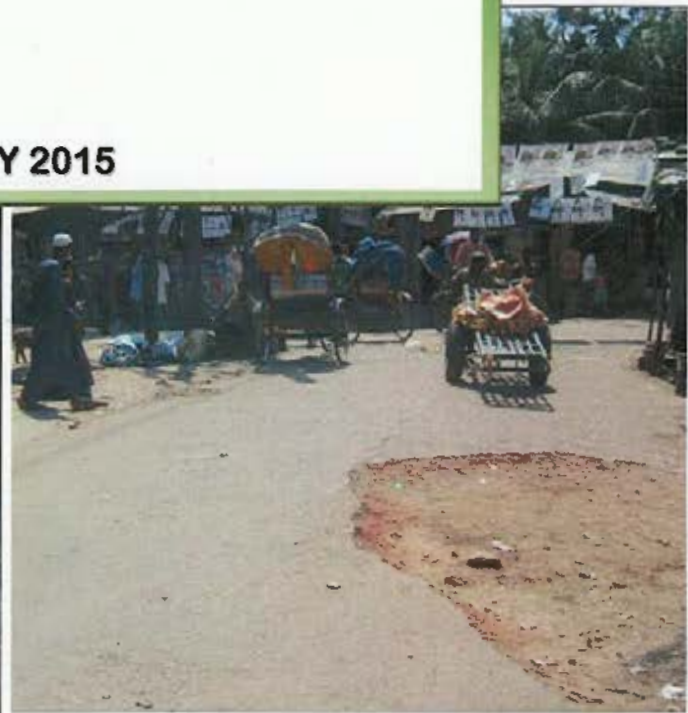
## COASTAL TOWNS ENVIRONMENTAL INFRASTRUCTURE PROJECT (CTEIP)

### Environmental and Social Safeguards Monitoring Report (ESSMR-01)

JULY 2015



Bhola Pourashava: Damaged Masonry Slab Culvert over Balikandi Khal beside the Town School Field



Galachipa: Damaged Part of WAPDA Road-4

# LOCAL GOVERNMENT ENGINEERING DEPARTMENT

(Ministry of Local Government and Rural Development Cooperatives)

ESSMR-01: July 2015

**Project Management and Supervision Consultant (PMSC)**

*EPTISA Services de Ingenieria S.L.*

*KS Consultants*

**eptisa**  
engineering



## Environmental and Social Safeguards Monitoring Report (ESSMR-01)

### Issue and Revision Record

| Rev | Date     | Originator | Contribution   | Check/<br>Approver | Description |
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Abbreviations and Acronyms:

|       |   |
|-------|---|
| Abbr  | Abbreviation  |
| ADB   | Asian Development Bank  |
| AFD   | Agence Française Développement  |
| AMT   | Amtoli Pourashava   |
| ASCE  | American Society of Civil Engineers   |
| BD    | Bid Document  |
| BDT   | Bangladesh Taka   |
| BH    | Borehole  |
| BL    | Boat Landing Station package  |
| BMGF  | Bill & Melinda Gates Foundation   |
| BNBC  | Bangladesh National Building Code   |
| BOO   | Build Own Operate   |
| BoQ   | Bill of Quantities  |
| BOT   | Build Operate Transfer  |
| BOOT  | Build Own Operate Transfer  |
| BT    | Bus Terminal package  |
| BWDB  | Bangladesh Water Development Board  |
| CBR   | California Bearing Ratio  |
| CDTA  | Capacity Development Technical Assistance: (7890) Strengthening the Resilience of the Urban Water Supply, Drainage, and Sanitation to Climate Change in Coastal Towns |
| CIF   | Climate Investment Funds  |
| CP    | Contract Package  |
| CS    | Cyclone Shelter Component   |
| CTIIP | Coastal Towns Environmental Infrastructure Project  |
| DDS   | Detailed Design Service   |
| DED   | Detailed Engineering Design   |
| DFM   | Domestic Flow meter   |
| DPHE  | Department of Public Health Engineering   |
| DR    | Drainage package, including Flood Control Works   |
| EA    | Executing Agency  |
| EIA   | Environmental Impact Assessment   |
| EIRR  | Economic Internal Rate of Return  |
| EMP   | Environmental Management Plan   |
| ESSMR | Environmental Social Safeguards Monitoring Report   |
| FTP   | Fast Track Package  |
| FIRR  | Financial Internal Rate of Return   |
| GAL   | Galachipa Pourashava  |
| GAP   | Gender Action Plan  |
| GLT   | Ground Level Tank   |
| GoPRB | Government of the People's Republic of Bangladesh   |
| GPS   | Global Positioning System   |
| IBC   | International Building Code   |
| ICB   | International Competitive Bidding   |
| ICAC  | Institutional Capacity and Awareness Consultant   |
| IEE   | Initial Environmental Examination   |

|        |   |
|--------|---|
| IS     | International Shopping  |
| Km     | Kilometer   |
| LAR    | Land Acquisition and Resettlement                                     |
| LCB    | Local Competitive Bidding   |
| LGED   | Local Government Engineering Department                               |
| MAT    | Mathbaria Pourashava  |
| MDB    | Multilateral Development Bank   |
| MDGs   | Millennium Development Goals  |
| M&E    | Mechanical and Electrical   |
| MLD    | Million litres per day  |
| MLGRDC | Ministry of Local Government and Rural Development Cooperatives       |
| MM     | Multi-purpose Market package  |
| MWR    | Ministry of Water Resources   |
| NCB    | National Competitive Bidding  |
| NGO    | Non Government Organization   |
| OHT    | Overhead Tank   |
| O&M    | Operation and Maintenance   |
| OTJT   | On-the-job-training   |
| PAM    | Project Administration Manual   |
| PLSC   | Pourashava Level Coordination Committee                               |
| PDA    | Project Design Advance  |
| PIR    | Pirojpur Pourashava   |
| PIU    | Project Implementation Unit   |
| PMSC   | Project Management and Supervision Consultant                         |
| PMU    | Project management Unit   |
| PPCR   | Pilot Program for Climate Resilience                                  |
| PPTA   | Project Participatory Technical Assistance                            |
| PTW    | Production Tube-well  |
| RCC    | Reinforced Cement Concrete  |
| RRP    | Report and Recommendation of the President                            |
| QA/QC  | Quality Assurance/ Quality Control                                    |
| RD     | Road package, including Bridges                                       |
| SCF    | Strategic Climate Fund  |
| SLR    | Sea Level Rise  |
| SP     | Subproject  |
| SPAR   | Subproject Appraisal Report   |
| SPCR   | Strategic Programme for Climate Resilience                            |
| STWSSP | Secondary Towns Water Supply and Sanitation Project                   |
| TA     | Technical Assistance  |
| ToR    | Terms of Reference  |
| TW     | Tubewell  |
| UGIIP  | Urban Governance and Environmental Infrastructure (Sector) Project    |
| US\$   | United States Dollar  |
| WC-SBP | Waste Concern - Sanitation Business Plan                              |
| WAPDA  | Water and Power Development Authority                                 |
| WPS    | Water Pumping Station   |
| WS     | Water Supply package: including Sanitation and Solid Waste Management |
| WTP    | Water Treatment Plant   |



## EXECUTIVE SUMMARY

The Coastal Towns Environmental Infrastructure Project (CTEIP) is a key infrastructure initiative of the Government of Bangladesh. The intervention is planned to develop climate resilient structures, for the proposed sub-projects for construction and improvement of roads, drains, water supply and cyclone shelters. The sub-projects are located within urban and semi urban areas of the respective Pourashavas. Award of contract has been completed for 5 contracts comprising: Mathbaria Pourashava: MAT/RD/01 & MAT/CS/01; Galachipa Pourashava: GAL/RD/01 & GAL/CS/01; and Pirojpur Pourashava: GAL/CS/01.

The challenge for the project is that the sub-projects are implemented in the most economically feasible, climate resilient, environmentally sustainable and socially acceptable, manner. The PPTA feasibility study, completed in October 2013, has provided a comprehensive set of recommendations for the planning, design and implementation of the Project. Based on the recommendations of this study, the DDS Consultant have completed the Detailed Engineering Design for the construction of the awarded contracts.

**Implementation Arrangements:** Local Government Engineering Department (LGED) is the executing agency (EA), and Department of Public Health Engineering (DPHE) is co-executing agency. LGED is responsible for providing support and guidance to Pourashavas concerning performance criteria and Pourashava development planning. Implementation activities will be overseen by a separate program management unit (PMU). The participating Pourashavas are the implementing agencies (IA), with a project implementation unit (PIU) within the Pourashava structure. Local LGED and DPHE offices will be involved in the functioning of the PIUs to provide technical support.

An environmental assessment using ADB's Rapid Environmental Assessment (REA) checklist for urban development was conducted and results of the assessment demonstrated that the subproject is unlikely to cause significant adverse impacts. The proposed infrastructure development programme subprojects are classified as Environmental Category B as per the SPS 2009 as no significant impacts are envisioned. The related environmental examination (IEE) reports have been prepared in accordance with ADB SPS 2009 requirements for environment category B projects and provides mitigation and monitoring measures to ensure no significant impacts as a result of the subproject.

The environmental mitigation measures as stipulated in the EMP (**Chapter 6**) and in the obtained environmental permit are monitored during implementation of the proposed infrastructure development programme. In order to perform monitoring of EMP, the contractor shall engage experienced laboratory and third party services in complying the required environmental testing of parameters listed in **Chapter 8**.

This Environmental and Social Safeguards Monitoring Report (ESSMR) is the initial semi-annual report covering the start of the construction and during the initial preliminary stage of the construction phase to June 2015. The parameters of Water Quality, Air Quality, Noise quality, and Soils shall be monitored; as specified in **Chapter 8**.

During public consultation recommendations were drawn including: a) involve local communities in all stages of project planning and development, b) establish permanent communication between project initiators and local authorities, c) setup grievance redress mechanism which will publicized through Pourashava level co-ordination committee and monitoring register and d) during construction, local people including women shall be given first priority in the employment of skilled and unskilled labour.

The LGED has disclosed the related Environmental Management Framework by making copies available at its head office and in the District / Pourashava where the Project is located. Copies are also made available to the Local Government's Agencies, the Environmental and Social Group and other stakeholders. The Government of Bangladesh has authorized the Asian Development Bank to disclose this IEE and EMP electronically through its InfoShop.

**Three Cyclone Shelter Contracts: EMP Monitored Result:** of the 112 monitored Environmental and Social parameters of the EMP, for the Cyclone Shelter component of the CTEIP programme for contract packages:



CTEIP/MAT/CS/01, CTEIP/GAL/CS/01, and CTEIP/PIR/CS/01: 42 line items were either yet to start or not applicable at this stage of the construction phase. The overall score was found to be 162 points, equivalent to a resultant 2.3 ranking. Hence, the overall compliance for the Cyclone Sub-projects is found to be **Partially Satisfactory** but with **19 key non-compliances**.

**Two Road Contracts: EMP Monitored Result:** of the 112 monitored Environmental and Social parameters of the EMP, for the **Road component** of the CTEIP programme for contract packages: CTEIP/MAT/RD/01 and CTEIP/GAL/RD/01: 30 line items were either yet to start or not applicable at this stage of the construction phase. The overall score was found to be 199 points, equivalent to a resultant 2.4 ranking. Hence, the overall compliance for the Cyclone Sub-projects is found to be **Partially Satisfactory** but with **19 key non-compliances**.

**Conclusion and Findings:**  
(ESSMR-01, dated July 2015)

**Cyclone Shelter Contracts: CTEIP/MAT/CS/01; CTEIP/GAL/CS/01; CTEIP/PIR/CS/01:** The result of this initial monitoring of the environmental and social covenants for the two active road contract packages of Mathbaria and Galachipa Pourashavas is found to be partially satisfactory but with many key non compliances. Immediate action regarding follow up action for completion of the verified monitoring for the ESSMR and related activities are required to address the situation as follows:

- i. Instigate greater frequency of public consultation during construction;
- ii. Sample monitoring and testing of the designated Environmental Parameters in full accordance with the contracted financing plan and testing requirements;
- iii. Grievance Redressal Mechanism: To implement according to EMP;
- iv. EMP implementation and monitoring Training; and
- v. Gender awareness and sensitivity to be applied on site in selection of work force.

The timeframe to take such action is as stated immediate so that rectification and compliance with the terms of the EMP; sample testing, Gender Action Plan, Health and Safety and the implementation of the terms of the compensation matrix to the project affected persons will be addressed. Accordingly, PMU/PIU/Consultant is to formulate the necessary training programmes.

**Roads Contracts: CTEIP/MAT/RD/01; CTEIP/GAL/RD/01:** The result of this initial monitoring of the environmental and social covenants for the two active road contract packages of Mathbaria and Galachipa Pourashavas is found to be partially satisfactory but with many key non compliances. Immediate action regarding follow up action for completion of the verified monitoring for the ESSMR and related activities are required to address the situation as follows:

- i. Instigate greater frequency of public consultation during construction;
- ii. Sample monitoring and testing of the designated Environmental Parameters in full accordance with the contracted financing plan and testing requirements;
- iii. Grievance Redressal Mechanism: To implement according to EMP;
- iv. EMP implementation and monitoring Training;
- v. Gender awareness and sensitivity to be applied on site in selection of work force; and
- vi. Monitor compensation matrix.

The timeframe to take such action is as stated immediate so that rectification and compliance with the terms of the EMP; sample testing, Gender Action Plan, Health and Safety and the implementation of the terms of the compensation matrix to the project affected persons will be addressed. Accordingly, PMU/PIU/Consultant is to formulate the necessary training programmes.

For all Cyclone Shelter Contract Packages, the Gender Action Plan has not been followed with a below satisfactory rating with 5 non compliances recorded, which is a serious non compliance.

For all Road Contract Packages, the Gender Action Plan has not been followed with a below satisfactory rating with 5 non compliances recorded, which is a serious non compliance.

## Chapter 1: Introduction





**PROJECT MANAGEMENT AND SUPERVISION CONSULTANT****Environmental and Social Safeguards Monitoring Report  
(ESSMR-01)****1. INTRODUCTION****1.1. Background**

Based on the Capacity Development Technical Assistance (CDTA) and Project Planning Technical Assistance (PPTA); the project on "Coastal Towns Environmental Infrastructure Project (CTIIP), now referred as Coastal Towns Environmental Infrastructure Project (CTEIP), Project Design Advance (PDA) for Detailed Design Services (DDS)" plans to strengthen the climate resilience, in incorporating climate change adaptation parameters in the design of the project related components, inclusive of urban water supply, sanitation, drainage, roads and solid waste management of the CTEIP Pourashavas.

CTEIP was approved by ADB on 6 August 2012 for an amount of \$3.5 million equivalent from ADB's Special Funds resources. The PDA Agreement was signed on 23 October 2012 and became effective on 29 October 2012. The Technical Assistance Project Proposal for the PDA was approved by the government on 3 April 2013. The PDA supported advanced preparatory work through Detailed Design Services (DDS) consultants to achieve project readiness including: (i) detailed engineering designs; (ii) advanced procurement; and (iii) safeguard document preparation. The PDA was refinanced under the ensuing ADB loan upon its effectiveness in September 2014.

The main investment project was signed by the Government of Bangladesh and ADB on 29 June 2014 for a total loan amount of \$82 million equivalent and a total grant amount of \$12 million. The loans and grants were effective on 19 September 2014 and scheduled to close on 31 December 2020. The total project amount for the eight Pourashavas is estimated to be \$117.1 million, and the implementation period is five years.

CTEIP finances basic urban services improvements and aims to increase climate resiliency that are vulnerable to the effects of climate change. The eight project Pourashavas will receive investments in two stages: (i) Stage 1 focuses on infrastructure crucial for climate resilience (e.g., roads, cyclone shelters, solid waste, drainage, water supply, and sanitation); and (ii) Stage 2 includes other infrastructure that contributes to general economic development (e.g., additional roads, markets, boat landings and bus terminals).

**1.2. Project Objectives**

The Coastal Towns Environmental Infrastructure Project will improve the quality of life for both the resident community members and for those visiting the urban areas, included within the Project. The majority of the resident urban populous, presently living under poor environmental conditions, would benefit from improved infrastructure and better utility services. As result, the economy would benefit from the increased efficiencies accrued inclusive of improvements made to road communications, safe and sustainable water supply provisions, upgraded drainage facilities and improved sanitation services. The enhanced capabilities of the Pourashavas, inclusive of the positive social strategy of gender involvement and the participatory role of the community, in efficient operations and maintenance of the urban facilities, would establish a sustainable capability for future effective urban governance.

The Subprojects would therefore be instrumental in attaining improved environmental conditions, which would inspire economic growth and entice the urban poor to actively participate. This will be achieved through strengthened urban management and support for priority investments in urban infrastructure and services required to meet basic human needs, improve quality of life, and stimulate sustainable economic development through equitable distribution of basic urban services to the residents that are technically feasible, financially viable, climatically resilient, environmentally sustainable, socially acceptable and operationally manageable.



The project aims to assure governance improvement and build resilience by linking each stage of investment to demonstrated reforms, as proven highly effective in previous ADB urban projects in Bangladesh. The eight project towns are divided into two batches of four, with each town entitled to two stages of investment (stages 1 and 2), refer to **Figure 1.1**. Towns will receive funding under each stage if they fulfil agreed performance criteria. Performance will be evaluated in the following areas: (i) strengthening climate-disaster planning; (ii) strengthening citizen participation; (iii) improving municipal planning, service delivery, and operation and maintenance; and (iv) strengthening municipal financial management. A performance evaluation committee will evaluate each Pourashava. The project reflects the successful experience in governance-led investment through performance-based allocation from the first and second Urban Governance and Infrastructure Improvement (Sector) Projects. The project also reflects findings of downscaled climate modelling from the technical assistance on Strengthening the Resilience of the Urban Water Supply, Drainage, and Sanitation to Climate Change in Coastal Towns.

### 1.3. Objectives of the PMSC

The Project will strengthen climate resilience and disaster preparedness in 8 vulnerable coastal Pourashavas of Bangladesh in two batches. The first batch of towns includes Pirojpur, Amtali, Mathbaria, and Galachipa, and the second batch includes Barguna, Bhola, Daulatkhana, and Kalapara.

The Project takes a holistic and integrated approach to urban development, which includes (i) provide climate-resilient municipal infrastructure, and (ii) strengthen institutional capacity, local governance, and public awareness, for improved planning and service delivery considering climate change and disaster risks. Key infrastructure investments include (i) drainage, (ii) water supply, (iii) sanitation, (iv) cyclone shelters, and (v) other municipal infrastructure including emergency access roads and bridges, solid waste management, bus terminals, slum improvements, boat landings, and markets.

The main objectives of the PMSC, in assisting LGED, the PMU/ PIU's and the related authorities of the CTEIP Pourashavas, in monitoring social and environmental safeguards, in compliance with ADB guidelines, include the following:

#### **Environmental Safeguards:**

- i. Assist in determining adequacy of cost for EMP implementation;
- ii. Assist in addressing any concern related to IEEs and EMPs;
- iii. Assist in summarizing IEEs, translating to language understood by local people and disclosure in public locations;
- iv. Oversee implementation of EMP including environmental monitoring of contractors;
- v. Assist in implementing corrective actions when necessary to ensure no environmental impacts;
- vi. Review monthly reports by contractors, assist PIUs in preparation of monthly environmental monitoring reports and submit to PMU;
- vii. Assist in establishing the grievance mechanism for safeguards and addressing any grievances brought about through the GRM in a timely manner as per IEEs;
- viii. Submit semiannually environmental safeguards monitoring report to PMU;
- ix. Be responsible for training the PMU safeguards officer and the PIUs safeguard assistants on environmental awareness and management in accordance with both ADB and government requirements and implement the capacity building program for PMU, PIUs, and all staff involved in project implementation on (a) ADB SPS, (b) Government of Bangladesh national and local environmental laws and regulations, (c) core labor standards, (d) occupational health and safety, (e) EMP implementation especially spoil management, working in congested areas, public relations and ongoing consultations, grievance redress, etc.; and
- x. Provide induction course for the training of contractors preparing them on EMP implementation.

#### **Social Safeguards:**

- i. Conduct the trainings and briefings on social safeguards policy, requirements, and GRMs for PMU staff, PIUs, and Pourashava officers and contractors;
- ii. Assist PMU Safeguards Officer in ensuring compliance to social safeguards policies of Government and ADB;
- iii. Assist the PIU safeguards officers in conducting consultations on the RPs for their endorsement

- iv. Oversee implementation of final RP by PIU safeguard officers and prepare a RP implementation report for PMU to provide "notice to proceed" with civil works activities in area where IR impacts are identify;
- v. Submit semiannually social safeguards monitoring report to PMU; and
- vi. Assist PIU safeguard officers for preparing the monthly reports on RP Support PMU in establishing grievance mechanism for safeguards and addressing grievances of APs in a timely manner.

#### 1.4. Climate Change Adaptation Measures

CTEIP has incorporated climate change adaptation measures in ensuring climate resilient municipal infrastructure. The interrelated design approach, under integrated development, has been conducted which forms the following summarized component-wise scope for the contract packages of the Batch 1, Stage I programme:

- Urban roads and bridges;
- Water Supply, Sanitation and Solid Waste Management;
- Flood Control and Stormwater Drainage;
- Commercial facilities including Bus Terminals and Multipurpose Markets; and
- Boat Landing Stations.

All related designs have been prepared being fully compatible with all relevant climate adaptation codes of practice in ensuring durability and sustainability of the sector component designs. Full coordination has been made with the respective Pourashava authorities, related stakeholders and implementing agencies, regarding the progressed designs.

#### 1.5. Project Scope and Implementation

The Project is to be implemented over a five year period from the date of loan effectiveness, scheduled for completion by February 2020. Prior to effectiveness of the CTEIP, conditionally scheduled in June 2014, ADB agreed with PMU and DDS consultancy during the Inception Review Mission (February 2014), on a preliminary

The Fast Track Programme was included to expedite the preparation of bid documents for the selected subprojects of Batch 1 Pourashavas, including 6 contract packages comprising 4 Cyclone Shelter packages and 2 Road packages. **Table 1.1** gives a summarized progress status to date of the five awarded contracts under various stages of construction.

Out of this fast track programme, the following contract packages have been awarded to date, for the construction programme is ongoing and for which this Environmental and Social Safeguards Monitoring Report has been prepared:

- Mathbaria Pourashava: MAT/RD/01 and MAT/CS/01;
- Galachipa Pourashava: GAL/RD/01 and GAL/CS/01; and
- Pirojpur Pourashava: GAL/CS/01.

Refer to **Annexure 4** for the physical and financial progress of the Batch 1, Stage I contract packages to date.





## **Chapter 2: Project Location and Stage I Components**



## 2. PROJECT LOCATION AND STAGE I COMPONENTS

### 2.1 Sub-project Selection Process

Particular attention has been paid to the data and recommendations contained in the PPTA Reports, which have been further reviewed and site verified by the DDSC in advance of progressing with the detailed engineering design. Based on risk and vulnerability; the ADB's subproject selection criteria, discussions held with community members and related stakeholders, which included the Pourashava administration, local people and educational administrations according to selected cyclone shelters. In the case of the proposed cyclone shelters, the siting of the building has been laid in such a way so that it does not interfere with the activities of other buildings and it is easily approachable by the people through established road access or included road access.

Selected sub-project schemes, including roads and drains, were identified and finalized during PPTA through the workshop organized in Pourashava in the presence of the Mayor, Councilors, Engineers and invited officials from relevant organizations. Particular attention was paid to the data and recommendations contained in the PPTA reports, which have been further reviewed and site verified in advance of progressing with the detailed design and IEE study conducted by the DDSC.

### 2.2 Cyclone Shelter State and Component

Research commissioned by the various development partners in Bangladesh, shows that 13 types of cyclone shelters have been constructed in Bangladesh. Generally they all follow similar designs, using a framed structure that can withstand storm flows and high winds. The population of the area has been regular victim of the frequent storm surges. The history and future prediction have indicated storm surges of 9.4 m without decay due to land hindrances. Storm surge level of 5.7 m is anticipated due to climate change in 2050 with decay in surge height.

Climate Change Adaptation design has been considered inclusive of rise in sea, flood levels due to tidal change and periodic flood surging. Plinth levels have therefore been designed for such changes requirements. Plot areas of the cyclone shelters have also been reviewed with respect to maintaining sufficient assembly area and save space for accommodating increased collection of crowd expected to occupy the facility during the times of adverse weather and cyclonic conditions. Improvements to the provisions of toilets and gender facilities have been completed and incorporated within the respective drawings and cost estimates.

### 2.3 Roads and Bridge Component

The existing road surface range from asphalt and/or concrete, herring bone brick and earthen roads. The formation level of most of the roads is typically raised above existing ground levels but not flood / tide / surge resilient. Roads are found to be in various degree of deterioration mainly due to poor construction practices and inadequate maintenance provisions. There is a need to design these roads as climate resilient so that these can be utilized in all seasons. The drainage along the road is non existence/ non-functional. The history and future prediction have indicated storm surges of 9.4 m without decay due to land hindrances. Storm surge level of 5.7m is anticipated due to climate change in 2050 with decay in surge height. The highest tide level is between 2.70-2.92<sup>1</sup> m PWD.

Climate change adaptation has been incorporated so that roads are climate resilient to 2050, considering rainfall, temperature, tide and/or floods and surge levels. Road formation levels have been kept above surge/ tide/ flood levels. Due allowance has also been given for the future staged development of the roads under normal maintenance processes, whereby it is estimated that the FRL's will be increased by a minimum of 40mm over a 7 year cycle period.

<sup>1</sup> Based on Local information and sea level rise.

## 2.4 Water Supply Component

The sub-project was identified during PPTA through officials from relevant organizations. Particular attention was paid to the data and recommendations contained in the PPTA reports, which are further reviewed, and sites verified in advance of progressing with the detailed design by the DDSC.

The design for the water supply component has been fully coordinated with representatives of the DPHE for which the Contract package for Amtali and Galachipa Pourashava are currently under the bidding procedures. The Draft DED for Mathbaria Pourashava is presently under scrutiny by the DPHE, awaiting finalization by the DDSC.

## 2.5 Drainage and Flood Control Component

The intervention is planned to develop climate resilient structures, including drainage, drainage related structures and flood protection infrastructural works. The proposed sites for construction of the drainage works are located within the respective Pourashava areas, within rights of way and within urban and semi urban areas. Investments under this subproject include construction of drains, box culverts, rehabilitation, re-excavation of khals inclusive of necessary stabilization of embankments and rehabilitation/ construction of culverts.

## **Chapter 3: Environmental Responsibilities and Institutional Setup**





### 3 ENVIRONMENTAL RESPONSIBILITIES AND INSTITUTIONAL SETUP

#### 3.1 Environmental Responsibilities

The Local Government Engineering Department (LGED) is the executing agency. LGED has constituted a Project Management Unit (PMU) and Project Implementation Unit (PIU). The PMU is headed by Project Director (PD). In order to put the project to logical conclusion the PD is assisted by three consultant team to assist and support the PMU and PIU (Project Implementation Unit). The consultant teams are: i) Detailed Design Services (DDS); ii) Project Management and Supervision Consultant (PMSC), and Institutional Capacity and Community Development consultant (ICCDC). The Pourashava will be the implementing agency and will be assisted by PIU. The facility created during the sub-project will be operated and maintained by the Pourashava.

#### 3.2 Institutional Arrangements

Refer to **Figure 3.1** for the overall CTEIP organization setup and the inter-related relationships of PMU/ the Pourashava staff/ Consultants and all related stakeholders and interested agencies, inclusive of details of all the Project Management officially CTEIP formed committees..

The main Ministry, Department, Institutions and Boards responsible for development of policy, framing regulation, developing projects, monitoring and approval of issues related to environment protection and conservation are presented in this section. The Department of Environment (DoE) was established in 1977 under the Environment Pollution Control Ordinance, 1977. During 1987-89, Forestry was a Division of Agriculture Ministry with a Secretary to Government in charge of the Forestry Division. With the formation of the new Ministry of Environment and Forests, in 1989, both the departments were transferred to this new Ministry. The DoE has been placed under the MoEF as its technical wing and is statutorily responsible for the implementation of the Environment Conservation Act, 1995. Besides these two departments, MoEF controls the Bangladesh Forest Industries Development Corporation (BFIDC), Bangladesh Forest Research Institute (BFRI) and Bangladesh National Herbarium (BNH).

#### 3.3 Implementation, Monitoring and Reporting Compliance

The existing IEEs/EMPs/DDR's and GAP's were updated, by the DDSC, based on the finalized detailed engineering designs and have been prepared in accordance with the EARF and subproject selection criteria related to safeguards, which were included in the respective Bid Documents and form part of the respective Contract Documents for the currently awarded and active civil works packages.

The PIU/Contractors are following all provisions detailed in the respective IEEs/EMPs/DDR's and GAP's, which are being closely implemented according to the environmental safeguard requirements of the project, including monitoring of the related specific indicators to the current status of the respective EMP's for the road and cyclone shelter packages, as reviewed and recorded in this ESSMR.

#### 3.4 Grievance Redressal Status

A project-specific grievance redress mechanism (GRM) has been established in each Pourashava to receive, evaluate, and facilitate the concerns, complaints, and grievances about the social and environmental performance at the level of the project. The GRM provides a time-bound and transparent mechanism to voice and resolve social and environmental concerns linked to the project. The GRM is established for social, environmental, or any other grievances related to CTEIP.

The GRM provides an accessible platform for receiving and facilitating grievances related to the project. The multi-tier GRM for the project is given with each tier having time-bound schedules and with responsible persons identified to address grievances and seek appropriate persons' advice at each stage, as required.



## **Chapter 4: Project Status of Ongoing Contract Packages**





#### 4. PROJECT STATUS OF ONGOING CONTRACT PACKAGES

Refer to **Table 4.1** for a summarized progress status of the referred contract packages.

##### 4.1 Description of Contracted Cyclone Shelter Works

A summarized description of the two active Cyclone Shelter Contract Packages, which are presently under various stages of construction, is given below.

**1** **Mathbaria Pourashava: Package No. CTEIP/MAT/CS/01**  
Construction of Multi-purpose Cyclone Shelter at Momenia Dakhil Madrassa (Ward-1), Mathbaria Pourashava, District: Pirojpur

| SI No. | Component Name   |
|--------|--|
|        | Construction of Cyclone Shelter at Momenia Dakhil Madrasha(word-01): |
| (1)    | Schedule 1: General & Site Facilities.                               |
| (2)    | Schedule 2: Civil work   |
| (3)    | Schedule 3: Internal Road  |
| (4)    | Schedule 4: Sanitary work  |
| (5)    | Schedule 5: Electrical work  |
| (6)    | Schedule 6: Tube well work (2nos Tube well)                          |
| (7)    | Schedule 7: Furniture work   |
| (8)    | Schedule 8: Environmental Mitigation Enhancement Works               |

**3** **Galachipa Pourashava: Package No. CTEIP/GAL/CS/01**  
Construction of 3 (three) Multi-purpose Cyclone Shelters under Galachipa Pourashava, District: Patuakhali

| SI No. | Component Name  |
|--------|---|
|        | Construction of Cyclone Shelter at Furfura Sharif Talimul Quran Madrasha (word-02): |
| (1)    | Schedule 1: General & Site Facilities.  |
| (2)    | Schedule 2-1: Civil work  |
| (3)    | Schedule 2-3: Sanitary work   |
| (4)    | Schedule 2-4: Electrical work   |
| (5)    | Schedule 2-5: Tube well work (2nos Tube well)                                       |
| (6)    | Schedule 2-6: Furniture work  |
|        | Construction of Cyclone Shelter at Galachpa Degree College Compound (word-09):      |
| (7)    | Schedule 3-1: Civil work  |
| (8)    | Schedule 3-3: Sanitary work   |
| (9)    | Schedule 3-4: Electrical Work   |
| (10)   | Schedule 3-5: Tube well work (2nos Tube well)                                       |
| (11)   | Schedule 3-6: Furniture work  |
|        | Construction of Cyclone Shelter at Sarshina Khanka Hafezia Madrassa (word-03):      |
| (12)   | Schedule 4-1: Civil work  |
| (13)   | Schedule 4-3: Sanitary work   |
| (14)   | Schedule 4-4: Electrical Work   |
| (15)   | Schedule 4-5: Tube well work (2nos Tube well)                                       |
| (16)   | Schedule 4-6: Furniture work  |
| (17)   | Schedule 5: Environmental Mitigation Enhancement Works                              |

4

Pirojpur Pourashava: Package No. CTEIP/PIR/CS/01

Construction of 3 (three) Multi-purpose Cyclone Shelters under Pirojpur Pourashava, District: Pirojpur

| SI No. | Component Name  |
|--------|---|
|        | Construction of Cyclone Shelter at Adarshapara Secondary School (word-05):    |
| (1)    | Schedule 1: General & Site Facilities.  |
| (2)    | Schedule 2-1: Civil work  |
| (3)    | Schedule 2.2: Internal Road   |
| (4)    | Schedule 2-3: Sanitary work   |
| (5)    | Schedule 2-4: Electrical work   |
| (6)    | Schedule 2-5: Tube well work (2nos Tube well)                                 |
| (7)    | Schedule 2-6: Furniture work  |
|        | Construction of Cyclone Shelter at Khamkata Govt Primary school.(Ward-08):    |
| (8)    | Schedule 3-1: Civil work  |
| (9)    | Schedule 3.2: Internal Road   |
| (10)   | Schedule 3-3: Sanitary work   |
| (11)   | Schedule 3-4: Electrical Work   |
| (12)   | Schedule 3-5: Tube well work (2nos Tube well)                                 |
| (13)   | Schedule 3-6: Furniture work  |
|        | Construction of Cyclone Shelter at Hularhat Dakhil Madrasa (ward-03):         |
| (14)   | Schedule 4-1: Civil work  |
| (15)   | Schedule 4.2: Internal Road   |
| (16)   | Schedule 4-3: Sanitary work   |
| (17)   | Schedule 4-4: Electrical Work   |
| (18)   | Schedule 4-5: Tube well work (2nos Tube well)                                 |
| (19)   | Schedule 4-6: Furniture work  |
| (20)   | Schedule 5: Environmental Mitigation Enhancement Works of Pirojpur Pourashava |

#### 4.2 Description of Contracted Road Works

A summarized description of the two active Road Contract Packages, which are presently under various stages of construction, is given below.

5

Mathbaria Pourashava: Package No. CTEIP/MAT/RD/01

Construction/Improvement of 4 Nos. Roads, Totaling 3.741 km in Mathbaria Pourashava, District: Pirojpur

| SI No. | Component Name  |
|--------|---|
|        | 2. Construction / Improvement of R&H Road to Bairatola Khal via Veterinary Hospital. Ward #05.                              |
| (1)    | (Road) (Length = 541.00 m)  |
| (2)    | (Drain) Length=224.00m  |
| (3)    | (Protection Wall) (Length = 49.00m)   |
|        | 3. Construction / Improvement of Road from Mathbaria Masua Road to Mathbaria Tushkhali khal via Women's College. Ward # 02. |
| (4)    | (Road) (Length = 375.00 m)  |
| (5)    | (Drain) Length=341.00m  |
| (6)    | (R.C.C Protection Wall) (Length = 87.0m)  |
|        | 4. Construction / Improvement of road from R & H road to Govt. College via New Market. Ward# 7                              |
| (7)    | (Road) (Length = 860.00 m)  |
| (8)    | (Road side Drain) (Length = 855.00m)  |
| (9)    | (Box Culvert: 1x1.5x8.10m) 01 Nos.  |
| (10)   | (Protection Wall) (Length = 29.00m)   |



|      |  |
|------|--|
|      | 5. Construction / Improvement of Bairatola to Mistrinari via (Shafa Road) end of Pourashava, Ward #05. |
| (11) | (Road) (Length= 1965.00m).   |
| (12) | (Box Culvert) (1 x 3.5 x 3.5) 1 Nos. (Length = 9.10m).   |
| (13) | (Box Culvert) (1 x 1.2 x 1.5) 3 Nos. (Length=9.10m).   |
| (14) | (Box Culvert) (1 x 1 x 1.5) 4 Nos. (Length=8.10m).   |
| (15) | Environmental Mitigation Enhancement Works of Mathbaria Pourashava                                     |

6

**Galachipa Pourashava: Package No. CTEIP/GAL/RD/01**

Construction/Improvement of 5 Nos. Roads, Totaling 6.555 km in Galachipa Pourashava, District: Patuakhali

| SI No. | Component Name   |
|--------|--|
|        | 1. Construction /Improvement of College Road & Connecting Road of Proposed CS in Degree College, Ward # 8 to 9 |
| (1)    | (Road) Total Length = 2165.00m   |
| (2)    | (Drain) Length=283.00m   |
| (3)    | (Box Culvert 1 x 1 x 1.5 x 9.10m) 01 Nos.  |
| (4)    | (Box Culvert: 1 x 2 x 2.5 x 9.10m) 01 Nos.   |
| (5)    | (Protection Wall) Length=85.00m  |
|        | 2. Construction/Improvement of Wapda Road (Damaged Parts ), Ward # 1,2,3 & 4                                   |
| (6)    | (Road) (Length =1575.00 m)   |
| (7)    | (Protection Wall) (Length = 132.00m)   |
|        | 3. Construction/Improvement of Banani Road with Connecting Khalifa Road, Ward # 09                             |
| (8)    | (Road) (Length = 1355.00 m)  |
| (9)    | (Box Culvert: 1 x 1 x 1.5 x 7.10m) 7 Nos.  |
| (10)   | (Box Culvert: 1 x 2 x 2.5m) (Length = 7.10m) 1 Nos.  |
|        | 4. Construction/Improvement of Santibag Road ,Ward #03   |
| (11)   | (Road) (Length = 610.00 m)   |
| (12)   | (Box Culvert) (1 x 1 x 1.5) (Length = 8.10 m) 3 Nos.   |
| (13)   | (Slope Protection Work With C C Block) (Length = 30.00 m)  |
|        | 5. Construction / Improvement of Sadar Road, Ward # 04 to 07.  |
| (14)   | (Road) (Length = 850.00 m)   |
| (15)   | (Drain) (Length = 758.00 m)  |
| (16)   | (Box Culvert) (1 x 1.2 x 1.6) (Length = 9.10 m) 01 Nos.  |
| (17)   | Environmental Mitigation Enhancement Works of Galachipa Pourashava   |

**4.3 Status of Civil Works Implementation**

Refer to Table 4.1, which gives an overall summary of the progress status of implementation of the contracts to date. This includes the 25 contract Packages under Batch 1, Stage I CTEIP institutional development programme, out of which 5 contract packages have been awarded to date.





## **Chapter 5: Compliance with Environmental Related Project Covenants**



## 5. COMPLIANCE WITH ENVIRONMENTAL RELATED PROJECT COVENANTS

### 5.1 National Covenants

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

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

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

The environmental policies are prepared by the Ministry of Environment and Forests (MoEF). MoEF has also formulated regulation toward clearance of projects from environmental angles based on environmental impact assessment report.

The Department of Environment is responsible for environmental issues while forest issues are looked after Department of Forests. Over the years the MoEF has adopted number of legal instrument in the form of Acts for the protection and conservation of the environment. **Table 5.1** summarizes the Environmental Legislation applicable to the sub-projects.

The **Ministry of Environment & Forests** is the nodal agency in the administrative structure of the Central Government, for the planning, promotion, co-ordination and overseeing the implementation of environmental and forestry programmes. MoEF oversees all environmental matters in the country and is a permanent member of the Executive Committee of the National Economic Council. The Ministry also plays a pivotal role as a participant of United Nations Environment Programme (UNEP). The principal activities undertaken by Ministry of Environment & Forests consist of conservation & survey of flora, fauna, forests and wildlife, prevention & control of pollution, forestation & regeneration of degraded areas and protection of environment, in the framework of legislations.

### 5.2 ADB Assigned Categorization

Asian Development Bank (ADB) requires the consideration of environmental issues in all aspects of ADB's operations, and the requirements for environmental assessment are described in ADB SPS, 2009. This states that ADB requires environmental assessment of all project loans, program loans, sector loans, sector development program loans, loans involving financial intermediaries, and private sector loans.

The nature of the environmental assessment required for a project depends on the significance of its environmental impacts, which are related to the type and location of the project; the sensitivity, scale, nature, and magnitude of its potential impacts; and the availability of cost-effective mitigation measures. Projects are screened for their expected environmental impacts, and are assigned to one of the following four categories:

- **Category A.** Projects could have significant adverse environmental impacts. An EIA is required to address significant impacts.
- **Category B.** Projects could have some adverse environmental impacts, but of lesser degree or significance than those in category A. An IEE is required to determine whether significant



environmental impacts warranting an EIA are likely. If an EIA is not needed, the IEE is regarded as the final environmental assessment report.

- **Category C.** Projects are unlikely to have adverse environmental impacts. No EIA or IEE is required, although environmental implications are reviewed.
- **Category FI.** Projects involve a credit line through a financial intermediary or an equity investment in a financial intermediary. The financial intermediary must apply an environmental management system, unless all projects will result in insignificant impacts.

As per above ADB environmental classification, the road and cyclone shelter sub-projects fall in **Category-B**.

### 5.3 ADB Safeguard Policy Statement

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

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

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

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

Refer to **Table 5.2**, which gives the current status of the compliance with ADB's resettlement policy statement (APS 2009).

### 5.4 Contract Requirements

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

- a) Initial Environmental Examination (IEE) attached hereto as **Appendix A to the Contract**;
- b) Environmental Management Plan (EMP) attached hereto as **Appendix B to the Contract**;
- c) Resettlement Plan (RP): (Due Diligence Report) attached hereto as **Appendix C to the Contract**;
- d) Gender Action Plan (GAP) attached hereto as **Appendix D to the Contract**;
- e) Quality Control Quality Assurance (QA/QC) Plan: refer to **Subsection 4 of the Contract**; and
- f) Health and Safety Manual (H&S): refer to **Subsection 6 of the Contract**.

In addition to the foregoing, the Contractor is to provide the Project Manager with a written notice of any unanticipated environmental or social risks or impacts that arise during construction, implementation or operation of the Plant or Works, which were not considered in the IEE, the EMP and the DDR or Short Resettlement Plan (RP).



#### 5.4.1 Air Quality

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

The mitigation measures are as follows:

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

#### 5.4.2 Noise Quality

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

The following mitigation measures may be adopted:

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

### 5.4.3 Health, Safety and Fuel Provisions

The Project will have no significant impact on disease transmission or other health factors. Positive health impacts will include improved access to health care facilities and quicker response time in emergency situations. No additional mitigation actions related to health are warranted.

Mitigation related to potential safety impacts will include improved signage. The construction camps will be fenced off using chain-link fencing to prevent unauthorized entry. Chain link is commercially available in rolls and can be raised on site along the perimeter of the construction camps, vehicle-parking areas and any other areas where temporary enclosure is required. The chain-link fencing will ensure that visual continuity is intact. The contractor shall provide the cooking gas in the contractor camp to reduce pressure on the cutting of trees from the area. However, it will be appropriate to employ local labour on site. This will also decrease the fuel requirements in the camps.

### 5.4.4 Construction Spoil & Debris Disposal

During construction about 10% of gravel, sand, bricks and cement is left as construction spoils. If it is not disposed properly it may become a place of mosquito breeding. Hence it is advocated that construction spoils shall be disposed off at a site approved by law.

## 5.5 Financing Agreement

### 5.5.1 Cyclone Shelter Environmental Monitoring Costs

Refer to **Table 5.1** for the total costs, along with the progress of the stipulated sample monitoring, of Environmental Management and Monitoring Plan, for the Cyclone Shelter forming an integral part of the contract package.

### 5.5.2 Roads Environmental Monitoring Costs

Refer to **Table 5.1** for the total costs, along with the progress of the stipulated sample monitoring, of Environmental Management and Monitoring Plan, for the Cyclone Shelter forming an integral part of the contract package.

## **Chapter 6: Environmental Monitoring Requirements**





## 6. ENVIRONMENTAL MONITORING REQUIREMENTS

The environmental mitigation measures, as stipulated in respective EMP's for the active Road and Cyclone Shelter Contracts: Mathbaria Pourashava: MAT/RD/01 and MAT/CS/01; Galachipa Pourashava: GAL/RD/01 and GAL/CS/01; and Pirojpur Pourashava: GAL/CS/01; and in the environmental permit, as monitored during implementation. In order to perform monitoring of EMP, the contractor has failed to engage laboratory and third party services in complying the required environmental testing of parameters: *This issue is being actively pursued at present for each Pourashava.*

### 6.1 Sampling and Testing of Environmental Parameters

#### 6.1.1 Cyclone Shelter Contracts

Based on the Project description, Environmental Baseline Data and Environmental sampling and monitoring requirements Monitoring Plan for Contract Packages, refer to **Annexure 5** for and for the Cyclone Shelter Contract Packages for the actives contracts CTEIP/MAT/CS/01, CTEIP/GAL/CS/01, and CTEIP/PIR/CS/01.

The sampling of Environmental Parameters has yet to be completed for the three Cyclone Shelter contract packages, therefore causing a key non compliance.

#### 6.1.2 Roads Contracts

Based on the Project description, Environmental Baseline Data and Environmental sampling and monitoring requirements Monitoring Plan for Contract Packages, refer to **Annexure 5** for the Road Contract Packages for the actives contracts CTEIP/MAT/RD/01 and CTEIP/GAL/RD/01.

The sampling of Environmental Parameters has yet to be completed for the two road contract packages, therefore causing a key non compliance.

### 6.2 Environmental Management Plan Implementation

Based on the Project description, Environmental Baseline Data and Environmental Impacts, the Environmental Management and Monitoring Plan for Contract Packages, refer to **Annexure 6** for the Cyclone Shelter Contract Packages for the actives contracts CTEIP/MAT/CS/01, CTEIP/GAL/CS/01, and CTEIP/PIR/CS/01, inclusive of the detailed Environmental Fields versus the related impacts, mitigation measures for negative impacts, various responsibilities, monitoring indicators and frequency of such monitoring.

Based on the Project description, Environmental Baseline Data and Environmental Impacts, the Environmental Management and Monitoring Plan for Contract Packages, refer to **Annexure 6** for the Road Contract Packages for the actives contracts CTEIP/MAT/RD/01 and CTEIP/GAL/RD/01, inclusive of the detailed Environmental Fields versus the related impacts, mitigation measures for negative impacts, various responsibilities, monitoring indicators and frequency of such monitoring.

### 6.3 Monitoring Compensation Entitlements

The monitoring of the compensation entitlement matrix requires further verification of the payments as detailed in the Due Diligence Report and according to the Tables given in **Annexure 8**. Each payment is to be made by issue of Bank Draft to the respective designated affected person and receipt shall be confirmed by signature and copy of the transferred payment.

#### 6.3.1 Road Contract Package CTEIP/MAT/RD/01

The total market price of affected trees and structures is Tk-1,691,300 and families affected are 55 Nos, out of whom 54 are male and 1 is female, according to the summarized amounts for the respective road schemes given below:

| Description   | Total(Tk)        |
|---|------------------|
| Table-1: R&H road to Bairatala Khal via Veterinary Hospital (ward no-5)       | 734,800          |
| Table-2: Masua Road to Mathbaria Tuskhali Khal via Women's College. Ward # 2. | 510,000          |
| Table-3: R&H Road to Govt. College via New Market. Ward # 7                   | 355,100          |
| Table-4: Bairatala to Mistrinari via Shafa road (ward no-5)                   | 91,400           |
| <b>Total</b>  | <b>1,691,300</b> |

### 6.3.2 Road Contract Package CTEIP/GAL/RD/01

The total number of families affected is 9; for a total number of persons being 43, out of whom 24 are male and 19 are female. The amount of compensation for temporary business loss is Tk-12,050. The amount of compensation for affected assets is Tk- 36,700 and the total compensation amounts to Tk. 48,750, according to the summarized amounts for the respective road schemes given below.

| Description  | Total(Tk)     |
|--|---------------|
| College road and connecting road of proposed (CS) in Degree College, (Ward no. 8 to 9) | 11,000        |
| Wapda Road (damaged parts) (Ward no. 1, 2, 3, 4)                                       | 1,050         |
| Banani road with Connecting Khalifa Road (Ward no. 9)                                  | 31,100        |
| Shanti Bagh Road (Ward no. 3)  | 5,600         |
| <b>Total</b>   | <b>48,750</b> |

## 6.4 Monitoring of Gender Action Plan

The project-specific Gender Action Plan (GAP) is a tool used to ensure gender mainstreaming, from project planning to project design and implementation. The GAP includes clear targets, quotas, gender design features and quantifiable performance indicators to ensure women's participation and benefits, which has been generated during the planning and design stage, and now involves the monitoring of compliance during the Construction phase of the CTEIP programme, incorporating the following considerations:

- preparatory work undertaken to address gender issues in the project;
- quotas, targets, design features included in the project to address gender inclusion and facilitate women's involvement and/or ensure tangible benefits to women
- mechanisms to ensure implementation of the gender design elements; and
- gender monitoring and evaluation indicators.

The Gender Action Plan forms an integral part of the Contract and hence is a commitment of the contractor to comply with the GAP provisions. The GAP is to be constantly reviewed during the course of implementation, refer to **Annexure 7** for the monitoring status, which is to be read with the appropriate provisions and line items of the EMP.

### 6.4.1 Cyclone Shelter Contract Packages

Of the 14 monitored GAP parameters for the Cyclone Shelter component of the CTEIP programme for contract packages: CTEIP/MAT/CS/01, CTEIP/GAL/CS/01, and CTEIP/PIR/CS/01: the overall score was found to be 25 points, equivalent to a resultant 1.8 ranking. Hence, the overall compliance for the Cyclone Sub-projects is found to be **Below Satisfactory** with **5 key non-compliances**

|                                |            |                           |  |
|--------------------------------|------------|---------------------------|--|
| Total Score for 14 parameters  | 25         |                           |  |
| Notes: YTS/Not Applicable      | 0          |                           |  |
| Numerator Value                | 14         |                           |  |
| <b>Overall Score</b>           | <b>1.8</b> | <b>Below Satisfactory</b> |  |
| <b>Non Compliance Recorded</b> | <b>5</b>   |                           |  |

For all Cyclone Shelter Contract Packages, the Gender Action Plan has not been followed with a below satisfactory rating with 5 non compliances recorded, which is a serious non compliance.

#### 6.4.2 Road Contract Packages

Of the 14 monitored GAP parameters for the Road component of the CTEIP programme for contract packages: CTEIP/MAT/RD/01 and CTEIP/GAL/RD/01, the overall score was found to be 22 points, equivalent to a resultant 1.6 ranking. Hence, the overall compliance for the Road Sub-projects is found to be **Below Satisfactory with 5 key non-compliances**

|                                |  |    |            |                           |
|--------------------------------|--|----|------------|---------------------------|
| Total Score for 14 parameters  |  | 22 |            |                           |
| Notes: YTS/Not Applicable      |  | 0  |            |                           |
| Numerator Value                |  | 14 |            |                           |
| <b>Overall Score</b>           |  |    | <b>1.6</b> | <b>Below Satisfactory</b> |
| <b>Non Compliance Recorded</b> |  |    | <b>5</b>   |                           |

For all Road Contract Packages, the Gender Action Plan has not been followed with a below satisfactory rating with 5 non compliances recorded, which is a serious non compliance.

#### 6.5 Monitoring of Occupational Health and Safety

In accordance with the Contract, the Contractor is to prepare a Health and Safety Action Plan, whereby the Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel and to provide a safe work environment, which is to be implemented according to appropriate occupational health and safety requirements detailed in the relevant clauses of the EMP and GAP.

For all Contract Packages, the Health and Safety Action Plan has not been prepared, which is a serious non compliance.





## **Chapter 7: Environmental Mitigation Measures Implementation**



## 7. ENVIRONMENTAL MITIGATION MEASURES IMPLEMENTATION

The proposed road and cyclone shelter subprojects have been planned to minimize any adverse environmental impacts, and adequate provisions have been incorporated into the project design to mitigate the impacts.

Preliminary design, field visits and results of the rapid environmental assessment indicate that road and cyclone shelter subproject implementation will not be having major negative impacts as activities will be localized / site-specific and of short duration. Following several aspects of the environment, that are not expected to be affected by the road and cyclone shelter subprojects, can be screened out of the assessment at this stage.

### 7.1 Pre-Operation: Design Stage

#### 7.1.1 Landscape

**Impact:** Adverse effects on aesthetics

**Mitigation Measure:** Development of the designs for the roads / bridges and cyclone shelters must be compatible with the surrounding environment.

#### 7.1.2 Consents and NOC's

**Impact:** Failure to obtain necessary consents, permits, NOC's can result in design revisions and/or stoppage of the works.

**Mitigation Measure:**

- Obtain all necessary consents, clearances, permits, NOC's prior to start of the Works.
- Acknowledge in writing and provide report on compliance all obtained on consents, clearances, permits, NOC's.
- Include in detailed design drawings and documents all conditions and provisions if necessary.

#### 7.1.3 Existing utilities

**Impact:** Disruption of services.

**Mitigation Measure:**

- Identify and include locations and operators of these utilities in detailed design documents to prevent unnecessary disruption of services during construction activities.
- Require construction contractors to prepare contingency plan to include actions to be done in case of unintentional interruption of services.
- Require construction contractors to prepare spoils management plan:
  - i) Spoils Information: Materials Type; Potential Contamination; Expected Volume and Sources; Spoil Classification.
  - ii) Spoils Management: Transportation of Spoil; Storage of Spoil; Contamination of Spoil; Approved Reuse and/or Disposal Sites.
  - iii) Records of Reuse and/or Disposal.

#### 7.1.4 Construction Work Camps

**Impact:** Hot mix plants, stockpile areas, storage disposal areas, disruption to traffic flow and sensitive receptors

**Mitigation Measure:** Determine locations prior to award of construction contracts.

#### 7.1.5 Sources of Materials

**Impact:** Extraction of material can disrupt natural land contours and vegetation resulting in accelerated erosion, disturbance in natural drainage, patterns, ponding and water logging and water pollution

**Mitigation Measure:** Prepare list of approved quarry sites and sources of materials.

### 7.1.6 EMP Implementation Training

**Impact:** Negative irreversible impact to the environment, workers and community

**Mitigation Measure:** Project manager and all key workers will be required to undergo EMP implementation including spoils management, Standard Operating Procedures (SOP) for construction works; health and safety (H&S), core labour laws, and applicable environmental laws.

## 7.2 Operation: Construction Stage

### 7.2.1 Physical Characteristics

**Topography, landforms, geology and soils:**

**Impact:** Significant amount of gravel, sand, and cement will be required for this subproject. Extraction of construction materials may cause localized changes in topography and landforms. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.

**Mitigation Measure:**

- Utilize readily available sources of materials. If contractor procures materials from existing borrow pits and quarries, ensure these conform to all relevant regulatory requirements.
- Borrow areas and quarries (If these are being opened up exclusively for the subproject) must comply with environmental requirements, as applicable. No activity will be allowed until formal agreement is signed between PIU, landowner and contractor.

**Water Quality:**

**Impact:** Excavation, run-off from stockpiled materials, and chemical contamination from fuels and lubricants may result to silt-laden runoff during rainfall which may cause siltation and reduction in the quality of adjacent bodies of water. The impacts are negative but short term, site-specific within a relatively small area and reversible by mitigation measures.

**Mitigation Measure:**

- Prepare and implement a spoils management plan.
- Prioritize re-use of excess spoils and materials in construction activities. If spoils will be disposed, consult with Local Authority on designated disposal areas.
- All earthworks must to be conducted during dry season to maximum extent possible to avoid the difficult working conditions that prevail during monsoon season such as problems from runoff.
- Location for stockyards for construction materials shall be identified at least 300m away from watercourses. Place storage areas for fuels and lubricants away from any drainage leading to water bodies.
- Take all precautions to minimize the wastage of water in the construction activities.
- Take all precautions to prevent entering of wastewater into streams, watercourses, or irrigation system. Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies.
- Ensure diverting storm water flow during construction shall not lead to inundation and other nuisances in low lying areas.
- While working across or close to any water body, the flow of water must not be obstructed. Ensure no construction materials like earth, stone, or appendage are disposed of in a manner that may block the flow of water of any watercourse and cross drainage channels.
- Monitor water quality according to the environmental management plan.

**Air Quality:**

**Impact:** Conducting works at dry season and moving large quantity of materials may create dusts and increase in concentration of vehicle-related pollutants (such as carbon monoxide, sulphur oxides, particulate matter,



nitrous oxides, and hydrocarbons) which will affect people who live and work near the sites. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.

**Mitigation Measure:**

- Damp down exposed soil and any sand stockpiled on site by spraying with water during dry weather.
- Use tarpaulins to cover soils, sand and other loose material when transported by trucks.
- Unpaved surfaces used for haulage of materials within settlements shall be maintained dust-free.
- Arrangements to control dust through provision of windscreens, water sprinklers, and dust extraction systems shall be provided at all hot-mix plants, batching plants and crushers (if these establishments are being set up exclusively for the subproject).
- Monitor air quality.

**Acoustic Environment:**

**Impact:** Construction activities will be on settlements, in and near schools, and areas with small-scale businesses. Temporary increase in noise level and vibrations may be caused by excavation equipment, and the transportation of equipment, materials, and people. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.

**Mitigation Measure:**

- Involve the community in planning the work program so that any particularly noisy or otherwise invasive activities can be scheduled to avoid sensitive times.
- Plan activities in consultation with Local Authority so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance.
- Use of high noise generating equipment shall be stopped during night time.
- Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach.
- Utilize modern vehicles and machinery with the requisite adaptations to limit noise and exhaust emissions, and ensure that these are maintained to manufacturers' specifications at all times.
- All vehicles and equipment used in construction shall be fitted with exhaust silencers. Use silent-type generators (if required).
- Monitor noise levels. Maintain maximum sound levels not exceeding 80 decibels (dBA) when measured at a distance of 10 m or more from the vehicle/s.
- If it is not practicable to reduce noise levels to or below noise exposure limits, the contractor must post warning signs in the noise hazard areas. Workers in a posted noise hazard area must wear hearing protection.
- Identify any buildings at risk from vibration damage and avoiding any use of pneumatic drills or heavy vehicles in the vicinity. Complete work in these areas quickly.

**Aesthetics:**

**Impact:** The construction activities do not anticipate any cutting of trees but will produce excess excavated earth (spoils), excess construction materials, and solid waste such as removed concrete, wood, packaging materials, empty containers, spoils, oils, lubricants, and other similar items. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.

**Mitigation Measure:**

- Prepare the Debris Disposal Plan.
- Remove all construction and demolition wastes on a daily basis.
- Coordinate with Local Authority for beneficial uses of excess excavated soils or immediately dispose to designated areas avoid stockpiling of any excess spoils.
- Suitably dispose of collected materials from drainages, unutilized materials and debris either through filling up of pits/wasteland or at pre-designated disposal locations.
- All vehicles delivering fine materials to the site and carrying waste debris for disposal shall be covered to avoid spillage of materials. All existing roads used by vehicles of the contractor, shall be kept clear of all dust/mud or other extraneous materials dropped by such vehicles.
- Lighting on construction sites shall be pointed downwards and away from oncoming traffic and nearby houses.

- In areas where the visual environment is particularly important or privacy concerns for surrounding buildings exist, the site may require screening. This could be in the form of shade cloth, temporary walls, or other suitable materials prior to the beginning of construction.
- The site must be kept clean to minimize the visual impact of the site. Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas.

### 7.2.2 Biological Characteristics

#### Biodiversity:

**Impact:** Activities being located in the built-up area of Pourashava. There are no protected areas in or around subproject sites, and no known areas of ecological interest. There are no trees at the site that need to be removed.

#### Mitigation Measure:

- Check if tree-cutting will be required during detailed design stage. No trees, shrubs, or groundcover may be removed or vegetation stripped without the prior permission of the environment management specialist.
- If during detailed design cutting of trees will be required, compensatory plantation for trees lost at a rate of 10 trees for every tree cut, in addition to tree plantation as specified in the design, will be implemented by the contractor, who will also maintain the saplings for the duration of his contract.
- All efforts shall be made to preserve trees by evaluation of minor design adjustments/ alternatives (as applicable) to save trees.
- Special attention shall be given for protecting giant trees and locally-important trees (with religious importance) during implementation.
- Prevent workers or any other person from removing and damaging any flora (plant/vegetation) and fauna (animal) including fishing in any water body in the subproject vicinity.
- Prohibit employees from poaching wildlife and cutting of trees for firewood.

### 7.2.3 Socio-Economic Characteristics

#### Existing provisions for pedestrians and other forms of transport:

**Impact:** Road closure is not anticipated. Hauling of construction materials and operation of equipment on-site may cause traffic problems. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.

#### Mitigation Measure:

- Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites.
- Maintain safe passage for vehicles and pedestrians throughout the construction period.
- Schedule truck deliveries of construction materials during periods of low traffic volume.
- Erect and maintain barricades, including signs, markings, flags and flagmen informing diversions and alternative routes when required.
- Notify affected sensitive receptors by providing sign boards informing nature and duration of construction activities and contact numbers for concerns/complaints.
- Leave spaces for access between mounds of soil.
- Provide walkways and metal sheets where required to maintain access across for people and vehicles.
- Increase workforce in front of critical areas such as institutions, place of worship, business establishment, hospitals, and schools.
- Consult businesses and institutions regarding operating hours and factoring this in work schedules. Ensure there is provision of alternate access to businesses and institutions during construction activities, so that there is no closure of these shops or any loss of clientele.
- Ensure any damage to properties and utilities will be restored or compensated to pre-work conditions.
- Coordinate with local authorities and prepare prior approved Traffic Management Plan (TMP), refer to TMP guidelines.



**Socio-economic status:**

**Impact:** Subproject components will be located in government land and existing school compounds thus there is no requirement for land acquisition or any resettlements. Manpower will be required during the 24-months construction stage. This can result to generation of contractual employment and increase in local revenue.

**Mitigation Measure:**

- Employ at least 50% of labour force from communities in the vicinity of the site. This will have the added benefit of avoiding social problems that sometimes occur when workers are imported into host communities, and avoiding environmental and social problems from workers housed in poorly serviced camp accommodation.
- Secure construction materials from local market.
- Enforcement Gender protocol according to Gender Action Plan given in **Annexure 7**.

**Other existing amenities for community welfare:****Impact:**

- Although construction of subproject components involves quite simple techniques of civil work, the invasive nature of excavation and the subproject sites being in built-up areas of the Pourashava where there are a variety of human activities, will result in impacts to the sensitive receptors such as residents, businesses, and the community in general.
- Excavation may also damage existing infrastructure (such as water distribution pipes, electricity pylons, etc) located alongside the roads. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.

**Mitigation Measure:**

- Obtain details from Pourashava nature and location of all existing infrastructure, and plan excavation carefully to avoid any such sites to maximum extent possible.
- Integrate construction of the various infrastructure subprojects to be conducted in the Pourashava (roads, water supply, etc.) so that different infrastructure is located on opposite sides of the road where feasible and roads and inhabitants are not subjected to repeated disturbance by construction in the same area at different times for different purposes.
- Consult with local community to inform them of the nature, duration and likely effects of the construction work, and to identify any local concerns so that these can be addressed.
- Existing infrastructure (such as water distribution pipes, electricity pylons, etc.) shall be relocated before construction starts at the subproject sites.
- Prior permission shall be obtained from respective local authority for use of water for construction. Use of water for construction works shall not disturb local water users.
- If construction work is expected to disrupt users of community water bodies, notice to the affected community shall be served 7 days in advance and again 1 day prior to start of construction.
- Ensure any damage to properties and utilities will be restored or compensated to pre-work conditions.

**7.2.4 Occupational Health and Safety**

**Impact:** Construction works will impede the access of residents and businesses in limited cases. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.

**Mitigation Measure:**

- Contractor's activities and movement of staff will be restricted to designated construction areas.
- Locations of hot-mix plants, batching plants and crushers (if these establishments are being set up exclusively for the subproject) shall be located at least 100 m away from the nearest dwelling preferably in the downwind direction.
- Consult with the Local Authority on the designated areas for stockpiling of, soils, gravel, and other construction materials.
- If the contractor chooses to locate the work camp/storage area on private land, he must get prior permission from the environment management specialist and landowner.



- Use small mechanical excavators to attain faster excavation progress. For rock and concrete breaking, use non-explosive blasting chemicals, silent rock cracking chemicals, and concrete breaking chemicals.
- Under no circumstances may open areas or the surrounding bushes be used as a toilet facility.
- Recycling and the provision of separate waste receptacles for different types of waste shall be encouraged.
- A general regard for the social and ecological well-being of the site and adjacent areas is expected of the site staff. Workers need to be made aware of some general rules: (i) No alcohol/drugs on site; (ii) prevent excessive noise; (iii) construction staff are to make use of the facilities provided for them, as opposed to ad hoc alternatives (e.g. fires for cooking, the use of surrounding bushes as a toilet facility); (iv) no fires permitted on site except if needed for the construction works; (v) trespassing on private/commercial properties adjoining the site is forbidden; (vi) other than pre-approved security staff, no workers shall be permitted to live on the construction site; and (vii) no worker may be forced to do work that is potentially dangerous or that he/she is not trained to do.
- Interested and affected parties need to be made aware of the existence of the complaints book and the methods of communication available to them. The contractor must address queries and complaints by: (i) documenting details of such communications; (ii) submitting these for inclusion in complaints register; (iii) bringing issues to the environment management specialist's attention immediately; and (iv) taking remedial action as per environment management specialist's instruction.
- The contractor shall immediately take the necessary remedial action on any complaint/grievance received by him and forward the details of the grievance along with the action taken to the environment management specialist within 48 hours of receipt of such complaint/grievance.

#### Worker's health and safety:

**Impact:** There is invariably a safety risk when construction works such as excavation and earthmoving are conducted in urban areas. Workers need to be mindful of the occupational hazards which can arise from working in height and excavation works. Potential impacts are negative and long-term but reversible by mitigation measures.

#### Mitigation Measure:

- Comply with requirements of Government of Bangladesh Labour Law of 2006 and all applicable laws and standards on workers health and safety (H&S).
- Ensure that all site personnel have a basic level of environmental awareness training. If necessary, the environmental management specialist and/or a translator shall be called to the sites to further explain aspects of environmental or social behaviour that are unclear.
- Produce and implement a site H&S plan which include measures as: (i) excluding the public from worksites; (ii) ensuring all workers are provided with and required to use personal protective equipment (reflectorized vests, footwear, gloves, goggles and masks) at all times; (iii) providing H&S training [2] for all site personnel; (iv) documenting procedures to be followed for all site activities; and (v) maintaining accident reports and records.
- Arrange for readily available first aid unit including an adequate supply of sterilized dressing materials and appliances.
- Maintain necessary living accommodation and ancillary facilities in functional and hygienic manner in work camps. Ensure (i) uncontaminated water for drinking, cooking and washing, (ii) clean eating areas where workers are not exposed to hazardous or noxious substances; and (iii) sanitation facilities are available at all times.
- Provide medical insurance coverage for workers.
- Provide H&S orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers.
- Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted.
- Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas.
- Ensure moving equipment is outfitted with audible back-up alarms.
- Mark and provide sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal. Signage shall



be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate

- Disallow worker exposure to noise level greater than 85 dBA for a duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively.

### 7.2.5 Historical, Cultural and Archaeological Characteristics

#### Physical and cultural heritage:

**Impact:** Construction works will not be in built-up areas of the Pourashava but risk for chance finds maybe low.

#### Mitigation Measure:

- All fossils, coins, articles of value of antiquity, structures and other remains of archaeological interest discovered on the site shall be the property of the government.
- Prevent workers or any other persons from removing and damaging any fossils, coins, articles of value of antiquity, structures and other remains of archaeological interest.
- Stop work immediately to allow further investigation if any finds are suspected.

#### Submission of EMP implementation Report:

**Impact:** Unsatisfactory compliance to EMP.

#### Mitigation Measure:

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

### 7.3 Post Construction Stage

#### Post-construction clean-up:

**Impact:** Damage due to debris, spoils, excess construction materials.

#### Mitigation Measure:

- Remove all spoils wreckage, rubbish, or temporary structures (such as buildings, shelters, and latrines) which are no longer required.
- All excavated roads shall be reinstated to original condition.
- All disrupted utilities restored.
- All affected structures rehabilitated/compensated.
- The area that previously housed the construction camp is to be checked for spills of substances such as oil, paint, etc. and these shall be cleaned up.
- All hardened surfaces within the construction camp area shall be ripped.
- All imported materials removed and the area shall be top soiled and regressed using guidelines set out in the re-vegetation specification that forms part of this document.
- The contractor must arrange the cancellation of all temporary services.
- Request PMU/PMSC to report in writing that worksites and camps have been vacated and restored to pre-project conditions before acceptance of work.

### 7.4 Operation and Maintenance Stage

#### 7.4.1 Physical Characteristics

##### Acoustic environment:

**Impact:** Temporary increase in noise level and vibrations. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.

**Mitigation Measure:**

- Plan activities in consultation with the Local Authority so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance.
- Identify any buildings at risk from vibration damage and avoiding any use of pneumatic drills or heavy vehicles in the vicinity. Complete work in these areas quickly.

## **Chapter 8: Key Environmental Issues And Action Plan**





## 8. KEY ENVIRONMENTAL ISSUES AND ACTION PLAN

### 8.1 Affected Ecosystems

The following sub-projects, of the below listed active Cyclone Shelter Contract Packages, are considered environmentally non-sensitive:

- **CTEIP/MAT/CS/01:** Construction of Multi-purpose Cyclone Shelter at Momenia Dakhil Madrassa (Ward-1), Mathbaria Pourashava, District: Pirojpur: present progress status 28%;
- **CTEIP/GAL/CS/01:** Construction of 3 (three) Multi-purpose Cyclone Shelters under Galachipa Pourashava, District: Patuakhali: present progress status:23%;
- **CTEIP/PIR/CS/01:** Construction of 3 (three) Multi-purpose Cyclone Shelters under Pirojpur Pourashava, District: Pirojpur: present progress status: 15%.

The following sub-projects, of the below listed active Road Contract Packages, are considered environmentally non-sensitive:

- **CTEIP/MAT/RD/01:** Construction/Improvement of 4 Nos. Roads, Totaling 3.741 km in Mathbaria Pourashava, District: Pirojpur: present progress status: 53%;
- **CTEIP/GAL/RD/01:** Construction/Improvement of 5 Nos. Roads, Totaling 6.555 km in Galachipa Pourashava, District: Patuakhali: present progress status:49%;

### 8.2 Complaints and Response System

In case of grievances that are immediate and urgent in the perception of the complainant, the contractor and supervision personnel from the project management and supervision consultants (PMSC) on-site will provide the most easily accessible or first level of contact for quick resolution of grievances.

Contact phone numbers and names of the concerned PIU safeguards assistant, contractors, PMU safeguards officer, PMSC environmental and social safeguards specialists are to be posted at all construction sites at visible locations.

Records are to be kept by the respective Pourashava/PIU's of all grievances received, including contact details of complainant, date the complaint was received, nature of grievance, agreed corrective actions and the date these were affected and final outcome. The number of grievances recorded and resolved and the outcomes will be displayed/disclosed in the PMU office, municipal office, and on the web, as well as reported in monitoring reports submitted to ADB on a semi-annual basis.

All costs involved in resolving the complaints (meetings, consultations, communication and reporting / information dissemination) will be borne by the concerned PIU at town-level; while costs related to escalated grievances will be met by the PMU.

The Grievance Redressal Mechanism has been established in the Pourashavas for pre-CTEIP resolutions of problems. Based on this established mechanism, the Pourashavas have the provision of interaction with registered complaints and the requisite response sensitivity.

The Grievance Redressal Committee has been setup in each of the Pourashavas comprising 6 members: Panel Mayor-1 as the Convener, 3 Female Councilors, 1 Male Councilor and 1 male Slum Development Officer.

To date complaints are being registered in the GRC, out of which all are redressed and none were related to CTEIP. Although, the GRC received a category of complaints related to CTEIP works of a very rudimentary nature e.g. removal of debris from local areas and removal of electric pillars, which have been quickly addressed by the Pourashavas.

However, the GRC do not maintain formal records of the category of complaints and the requisite response time, along with complainants' contact details.

### 8.3 Environmental / Social Safeguard Compliance on Application of EMP

Environmental and Social safeguard monitoring has been started from the quarter ending June 2015 for the Cyclone Shelter Contract Packages for the active contracts CTEIP/MAT/CS/01, CTEIP/GAL/CS/01, and CTEIP/PIR/CS/01; and the Road Contract Packages for the active contracts CTEIP/MAT/RD/01 and CTEIP/GAL/RD/01.

Through the monitoring checklists, which have been developed as per a prescribed Environmental Monitoring and Management Plan, the compliance with the application of the EMP, for the respective Pourashavas, are presently under scrutiny, which are in line with the specific scope of work, as defined by the respective Contract Packages and prevailing field conditions.

#### 8.3.1 Cyclone Shelter Contract Packages

The summary of compliance level of EMP application, for the active Cyclone Shelter Contract Packages, as stipulated in the contracted EMP, as agreed by ADB and in accordance with ADB guidelines, is shown below:

Note: (Excellent/Satisfactory/Partially Satisfactory/Below Satisfaction/Poor/Very Poor)

|   | Name of Sub Project   | EMP being Implemented<br>(Yes / No) | Overall Status of EMP Implementation<br>(Refer Annexure 6) | Actions Proposed/Additional Corrective Measures Required   |
|---|---|-------------------------------------|--|--|
| 1 | CTEIP/MAT/CS/01:<br>Construction of Multi-purpose Cyclone Shelter at Momenia Dakhil Madrassa (Ward-1), Mathbaria Pourashava, District: Pirojpur | Yes                                 | Partially Satisfactory                                     | <ul style="list-style-type: none"> <li>o Implementation of EMP especially dust suppression measures &amp; Proper disposal of debris required on part of contractors</li> <li>o Complete utilisation of PPE</li> <li>o Proper disposal of debris</li> <li>o Health and Safety Officer to be present on site</li> <li>o Sample testing yet to be done</li> </ul>   |
| 2 | CTEIP/GAL/CS/01:<br>Construction of 3 (three) Multi-purpose Cyclone Shelters under Galachipa Pourashava, District: Patuakhali                   | Yes                                 | Partially Satisfactory                                     | <ul style="list-style-type: none"> <li>o Implementation of EMP especially dust suppression measures &amp; Proper disposal of debris required on part of contractors</li> <li>o Disposal of old filter media at designated location</li> <li>o Health and Safety Officer to be present on site</li> <li>o Sample testing yet to be done</li> </ul>  |
| 3 | CTEIP/PIR/CS/01:<br>Construction of 3 (three) Multi-purpose Cyclone Shelters under Pirojpur Pourashava, District: Pirojpur                      | Yes                                 | Partially Satisfactory                                     | <ul style="list-style-type: none"> <li>o Implementation of EMP especially dust suppression measures &amp; Proper disposal of debris required on part of contractors</li> <li>o Strict surveillance by Engineer required on EMP implementation</li> <li>o Proper disposal of debris</li> <li>o Complete utilisation of PPE</li> <li>o Health and Safety Officer to be present on site</li> <li>o Sample testing yet to be done</li> </ul> |

Refer to **Table 6.1** for the record of monitored Environmental and Social Safeguard parameters for the Cyclone Shelter component of the CTEIP programme for contract packages : CTEIP/MAT/CS/01, CTEIP/GAL/CS/01, and CTEIP/PIR/CS/01, as summarized below:



|                                |  |     |            |                             |
|--------------------------------|--|-----|------------|-----------------------------|
| Total Score for 112 parameters |  | 162 |            |                             |
| Notes: YTS/Not Applicable      |  | 42  |            |                             |
| Numerator Value                |  | 70  |            |                             |
| <b>Overall Score</b>           |  |     | <b>2.3</b> | <b>Partial Satisfactory</b> |
| <b>Non Compliance Recorded</b> |  |     | <b>19</b>  |                             |

Of the 112 monitored Environmental and Social parameters of the EMP, for the Cyclone Shelter component of the CTEIP programme for contract packages: CTEIP/MAT/CS/01, CTEIP/GAL/CS/01, and CTEIP/PIR/CS/01: 42 line items were either yet to start or not applicable at this stage of the construction phase. The overall score was found to be 162 points, equivalent to a resultant 2.3 ranking. Hence, the overall compliance for the Cyclone Sub-projects is found to be **Partially Satisfactory** but with **19 key non-compliances** recorded as follows:

| EMP Ref. No. | Field: Impacts  | Ref.:     | Mitigation Measures   | Implementing Agency/ Responsibility               |
|--------------|---|-----------|---|---|
| 1.6          | <u>EMP Implementation Training</u> : Negative irreversible impact to the environment, workers and community | <u>10</u> | - Project manager and all key workers will be required to undergo EMP implementation including spoils management, Standard operating procedures (SOP) for construction works; health and safety (H&S), core labour laws, and applicable environmental laws.     | Contractor with assistance of PIU, ICCDC and PMSC |
| 2.1.2        | <u>Water Quality</u>  | <u>21</u> | - Monitor water quality according to the environmental management plan.   | Contractor  |
| 2.1.3        | <u>Air Quality:</u>   | <u>22</u> | - Damp down exposed soil and any sand stockpiled on site by spraying with water during dry weather;   | Contractor  |
| 2.1.4        | <u>Acoustic Environment</u>   | <u>25</u> | - Arrangements to control dust through provision of windscreens, water sprinklers, and dust extraction systems shall be provided at all hot-mix plants, batching plants and crushers (if these establishments are being set up exclusively for the subproject). | Contractor  |
|              |   | <u>26</u> | - Monitor air quality.  | Contractor  |
|              |   | <u>30</u> | - Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach;  | Contractor  |
|              |   | <u>33</u> | - Monitor noise levels. Maintain maximum sound levels not exceeding 80 decibels (dBA) when measured at a distance of 10 m or more from the vehicle/s.   | Contractor  |
|              |   | <u>34</u> | - If it is not practicable to reduce noise levels to or below noise exposure limits, the contractor must post warning signs in the noise hazard areas. Workers in a posted noise hazard area must wear hearing protection.                                      | Contractor  |
| 2.1.5        | <u>Aesthetics:</u>  | <u>36</u> | - Prepare the Debris Disposal Plan  | Contractor/<br>District Authority                 |
|              |   | <u>37</u> | - Remove all construction and demolition wastes on a daily basis.   | Contractor/<br>District Authority                 |
| 2.3.2        |   | <u>64</u> | Enforcement Gender protocol according to the Gender Action Plan.  | Contractor  |

| EMP Ref. No. | Field: Impacts                                 | Ref.: | Mitigation Measures  | Implementing Agency/ Responsibility |
|--------------|--|-------|--|-------------------------------------|
| 2.3.4        | Community Health and Safety:                   | 81    | - Interested and affected parties need to be made aware of the existence of the complaints book and the methods of communication available to them. The contractor must address queries and complaints by: (i) documenting details of such communications; (ii) submitting these for inclusion in complaints register; (iii) bringing issues to the environment management specialist's attention immediately; and (iv) taking remedial action as per environment management specialist's instruction. | Contractor                          |
| 2.3.4        | Community Health and Safety:                   | 82    | - The contractor shall immediately take the necessary remedial action on any complaint/grievance received by him and forward the details of the grievance along with the action taken to the environment management specialist within 48 hours of receipt of such complaint/grievance.   | Contractor                          |
| 2.3.5        | <u>Worker's health and safety:</u>             | 83    | - Comply with requirements of Government of Bangladesh Labour Law of 2006 and all applicable laws and standards on workers health and safety (H&S).  | Contractor                          |
|              |  | 84    | - Ensure that all site personnel have a basic level of environmental awareness training. If necessary, the environmental management specialist and/or a translator shall be called to the sites to further explain aspects of environmental or social behaviour that are unclear.  | Contractor                          |
|              |  | 85    | Produce and Implement H&S Plan   | Contractor                          |
|              |  | 89    | - Provide H&S orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;   | Contractor                          |
| 3.1          | <u>Submission of EMP implementation Report</u> | 97    | - Appointment of Supervisor to ensure EMP implementation;  | Contractor                          |
|              | Unsatisfactory compliance to EMP               | 98    | - Timely submission of monitoring reports including pictures.  | Contractor                          |

### 8.3.2 Roads Contract Packages

The summary of compliance level of EMP application, for the active Roads Contract Packages, as stipulated in the contracted EMP, as agreed by ADB and in accordance with ADB guidelines, is shown below:

Note: (Excellent/Satisfactory/Partially Satisfactory/Below Satisfaction/Poor/Very Poor)

|   | Name of Sub Project   | EMP being Implemented (Yes / No) | Overall Status of EMP Implementation (See Note) | Actions Proposed/Additional Corrective Measures Required  |
|---|---|----------------------------------|---|---|
| 1 | CTEIP/MAT/RD/01: Construction/Improvement of 4 Nos. Roads, Totalling 3.741 km in Mathbaria Pourashava, District: Pirojpur | Yes                              | Partially Satisfactory                          | <ul style="list-style-type: none"> <li>o Implementation of EMP</li> <li>o Complete utilisation of PPE</li> <li>o Proper disposal of debris</li> <li>o Health and Safety Officer to be present on site</li> <li>o Sample testing yet to be done</li> </ul> |



Note: (Excellent/Satisfactory/Partially Satisfactory/Below Satisfaction/Poor/Very Poor)

|   | Name of Sub Project   | EMP being Implemented (Yes / No) | Overall Status of EMP Implementation (See Note) | Actions Proposed/Additional Corrective Measures Required   |
|---|---|----------------------------------|---|--|
| 2 | CTEIP/GAL/RD/01: Construction/Improvement of 5 Nos. Roads, Totalling 6.555 km in Galachipa Pourashava, District: Patuakhali | Yes                              | Partially Satisfactory                          | <ul style="list-style-type: none"> <li>o Implementation of EMP especially dust suppression measures &amp; proper disposal of debris required;</li> <li>o Health and Safety Officer to be present on site</li> <li>o Sample testing yet to be done</li> </ul> |

Refer to **Annexure 6** for the record of monitored Environmental and Social Safeguard parameters for the Roads component of the CTEIP programme for contract packages: CTEIP/MAT/RD/01 and CTEIP/GAL/RD/01, as summarized below:

|                                |  |           |            |                             |
|--------------------------------|--|-----------|------------|-----------------------------|
| Total Score for 112 parameters |  | 199       |            |                             |
| Notes: YTS/Not Applicable      |  | 30        |            |                             |
| Numerator Value                |  | 82        |            |                             |
| <b>Overall Score</b>           |  |           | <b>2.4</b> | <b>Partial Satisfactory</b> |
| <b>Non Compliance Recorded</b> |  | <b>19</b> |            |                             |

Of the 112 monitored Environmental and Social parameters of the EMP, for the Road component of the CTEIP programme for contract packages: CTEIP/MAT/RD/01 and CTEIP/GAL/RD/01: 30 line items were either yet to start or not applicable at this stage of the construction phase. The overall score was found to be 199 points, equivalent to a resultant 2.4 ranking. Hence, the overall compliance for the Cyclone Sub-projects is found to be **Partially Satisfactory** but with **19 key non-compliances** recorded as follows:

| EMP Ref. No. | Field: Impacts   | Ref.:     | Mitigation Measures   | Implementing Agency/ Responsibility               |
|--------------|--|-----------|---|---|
| 1.6          | <b>EMP Implementation Training:</b> Negative irreversible impact to the environment, workers and community | <u>10</u> | Project manager and all key workers will be required to undergo EMP implementation including spoils management, Standard operating procedures (SOP) for construction works; health and safety (H&S), core labour laws, and applicable environmental laws.       | Contractor with assistance of PIU, ICCDC and PMSC |
| 2.1.2        | <b>Water Quality</b>   | 21        | - Monitor water quality according to the environmental management plan.   | Contractor  |
| 2.1.3        | <b>Air Quality:</b>  | 25        | - Arrangements to control dust through provision of windscreens, water sprinklers, and dust extraction systems shall be provided at all hot-mix plants, batching plants and crushers (if these establishments are being set up exclusively for the subproject). | Contractor  |
|              |  | <u>26</u> | - Monitor air quality.  | Contractor  |
| 2,1,4        | <b>Acoustic Environment</b>  | <u>33</u> | - Monitor noise levels. Maintain maximum sound levels not exceeding 80 decibels (dBA) when measured at a distance of 10 m or more from the vehicle/s  | Contractor  |
|              |  | 34        | - If it is not practicable to reduce noise levels to or below noise exposure limits, the contractor must post warning signs in the noise hazard areas. Workers in a posted noise hazard area must wear hearing protection.                                      | Contractor  |

| EMP Ref. No. | Field: Impacts  | Ref.: | Mitigation Measures  | Implementing Agency/ Responsibility |
|--------------|---|-------|--|-------------------------------------|
| 2.1.5        | <u>Aesthetics:</u>  | 36    | - Prepare the Debris Disposal Plan   | Contractor/<br>District Authority   |
|              |   | 37    | - Remove all construction and demolition wastes on a daily basis.  | Contractor/<br>District Authority   |
| 2.3.1        | Existing provisions for pedestrians and other forms of transport: | 54    | - Erect and maintain barricades, including signs, markings, flags and flagmen informing diversions and alternative routes when required.   | Contractor                          |
|              |   | 61    | - Coordinate with local authorities and prepare prior approved Traffic Management Plan (TMP), refer to TMP guidelines given in Annexure I. to EMP  | Contractor                          |
| 2.3.2        | Socio-economic status:  | 64    | Enforcement Gender protocol according to the Gender Action Plan.   | Contractor                          |
| 2.3.4        | Community Health and Safety:                                      | 81    | - Interested and affected parties need to be made aware of the existence of the complaints book and the methods of communication available to them. The contractor must address queries and complaints by: (i) documenting details of such communications; (ii) submitting these for inclusion in complaints register; (iii) bringing issues to the environment management specialist's attention immediately; and (iv) taking remedial action as per environment management specialist's instruction. | Contractor                          |
| 2.3.4        | Community Health and Safety:                                      | 82    | - The contractor shall immediately take the necessary remedial action on any complaint/grievance received by him and forward the details of the grievance along with the action taken to the environment management specialist within 48 hours of receipt of such complaint/grievance.   | Contractor                          |
| 2.3.5        | <u>Worker's health and safety:</u>                                | 83    | - Comply with requirements of Government of Bangladesh Labour Law of 2006 and all applicable laws and standards on workers health and safety (H&S).  | Contractor                          |
|              |   | 84    | - Ensure that all site personnel have a basic level of environmental awareness training. If necessary, the environmental management specialist and/or a translator shall be called to the sites to further explain aspects of environmental or social behaviour that are unclear.  | Contractor                          |
|              |   | 85    | Produce and Implement H&S Plan   | Contractor                          |
|              |   | 89    | - Provide H&S orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;   | Contractor                          |
| 3.1          | <u>Submission of EMP implementation Report</u>                    | 97    | - Appointment of Supervisor to ensure EMP implementation;  | Contractor                          |
|              | Unsatisfactory compliance to EMP                                  | 98    | - Timely submission of monitoring reports including pictures.  | Contractor                          |

#### 8.4 Compliance with Environmental Loan Covenants

The status of compliance of ADB's major Environmental Loan Covenants shown below

##### Environmental Loan Covenants

##### Status of Compliance

##### Environmental Management Plan



**Environmental Loan Covenants**

The State and the project City Corporations shall ensure that the Project is carried out in accordance with the existing environmental laws and regulations of Bangladesh and ADB's environmental guidelines, in particular the Environment Policy of the Asian Development Bank (2009);

(a) all monitoring and mitigation measures indicated in the Initial Environmental Examination and provided for under the Environmental Management Plan are undertaken for the Project

(b) Project implementation shall include consultation with local communities on environmental issues;

(c) Pourashavas shall take a proactive role in environmental planning, management and monitoring;

(d) Clearances shall be obtained for all applicable Project components prior to commencement of work on those components;

**Operation & Maintenance**

The State shall ensure that each Project City Corporation undertakes operation and maintenance of project facilities in accordance with good practice for water supply, sewerage and solid waste management, and in accordance with the regulations of India and of the state

**Status of Compliance**

Under compliance in accordance with ADB Environmental Policy and Environmental Assessment Guidelines 2003.

Under compliance: IEE screening of potential environmental impact and mitigation measures applied according to project location, specific sector development and associated design requirements.

EMP's prepared and monitored for compliance of stated mitigation measures.

Initial EMP Semi-Annual ESSMR submitted for June 2015.

Under compliance: completed under the design stage, which is ongoing by DDSC. This is also forming part of the ongoing PMSC/ICCDC public awareness campaign requirements.

During construction consultation with local communities on environmental issues are being considered.

Under compliance: initiated as the concept and detailed design stages have been progressed.

Under compliance: all necessary clearances and land acquisition issues resolved. Specific clearance details are now compiled for appropriate contract packages.

Shall be ensured as required

Will form part of the training requirement in effective O & M practices by PMSC/ICCDC.

O&M Manuals to be prepared by PMSC.

**8.5 Items of Focus**

Application of the respective EMP is to be achieved through continuous monitoring in the field, followed by filling up of the appropriate monitoring checklist and generation of environmental baseline data for this initial semi-annual ESSMR (July 2015).

Pourashava PIU/ Consultants to be vigilant in identification of the related Environmental/Social safeguard issues/problems related to environment. The contractors are regularly being directed to ensure proper implementation of the respective EMPs, inclusive of their contractual obligations regarding the frequent sample testing and monitoring requirements, as per ADB guidelines and Contract provisions.

A designated Nodal Environmental Officer( PMU)/ Consultant to have overall responsible for implementation of the respective EMP's and sample testing of the contracted environmental monitoring parameters. The Nodal Environmental Officer (PMU) / Consultant / Contractors to attend Environmental/ Social Safeguard's monitoring training as a matter of urgency.

Sample testing/monitoring of environmental parameters to be conducted through external testing agency to be arranged by the Contractor.

**8.6 Concluding Observations**

According to the current status of the Environmental Management Plan for the monitored Contract Packages to date, the associated key observations for the active Contract Packages: for the Cyclone Shelter Contract Packages for the actives contracts CTEIP/MAT/CS/01, CTEIP/GAL/CS/01, and CTEIP/PIR/CS/01, and the Road Contract Packages for the actives contracts CTEIP/MAT/RD/01 and CTEIP/GAL/RD/01,are given as follows:

- Use of PPE, including appropriate gumboot (plastic boots are not considered satisfactory), gloves, nose musk and ear plugs are complied. Dissemination of awareness on personal safety of work force is to be a continuous requirement;
- Traffic diversion not yet required for pipe laying projects;
- The vehicles carrying sand & cement are to be appropriately covered;
- During the dry period of construction, water sprinkling by use of water tanker is to be complied;
- Monthly maintenance of noise producing equipment to be reported;
- For public safety, barricade, caution board, safety tape etc. to be provided at the active working sites, which requires constant attention.

**8.7 Corrective Action Plan**

According to the current status of the Environmental Management Plan for the monitored Contract Packages to date, for complete compliance at "satisfactory / excellent" level, the following Action Plan requirements are to be given:

**Action Plan for Attaining Satisfactory Environmental Compliance**

| Action  | To be taken by         | Time frame |
|---|------------------------|------------|
| <ul style="list-style-type: none"> <li>• Cyclone Shelter Contract Packages for the actives contracts CTEIP/MAT/CS/01, CTEIP/GAL/CS/01, and CTEIP/PIR/CS/01:</li> </ul>  |                        |            |
| Instruction to contractors for implementation/ compliance and to PIU/Consultant for enforcement monitoring for: <ul style="list-style-type: none"> <li>o Proper disposal of debris</li> <li>o Complete use of PPE</li> <li>o Presence on site of health and safety officer</li> <li>o Correct maintained records of all H&amp;S issues;</li> <li>o Correct maintained records regarding ESSMR;</li> </ul> | PIU, PMSC, Contractors | Continuous |



|  |                        |   |
|--|------------------------|---|
| <ul style="list-style-type: none"> <li>o Restoration of road/lane after sectional completion – at earliest</li> <li>o Camp site management;</li> <li>o Water sprinkling during dry period</li> </ul> |                        |   |
| Public consultation during construction  | PIU, PMSC, Contractors | At least once in a month                                    |
| Sample monitoring and testing of the designated Environmental Parameters in full accordance with the contracted financing plan and testing requirements  | Contractors            | Immediate action, notwithstanding possible closure of sites |
| Follow up action for completion of the verified monitoring for the ESSMR   | PIU, PMSC, Contractors | Immediate   |
| Grievance Redressal Mechanism: To implement according to EMP   | PIU                    | Immediate   |
| EMP implementation and monitoring Training   | PIU, PMSC, Contractors | Immediate   |
| Gender awareness and sensitivity to be applied on site in selection of work force  | Contractor             | Immediate   |

**Action Plan for Attaining Satisfactory Environmental Compliance**

| Action  | To be taken by                       | Time frame  |
|---|--------------------------------------|---|
| Road Contract Packages for the actives contracts  | CTEIP/MAT/RD/01 and CTEIP/GAL/RD/01: |   |
| Instruction to contractors for implementation/ compliance and to PIU/Consultant for enforcement monitoring for: <ul style="list-style-type: none"> <li>o Proper disposal of debris</li> <li>o Complete use of PPE</li> <li>o Presence on site of health and safety officer</li> <li>o Correct maintained records of all H&amp;S issues;</li> <li>o Correct maintained records regarding ESSMR;</li> <li>o Restoration of road/lane after sectional completion – at earliest</li> <li>o Camp site management;</li> <li>o Water sprinkling during dry period</li> </ul> | PIU, PMSC, Contractors               | Continuous  |
| Public consultation during construction   | PIU, PMSC, Contractors               | At least once in a month                                    |
| Sample monitoring and testing of the designated Environmental Parameters in full accordance with the contracted financing plan and testing requirements   | Contractors                          | Immediate action, notwithstanding possible closure of sites |
| Follow up action for completion of the verified monitoring for the ESSMR  | PIU, PMSC, Contractors               | Immediate   |
| Grievance Redressal Mechanism: To implement according to EMP  | PIU                                  | Immediate   |
| EMP implementation and monitoring Training  | PIU, PMSC, Contractors               | Immediate   |
| Gender awareness and sensitivity to be applied on site in selection of work force   | Contractor                           | Immediate   |

| Item No. | Description | Quantity | Unit | Rate | Total |
|----------|-------------|----------|------|------|-------|
| 1        | ...         | ...      | ...  | ...  | ...   |
| 2        | ...         | ...      | ...  | ...  | ...   |
| 3        | ...         | ...      | ...  | ...  | ...   |
| 4        | ...         | ...      | ...  | ...  | ...   |
| 5        | ...         | ...      | ...  | ...  | ...   |
| 6        | ...         | ...      | ...  | ...  | ...   |
| 7        | ...         | ...      | ...  | ...  | ...   |
| 8        | ...         | ...      | ...  | ...  | ...   |
| 9        | ...         | ...      | ...  | ...  | ...   |
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| 34       | ...         | ...      | ...  | ...  | ...   |
| 35       | ...         | ...      | ...  | ...  | ...   |
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| 73       | ...         | ...      | ...  | ...  | ...   |
| 74       | ...         | ...      | ...  | ...  | ...   |
| 75       | ...         | ...      | ...  | ...  | ...   |
| 76       | ...         | ...      | ...  | ...  | ...   |
| 77       | ...         | ...      | ...  | ...  | ...   |
| 78       | ...         | ...      | ...  | ...  | ...   |
| 79       | ...         | ...      | ...  | ...  | ...   |
| 80       | ...         | ...      | ...  | ...  | ...   |
| 81       | ...         | ...      | ...  | ...  | ...   |
| 82       | ...         | ...      | ...  | ...  | ...   |
| 83       | ...         | ...      | ...  | ...  | ...   |
| 84       | ...         | ...      | ...  | ...  | ...   |
| 85       | ...         | ...      | ...  | ...  | ...   |
| 86       | ...         | ...      | ...  | ...  | ...   |
| 87       | ...         | ...      | ...  | ...  | ...   |
| 88       | ...         | ...      | ...  | ...  | ...   |
| 89       | ...         | ...      | ...  | ...  | ...   |
| 90       | ...         | ...      | ...  | ...  | ...   |
| 91       | ...         | ...      | ...  | ...  | ...   |
| 92       | ...         | ...      | ...  | ...  | ...   |
| 93       | ...         | ...      | ...  | ...  | ...   |
| 94       | ...         | ...      | ...  | ...  | ...   |
| 95       | ...         | ...      | ...  | ...  | ...   |
| 96       | ...         | ...      | ...  | ...  | ...   |
| 97       | ...         | ...      | ...  | ...  | ...   |
| 98       | ...         | ...      | ...  | ...  | ...   |
| 99       | ...         | ...      | ...  | ...  | ...   |
| 100      | ...         | ...      | ...  | ...  | ...   |

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Table 1: Summary of Environmental Impacts

| Impact Category     | Phase        | Impact Description                                    | Significance    |
|---------------------|--------------|---|-----------------|
| Air Quality         | Construction | Dust generation from earthmoving activities           | Low to Moderate |
|                     | Operation    | Vehicle emissions from site access roads              | Low             |
| Water Quality       | Construction | Runoff of sediment and silt into nearby water bodies  | High            |
|                     | Operation    | Leakage of oil or other fluids from site              | High            |
| Soil Contamination  | Construction | Disturbance and erosion of topsoil                    | Low to Moderate |
|                     | Operation    | Accumulation of waste materials on site               | Low             |
| Noise and Vibration | Construction | Noise from heavy machinery and trucks                 | High            |
|                     | Operation    | Low-level noise from site activities                  | Low             |
| Ecology             | Construction | Removal of vegetation and habitat destruction         | High            |
|                     | Operation    | Alteration of natural drainage patterns               | Low to Moderate |
| Social and Cultural | Construction | Temporary displacement of workers and local residents | Low             |
|                     | Operation    | Visual intrusion from site infrastructure             | Low             |



**Annexure 1:  
List of Monitored Sub-projects**



**Annexure 1: List of Monitored Sub-projects: Pourashava-wise**

**Mathbaria Scope of Work (CTEIP Batch 1, Stage 1)**

| Subproject Component                                   | Scope of Work   |   |
|--|---|---|
| <b>Roads/ Bridges</b><br>CTEIP/MAT/RD/01               | 4 nos. Roads: 3,741m:<br>1. Land Office to Mollikbari via Sadar Road (Wards 2 & 4)<br>(Not in contract but deferred)<br>2. R&H Road to Bairatala Khal via Veterinary Hospital (Ward 5)<br>3. Masua Road to Tuskhali Khal via Women's College (Ward 2)<br>4. R&H Road to Govt. College via New Market (Ward 7)<br>5. Bairatala to Mistribari via Shafa Road end of Pourashava (Ward 5) |   |
|  | Masua Khal Bridge: 1, length 42m  | Pending Bid Document  |
| <b>Cyclone Shelter</b><br>CTEIP/MAT/CS/01              | 1 at Momenia Dakhil Madrassa (Ward 1)   |   |
| <b>Drainage:</b>                                       | 10.8 km drains: earthen channels; cement concrete block lined;  | Scope to be verified: part included in Road package                                     |
|  | Channels; reinforced cement concrete covered drains   |   |
|  | maintenance equipment   |   |
| <b>Water Supply</b>                                    | land acquisition, 10 acres (4.0 ha)   | Draft DED under design review by DPHE   |
|  | Re-sectioning of canal, canal intake  |   |
|  | 1 surface water treatment plant 7.2 MLD capacity  |   |
|  | embankment around plant 800m, commissioning of plant  |   |
|  | 1 overhead tank 680m <sup>3</sup> ; 1 ground reservoir 2,000m <sup>3</sup> ;  |   |
|  | 49 km transmission and distribution pipeline;   |   |
|  | 3,200 service connections   |   |
|  | 3,500 water meters  |   |
|  | 10 exploratory wells  |   |
|  | mini water testing equipment  |   |
| pick-up, 2 motorcycles, computer, 1 back-up generators |   |   |
| <b>Sanitation</b>                                      | ADB-funded  | Scope to be verified for integrated development approach in formulation of Pilot Scheme |
|  | 5 public toilets; 7 school latrines; 8 community latrines   |   |
|  | 1 de-sludging truck   |   |
|  | BMGF-funded: public sanitation facility;  |   |
|  | (toilet complex with wastewater treatment) in market area;  |   |
|  | Septage management system/  |   |
|  | Treatment plant across from sweepers' colony  |   |
| 1 truck-mounted de-sludging equipment                  |   |   |
| <b>Solid Waste Management</b>                          | 5 rickshaw vans; 10 push carts  |   |

Source: DDS Consultant Compilation



**Annexure 1: List of Monitored Sub-projects: Pourashava-wise**

**Galachipa Scope of Work (CTEIP Batch 1, Stage 1)**

| Subproject Component          | Scope of Work  |
|-------------------------------|--|
| <b>Roads/ Bridges</b>         | Under Package CTEIP/GAL/01, which is previously invited for bidding:<br>Roads: 5, Total length: 6.555 km <ul style="list-style-type: none"> <li>• College Road and Road Connecting Proposed CS in Degree College (Wards 8 and 9)</li> <li>• WAPDA Road (Damaged Portions) (Wards 1,2,3 and 4)</li> <li>• Banani Road (Ward 9)</li> <li>• Shantibagh Road (Ward 3)</li> <li>• Sadar Road (Wards 4 and 7)</li> </ul> |
|                               | Under this Package <b>CTEIP/GAL/02</b> :<br>Roads: 2, Total length: 1.195 km and Roadside Drains 2 Total length: 0.923 km: <ul style="list-style-type: none"> <li>• Feeder Road (Ward 7)</li> <li>• Samudabad Road (Wards 6 and 9)</li> </ul>  |
| <b>Cyclone Shelters</b>       | 3 Cyclone Shelters:<br>(i) Furfura Sharif Talimul Quran Madrassa (Ward 2);<br>(ii) Galachipa Degree College (Ward 9); and<br>(iii) Sharshina Khanka Hafezia Madrassa (Ward 3)  |
| <b>Solid Waste Management</b> | 5 rickshaw vans; 10 push carts   |
| <b>Drainage</b>               | 10.39 km drains: earthen channels; cement concrete block lined;  |
|                               | Channels; reinforced cement concrete covered drains  |
|                               | maintenance equipment  |
| <b>Water Supply</b>           | 1 overhead tank 500m <sup>3</sup> ;  |
|                               | 25 km transmission and distribution pipeline;  |
|                               | 2,500 service connections  |
|                               | 2,500 water meters   |
|                               | mini water testing equipment   |
|                               | 1 pick-up, 2 motorcycles, 1 computer, 2 back-up generators   |
| <b>Sanitation</b>             | ADB-funded   |
|                               | 5 public toilets; 3 school latrines; 8 community latrines  |
|                               | 1 Septage Management System; 1 Public Sanitary Facility  |
|                               | 1 Waste Water Management   |

**Annexure 1: List of Monitored Sub-projects: Pourashava-wise**

| <b>Pirojpur Pourashava: Scope of Work (CTEIP Batch 1, Stage 1)</b> |  |
|--|--|
| <b>Subproject Component</b>  | <b>Scope of Work</b>   |
| <b>Roads/ Bridges</b>  | Roads: 17; Total length: 31.85 km  |
|  | Bridges: 4; Total length: 38m  |
| <b>Cyclone Shelter</b>   | 3 shelters in Batch 1, stage 1: CTEIP Fast Track Programme: Tended in 2014 under CTEIP:<br>i) Adrashapara Secondary School (Ward 5);<br>ii) Khamkata Govt. Primary School (Ward 8); and<br>iii) Hularhat Dakhil Madrassa (Ward 3).<br><br>2 shelters in Batch 1, stage 1: CTEIP remaining implementation programme under CTEIP:<br>i) Programme: Moidho Nimajpur Government Primary School (Ward 6); and ii) Moidho Dumuritala Government Primary School (Ward 9). |
| <b>Solid Waste Management</b>                                      | 6 rickshaw vans  |
|  | 15 push carts  |
| <b>Drainage</b>  | 25.16 km drains:   |
|  | - earthen channels   |
|  | - cement concrete block lined channels   |
|  | - reinforced cement concrete covered drains  |
|  | - reinforced cement concrete open drains   |
|  | - maintenance equipment  |
| <b>Sanitation</b>  | ADB-funded   |
|  | 5 public toilets   |
|  | 3 school latrines  |
|  | 16 community latrines  |
|  | 1 desludging truck   |

**Pirojpur Scope of Work (CTEIP Batch 1, Stage 1)**



## **Annexure 2: Tables to the Report**

**Table 1.1** Civil Works Progress

**Table 4.1** Progress Status of Implementation of Contracts

**Table 5.1** Applicable Environmental Legislation

**Table 5.2** ADB Safeguard Policy Status



Annex II  
Table 10 to 15

Table 10: ...

Table 11: ...

Table 12: ...

Table 13: ...

TABLE 1.1: Progress Summary Statement

Date: 31-Jul-15

| No.   | Town      | Component                           | Contract Package | Package Investment | Package Awarded (No.) | Contract Amount (Cr. Tk.) | Physical Progress (%) | Remarks  |
|---|-----------|-------------------------------------|------------------|--------------------|-----------------------|---------------------------|-----------------------|--|
| 1   | Pirojpur  | Road                                | PIR/RD/01        |                    |                       | 21.04                     | 0%                    | ICB Bid Document approved by ADB. Presently under off-line bidding process   |
| 2   |           |                                     | PIR/RD/02        |                    | -                     | 11.50                     | 0%                    | Road -23.53 Km, Est. Cost -Tk 26.54 Cr. 1 Pack under ADB review. 1 Pack DED ongoing  |
| 3   |           | Cyclone Shelter                     | PIR/CS/01        |                    | 1                     | 12.23                     | 15%                   | Cyclone Shelter -5 Nos., Est. Cost -Tk 18.12 Cr. 1 Pack under ADB review.  |
| 4   |           |                                     | PIR/CS/02        |                    |                       | 6.87                      |                       | Under bidding process  |
| 5   |           | Drain                               | PIR/DR/01        |                    | -                     | 29.33                     | 0%                    | Drain -19.14 Km. DED under review  |
| 6   |           | Sanitation & Solid Waste Management | PIR/PIL/01       |                    | -                     | 12.00                     | 0%                    | Preliminary Design Stage   |
| <b>Sub-total: Awarded Contracts (Pirojpur Pourashava):</b>    |           |                                     |                  |                    | 1                     | 12.23                     | 1.96%                 | 13.15% of Contracts Awarded  |
| <b>Sub-total: Total Contracts (Pirojpur Pourashava):</b>      |           |                                     |                  |                    | 6                     | 92.97                     | 30.93%                | Percentage of Batch 1: Stage I Towns   |
| 7   | Mathbaria | Road                                | MAT/RD/01        |                    | 1                     | 7.99                      | 53%                   | Road -3.74 Km + 4 Box Culvert & Road Side Drain.   |
| 8   |           |                                     | MAT/RD/02        |                    |                       | 5.50                      | 0%                    | DED finalized and field verification of designs being finalized  |
| 9   |           | Bridge                              | MAT/BR/01        |                    | -                     | 2.52                      | 0%                    | Preliminary Design Stage   |
| 10  |           | Cyclone Shelter                     | MAT/CS/01        |                    | 1                     | 3.57                      | 28%                   | Cyclone Shelter -1 No.   |
| 11  |           | Water Supply                        | MAT/WS/01        |                    | -                     | 36.67                     | 0%                    | DED under review by DPHE. WTP-7.2 MLD, OHT -2 Nos, Pipeline - 53.8 Km & Gen-1 Set.   |
| 12  |           | Drain                               | MAT/DR/01        |                    | -                     | 14.04                     | 0%                    | Under review and feasibility assessment  |
| 13  |           | Sanitation & Solid Waste Management | MAT/PIL/01       |                    | -                     | 12.00                     | 0%                    | Preliminary Design Stage   |
| <b>Sub-total: Awarded Contracts: (Mathbaria Pourashava):</b>  |           |                                     |                  |                    | 2                     | 11.56                     | 6.42%                 | 14.05% of Contracts Awarded  |
| <b>Sub-total: Total Contracts (Mathbaria Pourashava):</b>     |           |                                     |                  |                    | 7                     | 82.29                     | 27.38%                | Percentage of Batch 1: Stage I Towns   |
| 14  | Galachipa | Road                                | GAL/RD/01        |                    | 1                     | 11.37                     | 49%                   | Road-7.75 km, Est. cost-Tk 13.30 Cr., including 17 No. box culvert. 1 Pack under PIU re-evaluation                                 |
| 15  |           |                                     | GAL/RD/02        |                    |                       | 2.81                      | 0%                    | Bid Documents finalized. Under bidding process   |
| 16  |           | Cyclone Shelter                     | GAL/CS/01        |                    | 1                     | 12.88                     | 23%                   | Cyclone Shelter -3 Nos.  |
| 17  |           | Water Supply                        | GAL/WS/01        |                    | -                     | 11.90                     | 0%                    | e-GP opening 2-Aug-15. Est. cost -11.2 Cr. OHT -1 No., Pipeline - 33.5 km, Service connections -3100 Nos., Pump House & Generator- |
| 18  |           | Drain                               | GAL/DR/01        |                    | -                     | 25.79                     | 0%                    | 11No. Drain Length-6.6 Km, Est. Cost-9.16 Cr. DED under review.  |
| 19  |           | Sanitation & Solid Waste Management | GAL/PIL/01       |                    | -                     | 12.00                     | 0%                    | Preliminary Design Stage   |
| <b>Sub-total: Awarded Contracts: (Galachipa Pourashava):</b>  |           |                                     |                  |                    | 2                     | 24.25                     | 11.12%                | 31.60% of Contracts Awarded  |
| <b>Sub-total: Total Contracts (Galachipa Pourashava):</b>     |           |                                     |                  |                    | 6                     | 76.75                     | 25.54%                | Percentage of Batch 1: Stage I Towns   |
| 20  | Amtali    | Road                                | AMT/RD/01        |                    | -                     | 3.75                      | 0%                    | Road -7.92 Km, Est. Cost -Tk 8.39 Cr. 1 Pack e-GP opened on 28-Jun-15 & 1 Pack Bid document approved by ADB                        |
| 21  |           |                                     | AMT/RD/02        |                    |                       | 3.00                      | 0%                    | Bid Documents finalized. Under bidding process   |
| 22  |           | Cyclone Shelter                     | AMT/CS/01        |                    | 1                     | 14.00                     | 0%                    | Cyclone Shelter -3 Nos.  |
| 23  |           | Water Supply                        | AMT/WS/01        |                    | -                     | 12.70                     | 0%                    | Bid Document approved by ADB. OHT-1 No., Pipeline - 33.5 km, Service connections - 2147 Nos., Pump House & Generator- 1 each.      |
| 24  |           | Drain                               | AMT/DR/01        |                    | 1                     | 3.11                      | 0%                    | NOA issued. Drain -1.5 Km + Box Culvert & CC Block lining.   |
| 25  |           | Sanitation & Solid Waste Management | AMT/PIL/01       |                    | -                     | 12.00                     | 0%                    | Preliminary Design Stage   |
| <b>Sub-total: Awarded Contracts: (Amtali Pourashava):</b>     |           |                                     |                  |                    | 2                     | 17.11                     | 0.00%                 | 35.23% of Contracts Awarded  |
| <b>Sub-total: Total Contracts (Amtali Pourashava):</b>        |           |                                     |                  |                    | 6                     | 48.56                     | 16.16%                | Percentage of Batch 1: Stage I Towns   |
| <b>Total Programme Progress of Contracts awarded to date:</b> |           |                                     |                  |                    | 7                     | 65.14                     | 5.20%                 | Progress of Total Batch 1 Stage I Programme  |
|   |           |                                     |                  |                    |                       |                           | 24.01%                | Progress of Awarded Contracts  |
| <b>Total Contracts: Batch 1: Stage I Programme</b>            |           |                                     |                  |                    | 25                    | 300.56                    |                       |  |
| Loan Agreement 8284 33%                                       |           |                                     |                  |                    |                       |                           | 1.72%                 | Progress According to the designated Loan Agreement Distribution   |
| Loan Agreement 3133 50%                                       |           |                                     |                  |                    |                       |                           | 2.60%                 |  |
| Loan Agreement 0394 11%                                       |           |                                     |                  |                    |                       |                           | 0.57%                 |  |

Note: Contract amount given for awarded contracts, otherwise estimated amount

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**Table 4.1: Progress Status of Implementation of Contracts to Date**

|  |   |
|--|---|
| <b>Package no.</b><br><b>CTEIP/MAT/RD/01</b> | Construction/Improvement of 4 nos. Roads, totalling 3.741 kms, in Mathbaria Pourashava, District: Pirojpur.   |
| Name of Contractor:                          | TON (JV)  |
| Contract Amount:                             | BDT 79.924 million  |
| Date of Award:                               | 16.01. 2015   |
| Time of completion:                          | 12 Months (16.01. 2016)   |
| Financial Progress:                          | 33%   |
| Physical Progress:                           | 43%   |
| Elapsed Time:                                | 48%   |
| Scope of Work:                               | <b>Rd (2):</b> R&H Road to Bairatola Khal via Veterinary Hospital Road including Drain (224.00m) & RCC Protection Wall (49.00m)<br><b>Rd (3):</b> Mathbaria Masua Road to Mathbaria Tushkhali Khal via Women's College including Drain (200.00m) & RCC Protection Wall (107.00m)<br><b>Rd (4):</b> R&H road to Govt. College via New Market including Drain (855.00m), Box Culvert (1x1.5x8.10 m) & RCC Protection Wall (29.00m)<br><b>Rd (5):</b> Bairatola to Mistribai via (Shafa Road) end of Pourashava including Box Culvert (1x3.5x3.5x9.1m - 1nos, 1x1.2x1.5x9.1m - 3nos, 1x1x1.5x8.1 m - 4nos) |
| Progress Status                              | Work impeded by monsoon rains.<br>Roads (2); (3); (4) and (5), totaling 3.41 km, are in various stages of progress with road (2) advanced by 83%. The physical progress according to an overall average of the package stands at 53%.<br>Environmental Monitoring poor<br>Health and Safety initiatives poor<br>Environmental Monitoring poor<br>Contractor / PIU staff / PAP's to be given training  |
| <b>Package no.</b><br><b>CTEIP/MAT/CS/01</b> | Construction of Multipurpose Cyclone Shelter at Momenia Dakhil Madrassa (Ward 1), Mathbaria Pourashava, District: Pirojpur  |
| Name of Contractor:                          | M-Khan-STLI (JV)  |
| Contract Amount:                             | BDT 35.687 million  |
| Date of Award:                               | 01.02.2015  |
| Time of completion:                          | 12 Months (01.02.2016)  |
| Financial Progress:                          | 16%   |
| Physical Progress:                           | 25%   |
| Elapsed Time:                                | 44%   |
| Present Status:                              | Work impeded by rains.<br>Pre-cast piles completed and pile driving works in progress.<br>The physical progress according to an overall average of the package stands at 28%.<br><b>Overall progress is very poor</b><br>Health and Safety initiatives poor<br>Environmental Monitoring poor<br>Contractor / PIU staff / PAP's to be given training   |





**Table 5.1: Applicable GoB Environmental Legislations**

| S.No | Legislation   | Requirement for the Project   | Relevance   |
|------|---|---|---|
| 1    | Environmental Conservation Act of 1995 and amendments in 2000, 2002 and 2010 <sup>1</sup> | <ul style="list-style-type: none"> <li>• Restriction on operation and process, which can be continued or cannot be initiated in the ecologically critical areas</li> <li>• Regulation on vehicles emitting smoke harmful to the environment</li> <li>• Remedial measures for injuries to ecosystems</li> <li>• Standards for quality of air, water, noise and soil for different areas and limits for discharging and emitting waste</li> <li>• Environmental guidelines</li> </ul> | <ul style="list-style-type: none"> <li>• The provisions of the Act apply to the entire subproject in the construction and operation and maintenance (O&amp;M) phases.</li> </ul>                                  |
| 2    | Environmental Conservation Rules of 1997 and amendments in 2002 and 2003                  | <ul style="list-style-type: none"> <li>• Environmental clearances</li> <li>• Compliance to environmental quality standards</li> </ul>   | <ul style="list-style-type: none"> <li>• The subproject is categorized as Orange-B and requires LCC and ECC. All requisite clearances from DoE shall be obtained prior to commencement of civil works.</li> </ul> |
| 3    | Forest Act of 1927 and amendments (2000)  | <ul style="list-style-type: none"> <li>• Clearance for any felling, extraction, and transport of forest produce</li> </ul>  | <ul style="list-style-type: none"> <li>• Refer Baseline and EMP</li> </ul>  |
| 4    | Bangladesh Climate Change Strategy and Action Plan of 2009                                | <ul style="list-style-type: none"> <li>• Ensure existing assets (e.g., coastal and river embankments) are well maintained and fit for purpose and that urgently needed infrastructures (roads and urban drainage) is put in place to deal with the likely impacts of climate change.</li> <li>• Enhance the capacity government ministries, civil society and private sector to meet the challenge of climate change</li> </ul>   | <ul style="list-style-type: none"> <li>• Considered in project design components</li> </ul>   |
| 5    | Bangladesh Labour Law of 2006   | <ul style="list-style-type: none"> <li>• Compliance to the provisions on employment standards, occupational safety and health, welfare and social protection, labour relations and social dialogue, and enforcement</li> <li>• Prohibition of employment of children and adolescent</li> </ul>  | <ul style="list-style-type: none"> <li>• The provisions of the act apply to the entire subproject in the construction and O&amp;M phases. Provides for safety of workforce during construction phase.</li> </ul>  |

Source: TA 8128 Coastal Towns Infrastructure Improvement Project Volume 6

<sup>1</sup> *ECA Amendment 2000* focuses on ascertaining responsibility for compensation in cases of damage to ecosystems, increased provision of punitive measures both for fines and imprisonment and the authority to take cognizance of offences. *ECA Amendment 2002* elaborates restrictions on polluting automobiles; restrictions on sale, production of environmentally harmful items like polythene bags; assistance from law enforcement agencies for environmental actions; break up of punitive measures; and authority to try environmental cases. In *ECA Amendment 2010*, no individual or institution (government or semi-government/non-government/ self governing can cut/raze any hill or hillock; fill-up or change the status of any water body even in case of national interest; without prior clearance from respective the departments.



**Table 5.2: ADB Safeguard Policy Status**

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





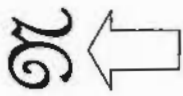
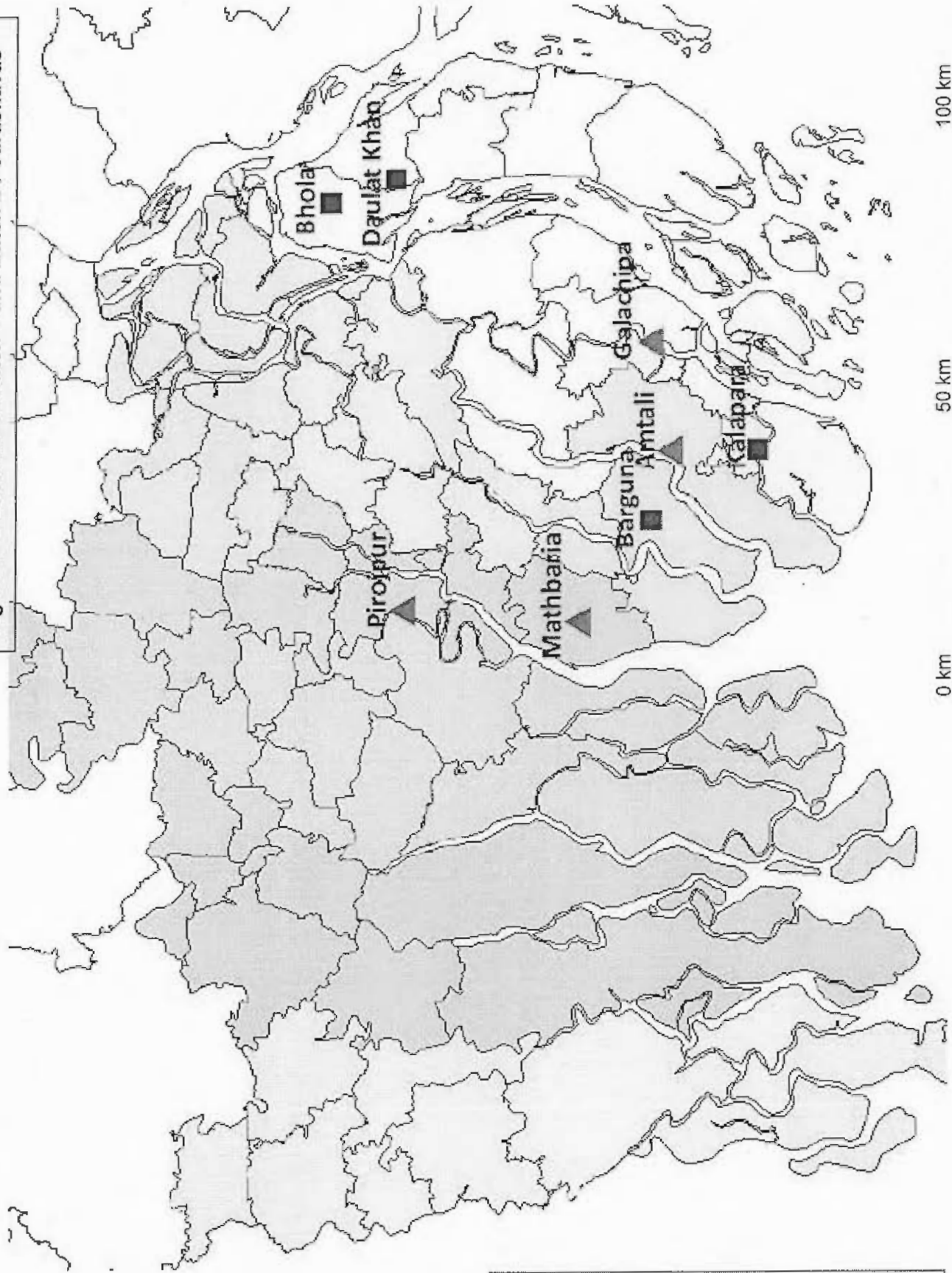
## **Annexure 3: Figures to the Report**

**Figure 1.1** Pourashava Location Map

**Figure 3.1** Project Organization Setup



Figure 1.1: Location of Batch 1 and Batch 2 Pourashavas



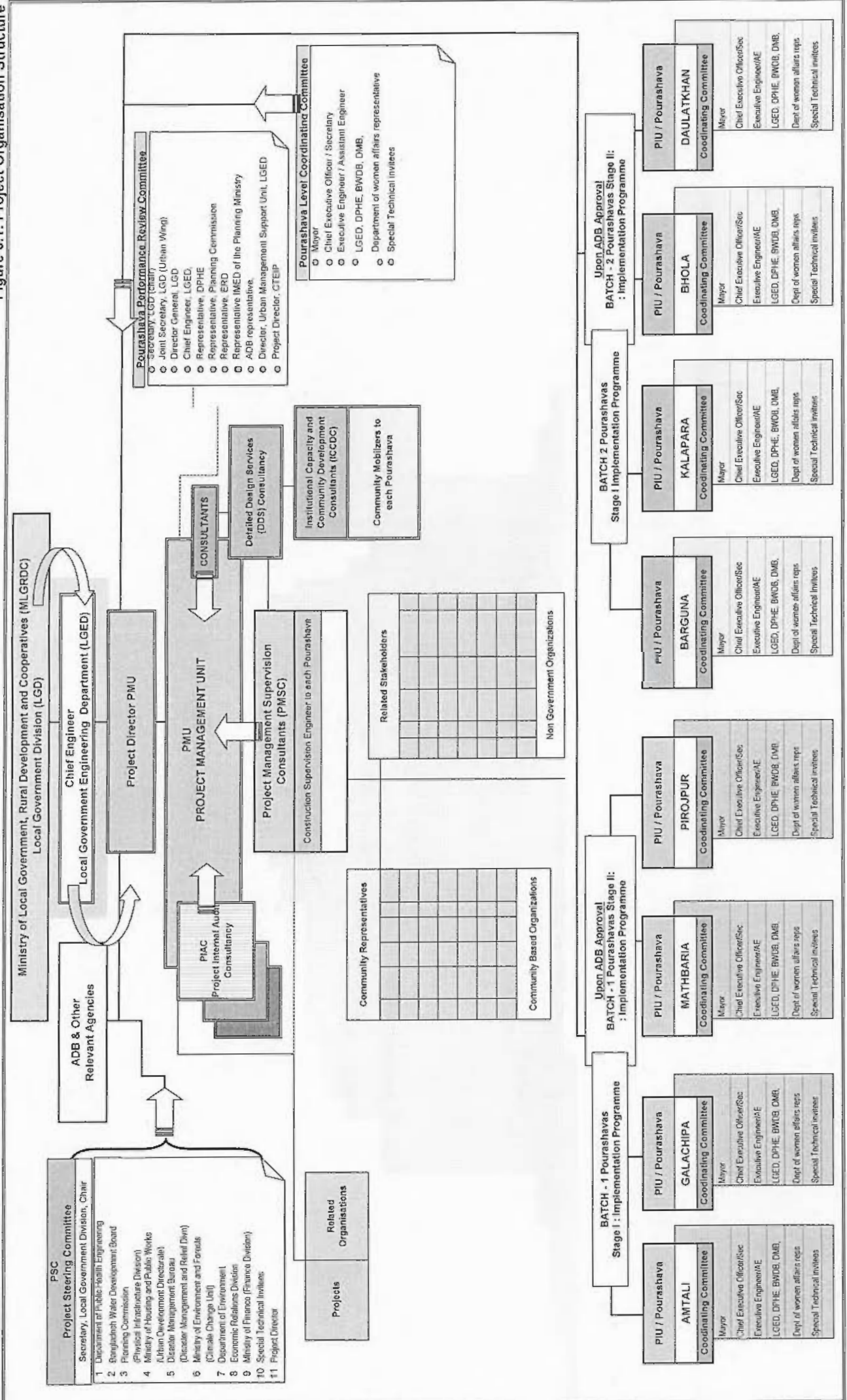
**Legend:**

- ▲ Batch I Town
- Batch II Town
- Bagerhat
- Barguna
- Barisal
- Bholia
- Gopalganj
- Jhalakati
- Khuina
- Patuakhali
- Pirojpur
- Satkhira
- Shariatpur





Figure 3.1: Project Organisation Structure





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**Annexure 4:  
Progress Status of  
Awarded Contract Packages**





**Local Government Engineering Department (LGED)**  
**Coastal Towns Environmental Infrastructure Project**  
**Monthly Progress Report - July 2015**

Pourashava : Pirojpur  
 District: Pirojpur

Reporting Date: 30-07-2015

| Sl. No. | Component | Package No.             | Contractor's Name | Name of Scheme   | Quantity (Km/m /Nos) | Estimated Amount (BDT) | Contract Amount (BDT) | Date of Commencement | Date of Completion | Physical Progress(%) | Total Amount Spent (BDT) | Financial Progress (%) | Remarks                               |
|---------|-----------|-------------------------|-------------------|--|----------------------|------------------------|-----------------------|----------------------|--------------------|----------------------|--------------------------|------------------------|---------------------------------------|
| 1       | Road      | 3                       | 4                 | 5  | 6                    | 7                      | 8                     | 9                    | 10                 | 11                   | 12                       | 13                     | 14                                    |
|         |           |                         |                   | <b>Construction / Improvement of 8 nos. road</b>   |                      |                        |                       |                      |                    |                      |                          |                        |                                       |
|         |           |                         |                   | (a) Masimpur main road from R&H road Sargicare (in front) towards Yasin Khal Pul towards west side Jubo Unnayan to bypass road(Road Length=2080 m),<br>Box Culvert -1x1x1.5x7.0m (03 Nos),<br>Box Culvert 1x1.5x2.0x7.0m (01 Nos),<br>Box Culvert 1x1.5x2.5x7.0m (05 Nos),<br>Box Culvert 1x2.0x3.0x6.20m,<br>Box Culvert 1x2.5x3.0x6.20m,<br>Protection Work- Retaining Wall (Length = 354.00 m),<br>Protection Work CC Block (Length = 128.20 m) | 2.08 Km              | 32,173,001             |                       |                      |                    |                      |                          |                        |                                       |
|         |           | CTEIP/PIR/2015-16/RD-01 |                   | (b) Balaka Club to Sargicare hospital via Modho Pirojpur Govt. primary School (Majid bari road) (Road Length = 1138.00 m)<br><br>Box Culvert 1x1x1x7.0m (02 Nos)<br>Protection Work CC Block (Length = 128.20 m)<br>Pipe Cross Drain (08 Nos)  | 1.138 Km             | 6,706,466              |                       |                      |                    |                      |                          |                        |                                       |
|         |           |                         |                   | (c) Sadhana Bridge to Shaik Bari Mosque via Basontopol (Road Length=575.00m).<br>Drain (Length =149.00m)<br>Pipe Cross Drain (06 Nos)  | 0.575 Km             | 8,086,039              |                       |                      |                    |                      |                          |                        | Bid Document is being reviewed by ADB |

| Sl. No. | Component | Package No. | Contractor's Name | Name of Scheme  | Quantity (Km/m /Nos) | Estimated Amount (BDT) | Contract Amount (BDT) | Date of Commencement | Date of Completion | Physical Progress(%) | Total Amount Spent (BDT) | Financial Progress (%) | Remarks                               |
|---------|-----------|-------------|-------------------|---|----------------------|------------------------|-----------------------|----------------------|--------------------|----------------------|--------------------------|------------------------|---------------------------------------|
| 1       | Road      | 3           | 4                 | 5   | 6                    | 7                      | 8                     | 9                    | 10                 | 11                   | 12                       | 13                     | 14                                    |
|         |           |             |                   | (d) Vijora Road, from R & H Road (Near Vijora Govt. Primary School ) to Mathkhola via Modho Namajpur Govt. P/School (Road Length=2620.00m),<br>Box Culvert 1x1.5x7.0m (02 Nos),<br>Box Culvert 1x1.5x2.0x7.0m (02 Nos),<br>Box Culvert 1x1.5x2.5x7.0m (03 Nos),<br>Box Culvert 1 x 2 x 2.5x6.2 m (02 Nos.),<br>R.C.C Protection Wall (Length=12.00m),<br>Slope Protection Work With C C Block (Length=160.40m). | 2.62 Km              | 34,242,101             |                       |                      |                    |                      |                          |                        |                                       |
|         |           |             |                   | (e) Construction/Improvement of Masimpur Varani Khal road from Baro Pul to Molia Bari Pul at east side (Road Length=1170.00m)<br>Box Culvert 1x1.0x1.5x7.0m (03 Nos),<br>Box Culvert 1x1.5x2.0x7.0m (02 Nos),<br>Box Culvert 1 x 2 x 2.5x6.2 m (02 Nos.),<br>Box Culvert 1 x 3 x 3.5x6.2 m (01 Nos.),<br>Protection Work- CC Block (Length = 255.20 m)  | 1.17 Km              | 19,680,472             |                       |                      |                    |                      |                          |                        | Bid Document is being reviewed by ADB |
|         |           |             |                   | (f) Muktaikati Road from Pirojpur-Nazirpur Road to Nima Bridge via Water Supply road (Road Length=2215.00m),<br>Box Culvert 1 x 1.0 x 1.0x7.0 (01 Nos.),<br>Box Culvert 1x1.0x1.5x7.0m (02 Nos),<br>Box Culvert 1x1.5x1.5x7.0m (01 Nos),<br>Pipe Cross Drain (04 Nos)   | 2.215 Km             | 16,529,523             |                       |                      |                    |                      |                          |                        |                                       |
|         |           |             |                   | (g) Narkhali Mollikbari to Mollabari & Kalam sk. House (Road Length=1735.00 m),   |                      |                        |                       |                      |                    |                      |                          |                        |                                       |

| Sl. No. | Component | Package No. | Contractor's Name | Name of Scheme  | Quantity (Km/m /Nos) | Estimated Amount (BDT) | Contract Amount (BDT) | Date of Commencement | Date of Completion | Physical Progress(%) | Total Amount Spent (BDT) | Financial Progress (%) | Remarks                               |
|---------|-----------|-------------|-------------------|---|----------------------|------------------------|-----------------------|----------------------|--------------------|----------------------|--------------------------|------------------------|---------------------------------------|
| 1       | Road      | 3           | 4                 | 5   | 6                    | 7                      | 8                     | 9                    | 10                 | 11                   | 12                       | 13                     | 14                                    |
|         |           |             |                   | Box Culvert 1x1.5x2.5x7.0m (01 Nos),<br>Box Culvert 1x2x2.5x6.2 m (01 nos),<br>Box Culvert 1x2.5x3.0x6.20.m (01 Nos)<br>Box Culvert 1x3.5x3.5x6.20.m (01 Nos)<br>Protection Work-CC Block (Length =135.8m),<br>Pipe Cross Drain (15 Nos)  | 1.735 Km             | 23,293,548             |                       |                      |                    |                      |                          |                        |                                       |
|         |           |             |                   | (h) Vijora Road, from R & H Road (Near Boropul) to Vijora Krishnachura via Skdar Bari (Road Length=2000.00m),<br>Box Culvert 1x1x1.5x7.0m (03 Nos),<br>Box Culvert 1x1.5x2.0x7.0m (01 Nos),<br>Box Culvert 1x2.0x2.0x7.00m (01 Nos),<br>Box Culvert: Skew 1 x 2 x 2 x 6.2m (01 Nos),<br>Pipe Cross Drain (10 Nos),<br>Protection Work-Retaining Wall (Length = 222.00 m),<br>Protection Work-CC Block (Length = 5.00 m) | 2.00 Km              | 19,539,339             |                       |                      |                    |                      |                          |                        | Bid Document is being reviewed by ADB |
|         |           |             |                   | 31.2 m Arch Bridge on Hularhat to Narkhali road over Damudar canal near Hularhat Dakhil Madrasa   |                      | 26,585,010             |                       |                      |                    |                      |                          |                        |                                       |
|         |           |             |                   | R.C.C Bridge Approach road in Hularhat to Narkhali road over Damudar canal near Hularhat Dakhil Madrasa and starting point of Road no-13.(Road) (Length=421.00m)  |                      | 11,900,350             |                       |                      |                    |                      |                          |                        |                                       |
|         |           |             |                   | 3-vent R.C.C Box Culvert over Vijora Khal at Ch. 0+395 km of Vijora road (Road no-06)   |                      | 3,359,684              |                       |                      |                    |                      |                          |                        |                                       |
|         |           |             |                   | 2-vent R.C.C Box Culvert at Ch. 1+438 km of Masimpur main road (Road no-01)   |                      | 3,095,617              |                       |                      |                    |                      |                          |                        |                                       |
|         |           |             |                   | Environmental Mitigation Enhancement Works of Pirojpur Pourashava (Road Part)   |                      | 1,703,980              |                       |                      |                    |                      |                          |                        |                                       |



| Sl. No. | Component | Package No.            | Contractor's Name | Name of Scheme   | Quantity (Km/m /Nos) | Estimated Amount (BDT) | Contract Amount (BDT) | Date of Commencement | Date of Completion | Physical Progress(%) | Total Amount Spent (BDT) | Financial Progress (%) | Remarks      |
|---------|-----------|------------------------|-------------------|--|----------------------|------------------------|-----------------------|----------------------|--------------------|----------------------|--------------------------|------------------------|--------------|
| 1       | 2         | 3                      | 4                 | 5  | 6                    | 7                      | 8                     | 9                    | 10                 | 11                   | 12                       | 13                     | 14           |
| 1       | Road      | CTEP/PIR/2015-16/RD-01 |                   | Environmental Mitigation Enhancement Works of Pirojpur Pourashava (Bridge & Culvert Part)  |                      | 438,900                |                       |                      |                    |                      |                          |                        |              |
|         |           |                        |                   | Sub-Total  | 13.53 Km             | 207,334,030            |                       |                      |                    | 0%                   |                          |                        |              |
|         |           |                        |                   | <b>Construction / Improvement of 8 nos. road (10.044 Km)</b>   |                      |                        |                       |                      |                    |                      |                          |                        |              |
|         |           |                        |                   | (a) South Sikarpur Muslimpara road (Road Length=815.00m), uPVC Pipe (250mm) Cross Drain (09 Nos), Slope Protection Work With CC Block (Length=128.20m), Road Protection Work-RCC (Length = 11.00 m), RCC Pipe Culvert-D600 x7.2m (04 Nos.)   | 0.815 Km             | 11,417,492             |                       |                      |                    |                      |                          |                        |              |
|         |           |                        |                   | (b) Apar circular Branch road, Moddo road from Shahid Bidhan road to bypass (Road Length=265.00m), RCC "U" Drain (Length=149 m) uPVC Pipe(250mm ) Cross Drain (06 Nos)   |                      |                        |                       |                      |                    |                      |                          |                        | DED on going |
|         | Road      | CTEP/PIR/2015-16/RD-02 |                   | (c) Ranipur Branch road form Ranipur BC road Pourashava last to Bekutia -RHD road via Sorav Hossain Master's house(Road Length=872.00m), Box Culvert 1x1x1.5x7.0m (02 Nos) Box Culvert 1x2.0x2.5x6.2m Box Culvert 1x2.5x3.0x6.2m Box Culvert 1x3.5x3.5x6.2m RCC Pipe Culvert-D600 x7.2m (01 Nos.) Protection Work-CC Block (Length = 20.20 m), | 0.265 Km             | 3,313,979              |                       |                      |                    |                      |                          |                        |              |
|         |           |                        |                   | (d) Brammonkati Road from Pirojpur-Nazirpur BC Road to Mozahar Mia's House via Misu Councilor's House, (Road Length = 625.00 m)  | 0.872 Km             | 7,489,870              |                       |                      |                    |                      |                          |                        |              |

Pourashava : Pirojpur  
District: Pirojpur

Reporting Date: 30-07-2015

| Sl. No. | Component | Package No.             | Contractor's Name | Name of Scheme   | Quantity (Km/m /Nos) | Estimated Amount (BDT) | Contract Amount (BDT) | Date of Commencement | Date of Completion | Physical Progress(%) | Total Amount Spent (BDT) | Financial Progress (%) | Remarks      |
|---------|-----------|-------------------------|-------------------|--|----------------------|------------------------|-----------------------|----------------------|--------------------|----------------------|--------------------------|------------------------|--------------|
| 1       | 2         | 3                       | 4                 | 5  | 6                    | 7                      | 8                     | 9                    | 10                 | 11                   | 12                       | 13                     | 14           |
|         | Road      | CTEIP/PIR/2015-16/RD-02 |                   | Box Culvert 1.0x1.5x7.0 m<br>Box Culvert 1.5x2.0x7.0 m<br>Box Culvert 2.0x2.0x7.0 m<br>Box Culvert 2.0x2.0x6.2 m<br>Pipe Cross Drain (05 Nos)<br>Slope Protection Work With C C Block (Length=65.00m)  | 0.625 Km             | 8,044,903              |                       |                      |                    |                      |                          |                        |              |
|         |           |                         |                   | (e) Jhatokati road Sahebpara road to Sunil Dakua's house (Left side canal (Road Length=1150.00m),<br>RCC Pipe Culvert-D600 x7.2m (02 Nos),<br>Box Culvert 1x1.5x7.0 m (04 Nos)<br>Box Culvert 1.5x2.0x7.0 m<br>Box Culvert 1x1.5x2.5x7.0m (01 Nos),<br>Box Culvert 2.0x2.5x6.2 m<br>Protection Work-CC Block (Length = 21.00 m)<br>Road Protection Work-RCC (Length = 20.00 m) | 1.150 Km             | 10,624,831             |                       |                      |                    |                      |                          |                        | DED on going |
|         |           |                         |                   | (f) Projpur -Nazirpur R&H road to police Line via Kanak Thakur's house (Road Length=1787.00m),<br>Box Culvert 1x1.0x1.5x7.0 m) 04 Nos<br>Box Culvert 1.5x2.0x7.0 m<br>Box Culvert 2.0x2.5x6.2 m<br>Box Culvert 3.0x3.5x6.2 m<br>Protection Work-CC Block (Length = 63.20 m)  | 1.787 Km             | 17,143,262             |                       |                      |                    |                      |                          |                        |              |
|         |           |                         |                   | (g) Narkhali road from Boro Khalisha Khali to Jaili Sk. House via Narkhali Gov't Primary School (Road Length=3,913 Km)<br>Box Culvert 1.0x1.0x7.0 m (5 Nos)  |                      |                        |                       |                      |                    |                      |                          |                        |              |

| Sl. No. | Component                    | Package No.                | Contractor's Name | Name of Scheme   | Quantity (Km/m /Nos) | Estimated Amount (BDT) | Contract Amount (BDT) | Date of Commencement | Date of Completion | Physical Progress (%)         | Total Amount Spent (BDT) | Financial Progress (%) | Remarks  |
|---------|------------------------------|----------------------------|-------------------|--|----------------------|------------------------|-----------------------|----------------------|--------------------|-------------------------------|--------------------------|------------------------|--|
| 1       | Road                         | 3                          | 4                 | 5  | 6                    | 7                      | 8                     | 9                    | 10                 | 11                            | 12                       | 13                     | 14   |
|         |                              |                            |                   | Road X-uPVC pipe   | 3.913 Km             |                        |                       |                      |                    |                               |                          |                        |  |
|         |                              | CTEIP/PIR/2015-16/RD-02    |                   | (h) Sikarpur branch CC road in front of Mosarraf Chairman's house and Adarshapara School /proposed Cyclone Shelter connecting road (Road Length=0.500 Km)<br>Box Culvert 1.0x1.0x7.0 m<br>Box Culvert 1.0x1.5x7.0 m<br>Box Culvert 1.5x1.5x7.0 m<br>Road X-uPVC pipe | 0.500 Km             |                        |                       |                      |                    |                               |                          |                        | DED on going   |
|         |                              |                            |                   | Environmental Mitigation Enhancement Works of Pirojpur Pourashava  |                      |                        |                       |                      |                    |                               |                          |                        |  |
|         |                              |                            |                   | Sub-Total  | 9.927 Km             | 58,034,336             |                       |                      |                    | 0                             |                          |                        |  |
|         |                              |                            |                   | Road Package Total   | 23.460 Km            | 265,368,366            |                       |                      |                    |                               |                          |                        |  |
| 2       | Multipurpose Cyclone Shelter | CTEIP/2014-15/PIR/CS-01    | MK-MF (JV)        | Construction of (3) Three no. Multipurpose Cyclone   |                      |                        | 122,255,000           | 02-01-2015           | 02-07-2016         | 21%<br>2%<br>27%<br>90%<br>5% | 17,525,498               | 14%                    |  |
|         |                              |                            |                   | (a) Adarshapara Secondary School   | 1 No.                | 32,103,907             |                       |                      |                    |                               |                          |                        |  |
|         |                              |                            |                   | (b) Khamkata Govt. Primary School and,   | 1 No.                | 43,233,029             |                       |                      |                    |                               |                          |                        |  |
|         |                              |                            |                   | (c) Hularhut Dakhil Madrasa  | 1 No.                | 30,005,203             |                       |                      |                    |                               |                          |                        |  |
|         |                              |                            |                   | General & Site Facilities  | -                    | 130,000                |                       |                      |                    |                               |                          |                        |  |
|         |                              |                            |                   | Environmental Mitigation Enhancement Works   | -                    | 944,379                |                       |                      |                    |                               |                          |                        |  |
|         |                              |                            |                   | Sub-Total  | 3 No.                | 106,416,518            | 122,255,000           |                      |                    | 15%                           | 17,525,498               | 14%                    | e-GP tender is being reviewed by ADB                   |
|         |                              | GP/CTEIP/2014-15/PIR/CS-02 |                   | Construction of (2) Two nos. Multipurpose Cyclone Shelters:  |                      |                        |                       |                      |                    |                               |                          |                        |  |
|         |                              |                            |                   | (a) Moidho Namajpur Government Primary School and,   | 1 No.                | 34,212,489             |                       |                      |                    |                               |                          |                        |  |
|         |                              |                            |                   | (b) Moidho Dumuriala Government Primary School.  | 1 No.                | 39,899,565             |                       |                      |                    |                               |                          |                        |  |
|         |                              |                            |                   | General & Site Facilities  | -                    | 120,000                |                       |                      |                    |                               |                          |                        | e-GP tender evaluation report is being reviewed by ADB |
|         |                              |                            |                   | Environmental Mitigation Enhancement Works   | -                    | 557,993                |                       |                      |                    |                               |                          |                        |  |



| Sl. No. | Component       | Package No.                 | Contractor's Name | Name of Scheme   | Quantity (Km/m /Nos) | Estimated Amount (BDT) | Contract Amount (BDT) | Date of Commencement | Date of Completion | Physical Progress(%) | Total Amount Spent (BDT) | Financial Progress (%) | Remarks |
|---------|-----------------|-----------------------------|-------------------|--|----------------------|------------------------|-----------------------|----------------------|--------------------|----------------------|--------------------------|------------------------|---------|
| 1       | 2               | 3                           | 4                 | 5  | 6                    | 7                      | 8                     | 9                    | 10                 | 11                   | 12                       | 13                     | 14      |
|         |                 | e-0                         |                   | Sub-Total  | 2 No.                | 74,790,047             |                       |                      |                    | 0%                   |                          |                        |         |
|         |                 |                             |                   | Cyclone Shelter Package Total  | 5 No.                | 181,206,565            | 122,255,000           |                      |                    | 15%                  | 17,525,498               | 14%                    |         |
| 3       | Drainage System | e-GP/CTEIP/2014-15/PR/DR-01 |                   | <b>Construction of Drains and culverts</b>   |                      |                        |                       |                      |                    |                      |                          |                        |         |
|         |                 |                             |                   | (a) Re-excavation of Damudar Khal from Borokhalishakhali Bridge to Boleswar river  | 4.90 Km              | 22,028,095             |                       |                      |                    |                      |                          |                        |         |
|         |                 |                             |                   | (b) Re-excavation of Pirojpur Parethat Varani Khal from Malaria Pool to Damudar Khal and Re-excavation of Parethat Varani Khal from Malaria Pool to Bara Pool                      | 2.00 Km              | 5,220,273              |                       |                      |                    |                      |                          |                        |         |
|         |                 |                             |                   | (c) Re-excavation and lining of Pirojpur Varani Khal from Marshid Bari Primary School to Malaria Pool  | 0.39 Km              | 3,740,616              |                       |                      |                    |                      |                          |                        |         |
|         |                 |                             |                   | (d) RCC U drain at Pal Para from Kabil House to Damudar Khal and Link-1 and Link-2   | 0.77 Km              | 13,006,976             |                       |                      |                    |                      |                          |                        |         |
|         |                 |                             |                   | (e) Re-excavation of Chan Mari Khal from Sarder Bari Field to Boleswar River   | 1.57 Km              | 5,634,401              |                       |                      |                    |                      |                          |                        |         |
|         |                 |                             |                   | (f) Gazi Bari Khal RCC drain from SK Jaill Mia House to Damudar Khal   | 1.00 Km              | 23,361,086             |                       |                      |                    |                      |                          |                        |         |
|         |                 |                             |                   | (g) RCC drain from Haque Mia's house to Damudar Khal   | 0.22 Km              | 2,321,124              |                       |                      |                    |                      |                          |                        |         |
|         |                 |                             |                   | (h) RCC Drain from North side of Bypass Road to Parethat Road Varani Khal near Bypass Traffic Moor and Re-excavation of Khal from South Side of Bypass Road to Maaddo Mushid House | 0.88 Km              | 3,531,397              |                       |                      |                    |                      |                          |                        |         |
|         |                 |                             |                   | (i) Adorsha Para RCC drain from East side of Sullian Mia's house to Boleswar River   | 0.45 Km              | 5,643,336              |                       |                      |                    |                      |                          |                        |         |
|         |                 |                             |                   | (j) Murshid Bari Khal RCC drain from Alam's House to Mushid Bari Primary School and Link-1   | 0.49 Km              | 4,999,636              |                       |                      |                    |                      |                          |                        |         |



| Sl. No.                              | Component                | Package No.  | Contractor's Name | Name of Scheme  | Quantity (Km/m/Nos) | Estimated Amount (BDT) | Contract Amount (BDT) | Date of Commencement | Date of Completion | Physical Progress (%) | Total Amount Spent (BDT) | Financial Progress (%) | Remarks                  |  |  |  |
|--------------------------------------|--------------------------|--|-------------------|---|---------------------|------------------------|-----------------------|----------------------|--------------------|-----------------------|--------------------------|------------------------|--------------------------|--|--|--|
| 1                                    | 2                        | 3  | 4                 | 5   | 6                   | 7                      | 8                     | 9                    | 10                 | 11                    | 12                       | 13                     | 14                       |  |  |  |
| 3                                    | Drainage System          | e-GP/CTEIP/2014-15/PRDR-01   |                   | (k) Re-excavation of Sikarpur khal from Pirojpur- Nazirpur Road Culvert (Shikder Bari) to Water Supply Compound and from Pirojpur- Nazirpur Road Culvert (Shikder Bari) to Damodar Khal | 0.89 Km             | 1,087,046              |                       |                      |                    |                       |                          |                        |                          |  |  |  |
|                                      |                          |  |                   | (l) Re-excavation of Sikarpur khal from Sheikh Bari to Shikder Bari Culvert Ch  | 0.94 Km             | 480,119                |                       |                      |                    |                       |                          |                        |                          |  |  |  |
|                                      |                          |  |                   | (m) RCC drain from Haque Driver House to Shikder Bari Culvert   | 0.34 Km             | 4,007,538              |                       |                      |                    |                       |                          |                        |                          |  |  |  |
|                                      |                          |  |                   | (n) Re-excavation of Fire Service Khal from Stadium compound to Damodar Khal  | 0.48 Km             | 4,453,664              |                       |                      |                    |                       |                          |                        |                          |  |  |  |
|                                      |                          |  |                   | (o) Re-excavation of Primary Teachers Training Institute Khal from Police Line to Damodar Khal  | 2.43 Km             | 2,579,811              |                       |                      |                    |                       |                          |                        |                          |  |  |  |
|                                      |                          |  |                   | (p) Re-excavation of Dhup Pasha Khal from Krishna Nagar Field to Damodar Khal.  | 1.40 Km             | 4,671,854              |                       |                      |                    |                       |                          |                        |                          |  |  |  |
|                                      |                          |  |                   | (q) Environmental Mitigation Enhancement Works of Pirojpur Pourashava   |                     | 1,252,660              |                       |                      |                    |                       |                          |                        |                          |  |  |  |
| <b>Drainage System Package Total</b> |                          |  |                   |   | 19.14 Km            | 108,019,632            |                       |                      |                    | 0%                    |                          |                        |                          |  |  |  |
| 4                                    | Sanitation & Solid Waste | <b>Improvement of Sanitation &amp; Solid Waste Management System</b> |                   |   |                     |                        |                       |                      |                    |                       |                          |                        |                          |  |  |  |
|                                      |                          | <b>Sanitation &amp; Solid Waste Management Package Total</b>         |                   |   |                     |                        |                       |                      |                    |                       |                          |                        |                          |  |  |  |
| <b>Total For Pirojpur</b>            |                          |  |                   |   |                     | 554,594,563            | 122,255,000           |                      |                    | 15%                   | 17,525,498               | 14%                    | Preliminary Design Stage |  |  |  |

**Local Government Engineering Department (LGED)  
Coastal Towns Environmental Infrastructure Project (CTEIP)  
Monthly Progress Report - July 2015**

Pourashava: Mathbaria

District: Pirojpur

Reporting 30-07-2015

| Sl. No.                                   | Component | Package No.     | Contractor's Name | Name of Scheme   | Quantity (Km/m /Nos)   | Estimated Amount (BDT) | Contract Amount (BDT) | Date of Commencement | Date of Completion | Physical Progress (%) | Total Amount Spent (BDT) | Financial Progress (%) | Remarks                  |  |
|---|-----------|-----------------|-------------------|--|--|------------------------|-----------------------|----------------------|--------------------|-----------------------|--------------------------|------------------------|--------------------------|--|
| 1   | Road      | 3               | 4                 | 5  | 6  | 7                      | 8                     | 9                    | 10                 | 11                    | 12                       | 13                     | 14                       |  |
| <b>Construction / Improvement of road</b> |           |                 |                   |  |  |                        |                       |                      |                    |                       |                          |                        |                          |  |
| 1   | Road      | CTEIP/MAT/RD/01 | TON (JV)          | (a)  | R&H Road to Bairatola Khal via Veterinary Hospital Road including Drain (224.00m) & RCC Protection Wall (49.00m)                                     | 0.541 Km               | 9,393,149             | 79,924,490           | 16-01-2015         | 16-01-2016            | 83%                      | 25,986,447             | 33%                      |  |
|   |           |                 |                   | (b)  | Mathbaria Masua Road to Mathbaria Tushkhali Khal via Women's College including Drain (200.00m) & RCC Protection Wall (107.00m)                       | 0.375 Km               | 9,697,094             |                      |                    |                       | 62%                      |                        |                          |  |
|   |           |                 |                   | (c)  | R&H road to Govt. College via New Market including Drain (855.00m), Box Culvert (1x1.5x8.10 m) & RCC Protection Wall (29.00m)                        | 0.860 Km               | 25,545,280            |                      |                    |                       | 28%                      |                        |                          |  |
|   |           |                 |                   | (d)  | Bairatola to Mistrilal via (Shafa Road) end of Pourashava including Box Culvert (1x3.5x3.5x9.1m - 1nos, 1x1.2x1.5x8.1m - 3nos, 1x1x1.5x8.1 m - 4nos) | 1.965 Km               | 27,173,870            |                      |                    |                       | 65%                      |                        |                          |  |
|   |           |                 |                   | Environmental Mitigation Enhancement Works of Mathbaria Pourashava | -  | 924,920                |                       |                      |                    | 20%                   |                          |                        |                          |  |
|   |           |                 |                   | <b>Sub-Total</b>   | <b>3.741 Km</b>  | <b>72,734,313</b>      | <b>79,924,490</b>     |                      |                    | <b>53%</b>            |                          | <b>33%</b>             |                          |  |
| 1   | Road      |                 |                   | <b>Construction / Improvement of road</b>                          |  |                        |                       |                      |                    |                       |                          |                        |                          |  |
|   |           |                 |                   | <b>Sub-Total</b>   |  |                        |                       |                      |                    |                       |                          |                        |                          |  |
|   |           |                 |                   | <b>Road Package Total</b>  | <b>Km</b>  | <b>72,734,313</b>      | <b>79,924,490</b>     |                      |                    | <b>53%</b>            | <b>25,986,447</b>        | <b>33%</b>             |                          |  |
| 2   | Bridge    |                 |                   | <b>Construction of Bridge</b>                                      |  |                        |                       |                      |                    |                       |                          |                        | Preliminary Design Stage |  |
|   |           |                 |                   | <b>Bridge Package Total</b>  |  |                        |                       |                      |                    |                       |                          |                        |                          |  |

| Sr. No.                                    | Component                | Package No.     | Contractor's Name | Name of Scheme  | Quantity (Km/m /Nos) | Estimated Amount (BDT) | Contract Amount (BDT) | Date of Commencement | Date of Completion | Physical Progress (%) | Total Amount Spent (BDT) | Financial Progress (%) | Remarks                    |
|--|--------------------------|-----------------|-------------------|---|----------------------|------------------------|-----------------------|----------------------|--------------------|-----------------------|--------------------------|------------------------|----------------------------|
| 1  |                          | 5               |                   |   | 6                    |                        |                       | 9                    | 10                 | 11                    | 12                       | 13                     | 14                         |
| 3  | Cyclone Shelter          | CTEIP/MAT/CS/01 | M-Khan-STLI (JV)  | <b>Construction of Multipurpose Cyclone Shelter</b>                                   |                      |                        |                       |                      |                    |                       |                          |                        |                            |
|  |                          |                 |                   | Momenia Dakhill Madrassa  | 1 No.                | 30,630,294             | 35,687,448            | 01-02-2015           | 01-02-2016         | 28%                   | 5,692,745                | 16%                    |                            |
|  |                          |                 |                   | General & Site Facilities   | -                    | 110,000                |                       |                      |                    | 90%                   |                          |                        |                            |
| Environmental Mitigation Enhancement Works | -                        | 314,793         | 20%               |   |                      |                        |                       |                      |                    |                       |                          |                        |                            |
|  |                          |                 |                   | <b>Cyclone Shelter Package Total</b>  | 1 No.                | 31,055,087             | 35,687,448            |                      |                    | 28%                   | 5,692,745                | 16%                    |                            |
| 4  | Water Supply             |                 |                   | <b>WTP (7.2 MLD) ; 2OHT; 52.8 km Pipeline; 3,500 SC+WM; 1 Gen Set, Test Equipment</b> | 1 No.                |                        |                       |                      |                    |                       |                          |                        | DED being reviewed by DPHE |
|  |                          |                 |                   | <b>Water Supply Package Total</b>   | 1 No.                |                        |                       |                      |                    |                       |                          |                        |                            |
| 5  | Drain                    |                 |                   | <b>Construction / Improvement of Drains</b>   |                      |                        |                       |                      |                    |                       |                          |                        |                            |
|  |                          |                 |                   | <b>Drain Package Total</b>  |                      |                        |                       |                      |                    |                       |                          |                        |                            |
| 6  | Sanitation & Solid Waste |                 |                   | <b>Improvement of Sanitation &amp; Solid Waste Management System</b>                  |                      |                        |                       |                      |                    |                       |                          |                        |                            |
|  |                          |                 |                   |   |                      |                        |                       |                      |                    |                       |                          |                        |                            |
|  |                          |                 |                   | <b>Sanitation &amp; Solid Waste Management Package Total</b>                          |                      |                        |                       |                      |                    |                       |                          |                        |                            |
|  |                          |                 |                   | <b>Total for Mathbaria</b>  |                      | <b>103,789,400</b>     | <b>115,611,938</b>    |                      |                    | <b>46%</b>            | <b>31,679,192</b>        | <b>27%</b>             |                            |



**Local Government Engineering Department (LGED)**  
**Coastal Towns Environmental Infrastructure Project (CTEIP)**  
**Monthly Progress Report - July 2015**

Pourashava: Galachipa  
 District: Patuakhali

Reporting Date: 30-07-2015

| Sl. No.   | Component | Package No.                    | Contractor's Name     | Name of Scheme  | Quantity (Km / M / No.) | Estimated Amount (BDT) | Contract Amount (BDT) | Date of Commencement | Date of Completion | Physical Progress(%) | Total Amount Spent (BDT) | Financial Progress (%) | Remarks                   |
|---|-----------|--------------------------------|-----------------------|---|-------------------------|------------------------|-----------------------|----------------------|--------------------|----------------------|--------------------------|------------------------|---------------------------|
| 1   |           | 3                              | 4                     | 5   | 6                       | 7                      | 8                     | 9                    | 10                 | 11                   | 12                       | 13                     | 14                        |
| <b>Construction / Improvement of Road:</b>      |           |                                |                       |   |                         |                        |                       |                      |                    |                      |                          |                        |                           |
| 1   | Road      | CTEIP/GAL/RD-01                | M/S. S M Construction | (a) College Road & Connecting Road of Proposed CS in Degree College including Drain (283.00m), Box Culvert (1x1.5x9.10m - 1nos, 2x2.5x9.10m - 1nos) & Protection Wall (85.00m). | 2.165 Km                | 31,801,536             | 113,737,782           | 26-01-2015           | 26-01-2016         | 50%                  | 38,236,964               | 34%                    |                           |
|   |           |                                |                       | (b) Wapda Road (Damaged Parts) including RCC Protection Wall (132.00m).   | 1.575 Km                | 21,641,175             |                       |                      |                    | 50%                  |                          |                        |                           |
|   |           |                                |                       | (c) Banani Road with Connecting Khalifa Road including Box Culvert (1x1.5x7.10m - 7nos, 2x2.5x7.10m - 1nos).  | 1.355 Km                | 19,186,752             |                       |                      |                    | 40%                  |                          |                        |                           |
|   |           |                                |                       | (d) Santibag Road including Box Culvert (1x1.5x8.10m - 3nos) & Slope Protection Work (30.00m).  | 0.610 Km                | 8,555,717              |                       |                      |                    | 50%                  |                          |                        |                           |
|   |           |                                |                       | (e) Sadar Road including Drain (758.00m) & Box Culvert (1.2x1.6x9.10m - 1nos).  | 0.85 Km                 | 20,977,012             |                       |                      |                    | 55%                  |                          |                        |                           |
|   |           |                                |                       | Environmental Mitigation Enhancement Works of Galachipa Pourashava  | -                       | 1,350,000              |                       |                      |                    | 20%                  |                          |                        |                           |
| <b>Sub-Total</b>                                |           |                                |                       |   | <b>6.56 Km</b>          | <b>103,512,192</b>     | <b>113,737,782</b>    |                      |                    | <b>49%</b>           | <b>38,236,964</b>        | <b>34%</b>             |                           |
| <b>Construction / Improvement of 2 nos.Road</b> |           |                                |                       |   |                         |                        |                       |                      |                    |                      |                          |                        |                           |
| 1   | Road      | e-GP/CTEIP/2014-15/GC/AL/RD-02 |                       | (a) Feeder road (Length= 695 m)   | 0.695 Km                |                        |                       |                      |                    |                      |                          |                        | Being Re-evaluated by PIU |
|   |           |                                |                       | Drain   | 455 M                   |                        |                       |                      |                    |                      |                          |                        |                           |
|   |           |                                |                       | RCC Box Culvert (1000x1500 )  | 1 No.                   |                        |                       |                      |                    |                      |                          |                        |                           |
|   |           |                                |                       | RCC Box Culvert (2000x2500 )  | 1 No.                   |                        |                       |                      |                    |                      |                          |                        |                           |
|   |           |                                |                       | RCC Protection Wall   | 30 M                    |                        |                       |                      |                    |                      |                          |                        |                           |
|   |           |                                |                       | Samudabad road (Length= 500 m)  | 0.695 Km                | 15,868,658             |                       |                      |                    |                      |                          |                        |                           |
| Drain   | 0.5 Km    |                                |                       |   |                         |                        |                       |                      |                    |                      |                          |                        |                           |
|   |           |                                |                       | 468 M   |                         |                        |                       |                      |                    |                      |                          |                        |                           |



| Sl. No. | Component                    | Package No.                  | Contractor's Name | Name of Scheme  | Quantity (Km / M / No.) | Estimated Amount (BDT) | Contract Amount (BDT) | Date of Commencement | Date of Completion | Physical Progress (%) | Total Amount Spent (BDT) | Financial Progress (%) | Remarks                                |
|---------|------------------------------|------------------------------|-------------------|---|-------------------------|------------------------|-----------------------|----------------------|--------------------|-----------------------|--------------------------|------------------------|--|
| 1       |                              | 3                            | 4                 | 5   | 6                       | 7                      | 8                     | 9                    | 10                 | 11                    | 12                       | 13                     | 14                                     |
|         |                              |                              |                   | RCC Box Culvert   | 1 No.                   |                        |                       |                      |                    |                       |                          |                        |  |
|         |                              |                              |                   | Environmental Mitigation Enhancement works                            | 0.5 Km                  | 13,196,130             |                       |                      |                    |                       |                          |                        | Being Re-evaluated by PIU              |
|         |                              |                              |                   | Sub-Total   | 1.20 Km                 | 29,524,188             |                       |                      |                    | 0                     |                          |                        |  |
|         |                              |                              |                   | Road Package Total  | 7.75 Km                 | 133,036,380            | 113,737,782           |                      |                    | 49%                   | 382,369,664              | 34%                    |  |
|         |                              |                              |                   | <b>Construction of 3 nos. Multipurpose Cyclone Shelter:</b>           |                         |                        |                       |                      |                    |                       |                          |                        |  |
| 2       | Multipurpose Cyclone Shelter | CTEIP/GAL/CS-01              | MK-MF (JV)        | (a) Fufura Sharif Talimul Quran Madrasha,                             | 1 No.                   | 39,636,047             | 128,769,648           | 11-01-2015           | 11-07-2016         | 10%                   | 23,473,779               | 18%                    |  |
|         |                              |                              |                   | (b) Galachipa Degree College Compound and,                            | 1 No.                   | 37,315,752             |                       |                      |                    | 30%                   |                          |                        |  |
|         |                              |                              |                   | (c) Sarshina Khanka Hafezia Madrasha.                                 | 1 No.                   | 39,142,721             |                       |                      |                    | 30%                   |                          |                        |  |
|         |                              |                              |                   | General & Site Facilities   | -                       | 130,000                |                       |                      |                    | 90%                   |                          |                        |  |
|         |                              |                              |                   | Environmental Mitigation Enhancement Works                            | -                       | 944,379                |                       |                      |                    | 20%                   |                          |                        |  |
|         |                              |                              |                   | Cyclone Shelter Package Total   | 3 No.                   | 117,168,899            | 128,769,648           |                      |                    | 23%                   | 23,473,779               | 18%                    |  |
| 3       | Water Supply                 | e-GP/CTEIP/2014-15/GAL/WS-01 |                   | <b>Construction / Improvement of Water Supply System</b>              |                         |                        |                       |                      |                    |                       |                          |                        |  |
|         |                              |                              |                   | (a) Test TWs  | 2 No.                   | 302,441                |                       |                      |                    |                       |                          |                        |  |
|         |                              |                              |                   | Production TWs  | 2 No.                   | 4,868,548              |                       |                      |                    |                       |                          |                        |  |
|         |                              |                              |                   | (b) OHT   | 1 No.                   | 22,963,143             |                       |                      |                    |                       |                          |                        |  |
|         |                              |                              |                   | (c) Pipeline (new)  | 30.1 Km                 | 42,403,837             |                       |                      |                    |                       |                          |                        |  |
|         |                              |                              |                   | Pipeline (Replaced)   | 3.4 Km                  | 3,711,806              |                       |                      |                    |                       |                          |                        |  |
|         |                              |                              |                   | Service Connections (New)   | 2500 No.                | 22,713,519             |                       |                      |                    |                       |                          |                        |  |
|         |                              |                              |                   | Service Connections (Replaced)  | 600 No.                 | 3,429,660              |                       |                      |                    |                       |                          |                        |  |
|         |                              |                              |                   | Pump Houses & Bundry Wall   | 2 No.                   | 2,846,116              |                       |                      |                    |                       |                          |                        |  |
|         |                              |                              |                   | Supply of O & M tools   | 1 Set                   | 47,102                 |                       |                      |                    |                       |                          |                        |  |
|         |                              |                              |                   | Supply, fitting, fixing and commissioning of Electro-mechanical works | 2 No.                   | 8,315,360              |                       |                      |                    |                       |                          |                        | e-GP Published. Bid open on 2-Aug-2015 |
|         |                              |                              |                   | Environmental Mitigation Enhancement Works                            | 1 Set                   | 528,149                |                       |                      |                    |                       |                          |                        |  |

| S. No.                            | Component | Package No.     | Contractor's Name                                    | Name of Scheme   | Quantity (Km / M / No.) | Estimated Amount (BDT) | Contract Amount (BDT) | Date of Commencement | Date of Completion | Physical Progress(%) | Total Amount Spent (BDT) | Financial Progress (%) | Remarks |  |  |  |
|-----------------------------------|-----------|-----------------|--|--|-------------------------|------------------------|-----------------------|----------------------|--------------------|----------------------|--------------------------|------------------------|---------|--|--|--|
| 1                                 | 2         | 3               | 4  | 5  | 6                       | 7                      | 8                     | 9                    | 10                 | 11                   | 12                       | 13                     | 14      |  |  |  |
| <b>Water Supply Package Total</b> |           |                 |  |  |                         | 112,129,680            |                       |                      |                    | 0%                   |                          |                        |         |  |  |  |
| 4                                 | Drainage  | CTEIP/GAL/DR/01 | <b>Construction / Improvement of Drainage system</b> |  |                         |                        |                       |                      |                    |                      |                          |                        |         |  |  |  |
|                                   |           |                 | (a)  | Re-excavation of Golachipa Khal from Thana Moor to Sluice Gate (Ch.0+000m to 1+200m) and Re-excavation of Golachipa Khal from Textile School to Sluice Gate (Ch. 0+000 to 1+230). Total length:2430m | 2.43 Km                 | 5,316,287              |                       |                      |                    |                      |                          |                        |         |  |  |  |
|                                   |           |                 | (b)  | RCC U drain from Sub-Register Office to Kabikha Road (Ch.0+000 to 0+600 m). Length: 600 m  | 0.6 Km                  | 10,148,173             |                       |                      |                    |                      |                          |                        |         |  |  |  |
|                                   |           |                 | (c)  | RCC open U Drain from Cinema Hall Moor to Asad Monjil Lane (Ch. 0+175 to 0+000 and 0+000 to 0+585). Length: 760m   | 0.76 Km                 | 22,338,374             |                       |                      |                    |                      |                          |                        |         |  |  |  |
|                                   |           |                 | (d)  | RCC Drain from Dr. Alim House to Jashim House canal (Ch. 0+250 to 0+000 and 0+000 to 0+100 m)Length:350m   | 0.35 Km                 | 4,122,760              |                       |                      |                    |                      |                          |                        |         |  |  |  |
|                                   |           |                 | (e)  | RCC Trapezoidal drain from Delwar Matbor House to Golachipa khal via Chumnu Mollah's House (Ch. 0+000 to 0+203 m) Length: 203 m  | 0.203 Km                | 3,727,630              |                       |                      |                    |                      |                          |                        |         |  |  |  |
|                                   |           |                 | (f)  | RCC open U Drain from Thana complex to Puran Piada Bari (Ch. 0+000 to 1+030). Length: 1030m.   | 1.03 Km                 | 21,034,750             |                       |                      |                    |                      |                          |                        |         |  |  |  |
|                                   |           |                 | (g)  | RCC open U Drain from MuktiJoddha Parishad Moor to WAPDA main drain (Ch. 0+000 to 0+240) Length: 240m.   | 0.24 Km                 | 5,419,729              |                       |                      |                    |                      |                          |                        |         |  |  |  |
|                                   |           |                 | (h)  | RCC open Drain from Mustafa Enterprise Moor to WAPDA Main Drain (Ch.0+000 to 0+255) (Length:255m)  | 0.255 Km                | 5,594,521              |                       |                      |                    |                      |                          |                        |         |  |  |  |
|                                   |           |                 | (i)  | RCC open U Drain from Samir Pal House to Sohrab Mia canal (Ch.0+100 to 0+359) Length: 259m   | 0.259 Km                | 5,112,089              |                       |                      |                    |                      |                          |                        |         |  |  |  |
|                                   |           |                 | (j)  | RCC open U Drain from Veterinarian Hospital to Golachipa Khal. (Ch.0+000 to 0+200) Length: 200m  | 0.2 Km                  | 4,045,582              |                       |                      |                    |                      |                          |                        |         |  |  |  |
|                                   |           |                 | (k)  | Construction of Drain on Banani Road With Connecting Khalifa Road under Ward No: 09. Length: 180m  | 0.18 Km                 | 3,411,344              |                       |                      |                    |                      |                          |                        |         |  |  |  |
|                                   |           |                 |  | Environmental Mitigation Enhancement Works   |                         |                        |                       |                      | 1,328,620          |                      |                          |                        |         |  |  |  |

DED on going

| Sr. No.  | Component                | Package No. | Contractor's Name | Name of Scheme  | Quantity (Km / M / No.) | Estimated Amount (BDT) | Contract Amount (BDT) | Date of Commencement | Date of Completion | Physical Progress(%) | Total Amount Spent (BDT) | Financial Progress (%) | Remarks                  |
|--|--------------------------|-------------|-------------------|---|-------------------------|------------------------|-----------------------|----------------------|--------------------|----------------------|--------------------------|------------------------|--------------------------|
| 1  |                          | 3           | 4                 | 5   | 6                       | 7                      | 8                     | 9                    | 10                 | 11                   | 12                       | 13                     | 14                       |
| <b>Drainage Package Total</b>                                |                          |             |                   |   |                         | 91,599,859             |                       |                      |                    | 0%                   |                          |                        |                          |
| 6  | Sanitation & Solid Waste |             |                   | Improvement of Sanitation & Solid Waste Management System |                         |                        |                       |                      |                    |                      |                          |                        | Preliminary Design Stage |
| <b>Sanitation &amp; Solid Waste Management Package Total</b> |                          |             |                   |   |                         | 453,934,817            | 242,507,430           |                      |                    | 35%                  | 61,710,743               | 25%                    |                          |
| <b>Total for Galachipa</b>                                   |                          |             |                   |   |                         |                        |                       |                      |                    |                      |                          |                        |                          |

**Annexure 5:  
EMP BoQ of Sub-projects:  
Sample Testing and Monitoring Status**





Annexure 5: Road Contract Package: EMP Bill of Quantities

| BoQ Ref.:                              | Impact Description  | Unit | Quantity | Frequency   | Site | Rate   | Total (Tk.)    | Monitored / Results | National Standard | Remarks |
|--|---|------|----------|---|------|--------|----------------|---------------------|-------------------|---------|
| <b>Environmental Sample Monitoring</b> |   |      |          |   |      |        |                |                     |                   |         |
| 67                                     | Overall environmental management in addition to compliance to the clauses PCC 2.3(i) and Appendix-A (IEE) to the entire satisfaction of E-I-C<br>c) Environmental monitoring<br>i) <b>Air quality</b> (SPM, RPM and CO during construction at each road once in 6 months. | Each | 16       | Sample: 2x4x2<br>Environmental monitoring<br>i) Air quality (SPM, RPM and CO during construction at each road once in 6 months. |      | 12,000 | 192,000        |                     |                   |         |
| 68                                     | Overall environmental management in addition to compliance to the clauses PCC 2.3 (i) and Appendix-A (IEE) to the entire satisfaction of E-I-C<br>c) Environmental monitoring<br>ii) <b>Water quality monitoring during construction.</b>                                 | Each | 16       | Sample: 2x4x2<br>Environmental monitoring<br>ii) Water quality monitoring during construction.                                  |      | 6,000  | 96,000         |                     |                   |         |
| 69                                     | Overall environmental management in addition to compliance to the clauses PCC 2.3 (i) and Appendix-A (IEE) to the entire satisfaction of E-I-C<br>c) Environmental monitoring<br>iii) <b>Noise Levels</b>   | Each | 16       | Sample: 2x4x2<br>Environmental monitoring<br>iii) Noise Levels  |      | 2,000  | 32,000         |                     |                   |         |
| 70                                     | Overall environmental management in addition to compliance to the clauses PCC 2.3 (i) and Appendix-A (IEE) to the satisfaction of E-I-C<br>c) Environmental monitoring<br>iv) <b>Soil Sampling</b> (organics matter, Nitrogen, Phosphate, Oil and Grease)                 | Each | 8        | Sample: 2x4x1<br>Environmental mo iv)<br>Soil Sampling(organics matter, Nitrogen, Phosphate, Oil and Grease)                    |      | 4,000  | 32,000         |                     |                   |         |
|  | <b>Sub Total(C)</b>   |      |          |   |      |        | <b>352,000</b> |                     |                   |         |
|  | <b>Total(A+B+C)</b>   |      |          |   |      |        | <b>924,920</b> |                     |                   |         |

Annexure 5: Road Contract Package: EMP Bill of Quantities

| BoQ Ref.:                  | Impact Description  | Unit | Quantity | Frequency                     | Site | Rate    | Total (Tk.)    | Monitored / Results | National Standard | Remarks |
|----------------------------|---|------|----------|-------------------------------|------|---------|----------------|---------------------|-------------------|---------|
| <b>Mitigation Measures</b> |   |      |          |                               |      |         |                |                     |                   |         |
| 65                         | Overall Environmental management in addition to compliance to the clauses PCC 2.3(i) and Appendix-A(IEE) to the entire satisfaction of E-I-C<br><br>A: On Temporary Camp Site : Establish water supply and Waste water treatment and disposal facilities including prevention of spillage, leakage of water pollution Toilet, Septic Tank, Soak pit, Solid waste collection, Treatment and Disposal as per standard) to the entire satisfaction of E-I-C. | Each | 1.00     | Establish along with Campsite |      | 124,000 | 124,000        |                     | NA                |         |
| 66                         | B: Overall environmental management in addition to compliance to the clauses PCC 2.3 (i) and to Appendix-A(IEE) to the entire satisfaction of E-I-C<br>Dust suppression measure to the entire satisfaction of the Engineer  | m    | 3,741    | As and when Required          |      | 120     | 448,920        |                     | NA                |         |
|                            | <b>Sub Total(A+B) =</b>   |      |          |                               |      |         | <b>572,920</b> |                     |                   |         |

Table 6.2 Cyclone Shelter: EMP Monitoring

Table 6.1 Road Packages: EMP Monitoring

## Annexure 6: EMP Monitoring





Table 6.1: Environmental Management Plan: Cyclone Shelter Monitoring Report

| Ref. No.                      | Field: Impacts   | Reference | Mitigation Measures   | Implementing Agency/ Responsibility                | Monitoring Frequency: Monitoring Indicators   | Cost (Tk)  | Status of EMP |                  | EMP Score | Remarks / Additional Corrective Measures Required |
|-------------------------------|--|-----------|---|--|---|--|---------------|------------------|-----------|---|
|                               |  |           |   |  |   |  | (Yes / No)    | Progress Grading |           |   |
| During Pre-Construction Phase |  |           |   |  |   |  |               |                  |           |   |
| 1.1                           | Landscaping: Advise effects on aesthetics  | 1         | Development of the designs for the shelter must be compatible with the surrounding environment.   | Consultant/  | During Design Stage: Incorporated design considerations   | Consultancy Cost and EMP   | Y             | 3                |           |   |
| 1.2                           | Consents: NCC's: Failure to obtain necessary consents, permits, NCC's can result in design revisions and/or stoppage of the Works  | 2         | Obtain all necessary consents, clearances, permits, NCC's prior to start of the Works.  | PMU/PIU, DDS Designer, PMSC                        | During Design Stage: Incorporated design considerations   | No costs required as mitigated measures put in place during Design phase | Y             | 3                |           | Not Applicable                                    |
|                               |  | 3         | Acknowledge in writing and provide report on compliance all obtained on consents, clearances, permits, NCC's.   |  |   |  |               |                  |           |   |
|                               |  | 4         | Include in detailed design drawings and documents all conditions and provisions if necessary.   |  |   |  |               |                  |           | Not Applicable                                    |
| 1.3                           | Existing utilities: Disruption of services   | 5         | Identify and include locations and operators of messes utilities in detailed design   | PMU/PIU, DDS Designer, PMSC                        | During Design Stage: List of affected utilities and operators in Bid Document.  | No costs required as mitigated measures put in place during Design phase | Y             | 3                |           | Not Applicable                                    |
|                               |  | Z         | Require construction contractors to prepare contingency plan to include actions to be done in case of unintentional interruption of services.   |  |   |  |               |                  |           |   |
|                               |  |           | Require construction contractors to prepare spoils management plan:   |  |   |  |               |                  |           |   |
|                               |  |           | i) Spoils Information: Materials Type; Potential Contamination; Expected Volume and Sources; Spoil  |  |   |  |               |                  |           |   |
|                               |  |           | ii) Spoils Management: Transportation of Spoil; Storage of Spoil; Contamination of Spoil; Approved Reuse and/or Disposal Sites  |  |   |  |               |                  |           |   |
|                               |  |           | iii) Records of Reuse and/or Disposal   |  |   |  |               |                  |           |   |
| 1.4                           | Construction work camps: Hot mix plants, stockpile areas, storage disposal areas; Disruption to traffic flow and sensitive receptors   | 8         | Determine locations prior to award of construction contracts;   | PMU/PIU, DDS Designer, PMSC                        | During Design Stage: List of selected sites.  | No costs required as mitigated measures put in place during Design phase | Y             | 3                |           |   |
|                               |  |           |   |  |   |  |               |                  |           |   |
|                               |  |           |   |  |   |  |               |                  |           |   |
| 1.5                           | Sources of Materials: Extraction of material can disrupt natural land contours and vegetation resulting in accelerated erosion, disturbance in natural drainage, patterns, ponding and water logging and water pollution | 9         | Prepare list of approved quarry sites and sources of materials.   | PMU/PIU, DDS Designer, PMSC                        | During Design Stage: List of approved quarries and sources of materials.  | No costs required as mitigated measures put in place during Design phase |               |                  |           | Not Applicable                                    |
|                               |  |           |   |  |   |  |               |                  |           |   |
|                               |  |           |   |  |   |  |               |                  |           |   |
| 1.6                           | EMP Implementation Training: Negative irreversible impact to the environment, workers and community  | 10        | Project manager and all key workers will be required to undergo EMP implementation including spoils management, Standard operating procedures (SOP) for construction works; health and safety (H&S), core labour laws, and applicable environmental laws. | Contractor with assistance of PIU, IC/CDC and PMSC | During Design Stage and during mobilization of workers to site: Sateguard compliance protocols in place; Prove of training completion at sites; Posting of EMP at work sites. | Costs: PMU/PIU Contractor  | N             | 1                |           | Training required                                 |
| 2                             | During Construction Phase  |           |   |  |   |  |               |                  |           |   |
| 2.1                           | Physical Characteristics   |           |   |  |   |  |               |                  |           |   |
| 2.1.1                         | Topography, landforms geology and soils:   | 11        | Utilize readily available sources of materials. If contractor procures materials from existing borrow pits and quarries, ensure these conform to all relevant regulatory requirements.  | Executive agency/ consultant/                      | Monthly by PIU.   | Mitigation measures: Contract Cost                                       | Y             | 4                |           |   |









Table 6.1: Environmental Management Plan: Cyclone Shelter Monitoring Report

| Ref. No. | Field  | Reference | Mitigation Measures   | Implementing Agency/ Responsibility | Monitoring Frequency:  | Cost (TK)                             | Status of EMP |                  | EMP Score | Remarks / Additional Corrective Measures Required                         |       |   |    |  |            |  |                                       |   |  |   |                |    |  |    |  |            |  |                                       |   |  |   |  |
|----------|--|-----------|---|-------------------------------------|--|---------------------------------------|---------------|------------------|-----------|---|-------|---|----|--|------------|--|---------------------------------------|---|--|---|----------------|----|--|----|--|------------|--|---------------------------------------|---|--|---|--|
|          |  |           |   |                                     |  |                                       | Yes / No      | Progress Grading |           |   |       |   |    |  |            |  |                                       |   |  |   |                |    |  |    |  |            |  |                                       |   |  |   |  |
| 2.3      | Socioeconomic Characteristics  | 47        | Status of EMP = <b>Poor (0); Below Satisfactory (1); Partially Satisfactory (2); Satisfactory (3 - 4); Excellent (5)</b><br>Special attention shall be given for protecting giant trees and locally-important trees (with religious importance) during implementation.<br>Prevent workers or any other person from removing and damaging any flora (plant/vegetation) and fauna (animal) including fishing in any water-body in the site.<br>Prohibit employees from poaching wildlife and cutting of trees for firewood. | Contractor                          | Monitoring Indicators<br>PIU and PIU to report in writing the number of trees cut and planted.<br>If tree cutting required, to be determined during Design stage.<br>Numbers of complaints from sensitive receptors on disturbance of vegetation, poaching, fishing etc. |                                       | Y             | N                |           | Yet to Start (YTS);<br>Not Applicable<br>Not Applicable<br>Not Applicable |       |   |    |  |            |  |                                       |   |  |   |                |    |  |    |  |            |  |                                       |   |  |   |  |
|          |  |           |   |                                     |  |                                       |               |                  |           |   | 2.3.1 | Existing provisions for pedestrians and other forms of transport:                                     | 51 | Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites.   | Contractor | Monthly Inspection by PIU and PMSC during design stage and agreed during construction stage;<br>OR | Mitigation measures:<br>Contract Cost | Y |  | 4 |                |    |  |    |  |            |  |                                       |   |  |   |  |
|          |  |           |   |                                     |  |                                       |               |                  |           |   |       |   |    |  |            |  |                                       |   |  |   |                | 52 | Road closure is not anticipated. Hauling of construction materials and operation of equipment on-site may cause traffic problems. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures. | 52 | Maintain safe passage for vehicles and pedestrians throughout the construction period. | Contractor | Monthly Inspection by PIU and PMSC during design stage and agreed during construction stage;<br>OR | Mitigation measures:<br>Contract Cost | Y |  | 3 |  |
|          |  |           |   |                                     |  |                                       |               |                  |           |   |       |   |    |  |            |  |                                       |   |  |   |                |    |  |    |  |            |  |                                       |   |  |   |  |
| 54       | Erect and maintain barricades, including signs, markings, flags and flagmen informing diversions and alternative routes when required.   | 54        | Notify affected sensitive receptors by providing sign boards informing nature and duration of construction activities and contact numbers for concerns/complaints.  | Contractor                          | Monthly Inspection by PIU and PMSC during design stage and agreed during construction stage;<br>OR   | Mitigation measures:<br>Contract Cost | Y             |                  | 3         | Not Applicable  |       |   |    |  |            |  |                                       |   |  |   |                |    |  |    |  |            |  |                                       |   |  |   |  |
|          |  |           |   |                                     |  |                                       |               |                  |           |   | 55    | Leave spaces for access between mounds of soil.   | 55 | Provide walkways and metal sheets where required to maintain access across for people and vehicles.  | Contractor | Monthly Inspection by PIU and PMSC during design stage and agreed during construction stage;<br>OR | Mitigation measures:<br>Contract Cost | Y |  | 3 | Not Applicable |    |  |    |  |            |  |                                       |   |  |   |  |
| 56       | Consult businesses and institutions regarding operating hours and factoring this in work schedules. Ensure there is provision of alternate access to businesses and institutions during construction activities, so that there is no closure of these shops or any loss of clientele.  | 56        | Increase workforce in front of critical areas such as institutions, place of worship, business establishment, hospitals, and schools.   | Contractor                          | Monthly Inspection by PIU and PMSC during design stage and agreed during construction stage;<br>OR   | Mitigation measures:<br>Contract Cost | Y             |                  | 2         | Not Applicable  |       |   |    |  |            |  |                                       |   |  |   |                |    |  |    |  |            |  |                                       |   |  |   |  |
|          |  |           |   |                                     |  |                                       |               |                  |           |   | 57    | Ensure any damage to properties and utilities will be restored or compensated to pre-work conditions. | 57 | Coordinate with local authorities and prepare prior approved Traffic Management Plan (TMP), refer to TMP guidelines given in Annexure 1.   | Contractor | Monthly Inspection by PIU and PMSC during design stage and agreed during construction stage;<br>OR | Mitigation measures:<br>Contract Cost | Y |  | 3 | Not Applicable |    |  |    |  |            |  |                                       |   |  |   |  |
| 58       | Employ at least 50% of labour force from communities in the vicinity of the site. This will have the added benefit of avoiding social problems that sometimes occur when workers are imported into host communities, and avoiding environmental and social problems from workers housed in poorly serviced camp accommodation. | 58        | Secure construction materials from local market.  | Contractor                          | Monthly Inspection by PIU and PMSC during design stage and agreed during construction stage;<br>OR   | Mitigation measures:<br>Contract Cost | Y             |                  | 2         | Not Applicable  |       |   |    |  |            |  |                                       |   |  |   |                |    |  |    |  |            |  |                                       |   |  |   |  |
|          |  |           |   |                                     |  |                                       |               |                  |           |   | 59    | Secure construction materials from local market.  | 59 | Enforcement: Gender protocol according to the Gender Action Plan.  | Contractor | Monthly Inspection by PIU and PMSC during design stage and agreed during construction stage;<br>OR | Mitigation measures:<br>Contract Cost | Y |  | 1 | GAP to start   |    |  |    |  |            |  |                                       |   |  |   |  |
| 60       | Enforcement: Gender protocol according to the Gender Action Plan.  | 60        |   | Contractor                          | Monthly Inspection by PIU and PMSC during design stage and agreed during construction stage;<br>OR   | Mitigation measures:<br>Contract Cost | Y             |                  | 3         |   |       |   |    |  |            |  |                                       |   |  |   |                |    |  |    |  |            |  |                                       |   |  |   |  |
|          |  |           |   |                                     |  |                                       |               |                  |           |   | 61    |   | 61 |  | Contractor | Monthly Inspection by PIU and PMSC during design stage and agreed during construction stage;<br>OR | Mitigation measures:<br>Contract Cost | Y |  | 3 |                |    |  |    |  |            |  |                                       |   |  |   |  |
| 62       |  | 62        |   | Contractor                          | Monthly Inspection by PIU and PMSC during design stage and agreed during construction stage;<br>OR   | Mitigation measures:<br>Contract Cost | Y             |                  | 3         |   |       |   |    |  |            |  |                                       |   |  |   |                |    |  |    |  |            |  |                                       |   |  |   |  |
|          |  |           |   |                                     |  |                                       |               |                  |           |   | 63    |   | 63 |  | Contractor | Monthly Inspection by PIU and PMSC during design stage and agreed during construction stage;<br>OR | Mitigation measures:<br>Contract Cost | Y |  | 3 |                |    |  |    |  |            |  |                                       |   |  |   |  |
| 64       |  | 64        |   | Contractor                          | Monthly Inspection by PIU and PMSC during design stage and agreed during construction stage;<br>OR   | Mitigation measures:<br>Contract Cost | Y             |                  | 3         |   |       |   |    |  |            |  |                                       |   |  |   |                |    |  |    |  |            |  |                                       |   |  |   |  |
|          |  |           |   |                                     |  |                                       |               |                  |           |   | 2.3.2 | Socio-economic status:  | 62 | Subproject components will be located in government land and existing school compounds thus there is no requirement for land acquisition or any resettlements. Manpower will be required during the 24-months construction stage. This can result to generation of contractual employment and increase in local revenue. | Contractor | Monthly Inspection by PIU and PMSC during design stage and agreed during construction stage;<br>OR | Mitigation measures:<br>Contract Cost | Y |  | 2 | Not Applicable |    |  |    |  |            |  |                                       |   |  |   |  |
| 63       |  | 63        |   | Contractor                          | Monthly Inspection by PIU and PMSC during design stage and agreed during construction stage;<br>OR   | Mitigation measures:<br>Contract Cost | Y             |                  | 3         |   |       |   |    |  |            |  |                                       |   |  |   |                |    |  |    |  |            |  |                                       |   |  |   |  |
|          |  |           |   |                                     |  |                                       |               |                  |           |   | 64    |   | 64 |  | Contractor | Monthly Inspection by PIU and PMSC during design stage and agreed during construction stage;<br>OR | Mitigation measures:<br>Contract Cost | Y |  | 3 |                |    |  |    |  |            |  |                                       |   |  |   |  |











| Ref. No.                       | Field: Impacts  | Reference  | Mitigation Measures  | Implementing Agency/ Responsibility | Monitoring Frequency: Monitoring Indicators   | Cost (TK)             | Status of EMP (Yes / No) |   | Progress Grading | EMP Score | Remarks / Additional Corrective Measures Required |
|--------------------------------|---|------------|--|-------------------------------------|---|-----------------------|--------------------------|---|------------------|-----------|---|
|                                |   |            |  |                                     |   |                       | Y                        | N |                  |           |   |
| 5.2.1                          | Workers health and safety:<br>Workers need to be mindful of the occupational hazards. Potential impacts are negative and long-term but reversible by mitigation measures. | 110<br>111 | Status of EMP = Poor (0); Below Satisfactory (1); Partially Satisfactory (2); Satisfactory (3 - 4); Excellent (5)<br>110 - Comply with requirements of Government of Bangladesh Labour Law of 2006 and all applicable laws and standards on workers H&S.<br>111 - Ensure that all site personnel have a basic level of H&S training. |                                     | During repair works   | Included in O&M Costs | Y                        | N |                  | YTS       | Yet to Start (YTS):                               |
|                                |   | 112        | Mark and provide sign boards. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate.   |                                     | <ul style="list-style-type: none"> <li>No complaints from sensitive receptors</li> <li>No complaints from workers related to O&amp;M activities;</li> <li>Zero accidents</li> </ul> |                       |                          |   | 162              |           |   |
| Overall EMP Compliance Rating: |   |            |  |                                     |   |                       |                          |   |                  |           |   |
| Key Non-Compliance Record:     |   |            |  |                                     |   |                       |                          |   |                  |           |   |
| Remarks:                       |   |            |  |                                     |   |                       |                          |   |                  |           |   |
| Notes: YTS/Mat Applicable      |   |            |  |                                     |   |                       |                          |   | 42               |           |   |
| Numerator Value                |   |            |  |                                     |   |                       |                          |   | 70               |           |   |
| Overall Score                  |   |            |  |                                     |   |                       |                          |   |                  | 2.3       | Partial Satisfactory                              |
| Non Compliance Recorded        |   |            |  |                                     |   |                       |                          |   |                  | 19        |   |

| Ref. No. | Impacts   | Reference | Mitigation Measures   | Implementing Agency/ Responsibility              | Monitoring Frequency:  |  | Cost (TK) | Status of EMP |                  | EMP Score | Remarks / Additional Corrective Measures Required |                   |
|----------|---|-----------|---|--|--|--|-----------|---------------|------------------|-----------|---|-------------------|
|          |   |           |   |  | Monitoring Indicators  |  |           | (Yes / No)    | Progress Grading |           |   |                   |
| 1        | During Pre-Construction Phase   |           | Status of EMP = [Poor (0); Below Satisfactory (1); Partially Satisfactory (2); Satisfactory (3 - 4); Excellent  |  |  |  |           |               |                  |           |   |                   |
| 1.1      | Landscaping<br>Adverse effects on aesthetics  |           | 1 • Development of the designs for the shelter must be compatible with the surrounding environment.   | Executive agency/consultant/                     | During Design Stage<br>Incorporated design considerations  | Cost and EMP   | Y         |               | 3                |           |   |                   |
| 1.2      | Consents; NOC's<br>Failure to obtain necessary consents, permits, NOC's can result in design revisions and/or stoppage of the Works   |           | 2 • Obtain all necessary consents, clearances, permits, NOC's prior to commencement of work.<br>3 • Acknowledge in writing and provide report on compliance all obtained on consents, clearances, permits, NOC's;<br>4 • Include in detailed design drawings and documents all conditions and provisions if necessary.  | PMU/PIU, DOS Designer, PMSC                      | During Design Stage<br>Incorporated design considerations  | No costs required as mitigated measures put in place during Design phase | Y         |               | 3                |           |   | Not Applicable    |
| 1.3      | Existing utilities:<br>Disruption of services   |           | 5 • Identify and include locations and operators of fesses utilities in detailed design documents to prevent unnecessary disruption of services during construction activities.<br>6 • Require construction contractors to prepare contingency plan to include actions to be done in case of unintentional interruption of services.<br>Z • Require construction contractors to prepare spoils management plan:<br>i) Spoils Information:<br>Materials Type: Potential Contamination; Expected Volume and Sources; Spoil Classification<br>ii) Spoils Management:<br>Transportation of Spoil; Storage of Spoil; Contamination of Spoil; Approved Reuse and/or Disposal Sites<br>iii) Records of Reuse and/or Disposal | PMU/PIU, DOS Designer, PMSC                      | During Design Stage:<br>• List of affected utilities and operators in Bid Document;<br>• Required contingency plans for service interruption;<br>• Follow Spoils Management Plan.                        | No costs required as mitigated measures put in place during Design phase | Y         |               | 3                |           |   | Not Applicable    |
| 1.4      | Construction work camps:<br>Hot mix plants, stockpile areas, storage disposal areas; Disruption to traffic flow and sensitive receptors   |           | 8 • Determine locations prior to award of construction contracts;   | PMU/PIU, DOS Designer, PMSC                      | During Design Stage:<br>• List of selected sites;<br>• Identified sources of materials;<br>• Written consent by landowners for disposal to agricultural land.  | No costs required as mitigated measures put in place during Design phase | Y         |               | 3                |           |   |                   |
| 1.5      | Sources of Materials:<br>Extraction of material can disrupt natural land contours and vegetation resulting in accelerated erosion, disturbance in natural drainage, patterns, ponding and water logging and water pollution |           | 9 • Prepare list of approved quarry sites and sources of materials.   | PMU/PIU, DOS Designer, PMSC                      | During Design Stage:<br>• List of approved quarries and sources of materials;<br>• Bid document to include appropriate clauses;<br>• Bid document to include clause for verification of suitable sources | No costs required as mitigated measures put in place during Design phase | Y         |               | 3                |           |   |                   |
| 1.6      | EMP Implementation Training: Negative irreversible impact to the environment, workers and community   |           | 10 • Project manager and all key workers will be required to undergo EMP implementation including spoils management, Standard operating procedures (SOP) for construction works, health and safety (H&S), core labour laws, and applicable environmental laws.  | Contractor with assistance of PIU, CCDC and PMSC | During Design Stage and during mobilization of workers to site:<br>• Safeguard compliance protocols in place;<br>• Prove of training completion at sites;<br>• Posting of EMP at work sites.             | Costs - PMU/PIU Contractor   | N         |               | 1                |           |   | Training required |

Contract Packages: CTEIP/MAT/RD/01 and CTEIP/GAL/RD/01

Table 6.2: Environmental Management Plan: Roads Monitoring Report

| Ref. No. | Field:  | Impacts | Reference | Mitigation Measures  | Implementing Agency/ Responsibility         | Monitoring Frequency:  | Monitoring Indicators   | Cost (TK)                             | Status of EMP |    | EMP Score | Remarks / Additional Corrective Measures Required |
|----------|---|---------|-----------|--|---|--|---|---------------------------------------|---------------|----|-----------|---|
|          |   |         |           |  |   |  |   |                                       | Yes /         | No |           |   |
| 2        | During Construction Phase   |         |           |  |   |  |   |                                       |               |    |           |   |
| 2.1      | Physical Characteristics  |         |           |  |   |  |   |                                       |               |    |           |   |
| 2.1.1    | Topography, landforms, geology and soils  |         | 11        | Utilize readily available sources of materials. If contractor procures materials from existing borrow pits and quarries, ensure these conform to all relevant regulatory requirements.   | Executive agency/ consultant/<br>contractor | Monthly by PIU   | Records of sources of materials.  | Mitigation measures:<br>Contract Cost | Y             | N  | 4         |   |
| 2.1.1    | Significant amount of gravel, sand, and cement will be required for this subproject. Extraction of construction materials may cause localized changes in topography and landforms. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures. |         | 12        | Borrow areas and quarries (if these are being opened up exclusively for the subproject) must comply with environmental requirements, as applicable. No activity will be allowed until formal agreement is signed between PIU, landowner and contractor.                  |   |  |   |                                       | Y             |    | 3         |   |
| 2.1.2    | Water Quality:  |         | 13        | Prepare and implement a spoils management plan.  | Contractor                                  | Monthly by PIU and PMSC (frequency and sampling sites to be finalized during design stage and agreed during construction stage)            | <ul style="list-style-type: none"> <li>Areas for stockpiles, storage of fuels and lubricants and waste materials;</li> <li>Numbers of silt traps installed along trenches leading to water bodies;</li> <li>Records of surface water quality inspection;</li> <li>Effectiveness of water management measures with no visible degradation due to construction activities.</li> </ul> | Mitigation measures:<br>Contract Cost | Y             |    | 2         |   |
|          | Excavation, run-off from stockpiled materials, and chemical contamination from fuels and lubricants may result to silt-laden runoff during rainfall which may cause siltation and reduction in the quality of adjacent bodies of water. The   |         | 14        | Prioritize re-use of excess spoils and materials in construction activities. If spoils will be disposed, consult with Local Authority on designated disposal areas.  |   |  |   |                                       | Y             |    | 3         |   |
|          |   |         | 15        | All earthworks must be conducted during dry season to maximum extent possible to avoid the difficult working conditions that prevail during monsoon season such as problems from runoff.   |   |  |   |                                       | Y             |    | 3         |   |
|          |   |         | 16        | Location for stockyards for construction materials shall be identified at least 300m away from watercourses. Place storage areas for fuels and lubricants away from any drainage leading to water bodies.  |   |  |   |                                       | Y             |    | 3         |   |
|          |   |         | 17        | Take all precautions to minimize the wastage of water in the construction activities.  |   |  |   |                                       | Y             |    | 3         |   |
|          |   |         | 18        | Take all precautions to prevent entering of wastewater into streams, watercourses, or irrigation system. Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies.  |   |  |   |                                       | Y             |    | 3         |   |
|          |   |         | 19        | Ensure diverting storm water flow during construction shall not lead to inundation and other nuisances in low lying areas.   |   |  |   |                                       | Y             |    | 4         |   |
|          |   |         | 20        | While working across or close to any water body, the flow of water must not be obstructed. Ensure no construction materials like earth, stone, or appendage are disposed of in a manner that may block the flow of water of any watercourse and cross drainage channels. |   |  |   |                                       | Y             |    | 3         |   |
|          |   |         | 21        | Monitor water quality according to the environmental management  |   |  |   |                                       | N             |    | 1         | Testing to start                                  |
| 2.1.3    | Air Quality:  |         | 22        | Damp down exposed soil and any sand stockpiled on site by spraying with water during dry weather.  | Contractor                                  | Monthly inspection by PIU and PMSC (frequency and sampling sites to be finalized during design stage and agreed during construction stage) | Mitigation measures:<br>Contract Cost   | Y                                     |               |    | 3         |   |



Contract Packages: CTEIP/MAT/RD/01 and CTEIP/GAL/RD/01

Table 6.2: Environmental Management Plan: Roads Monitoring Report

| Ref. No. | Field: | Reference   | Mitigation Measures  | Implementing Agency/ Responsibility | Monitoring Frequency: | Monitoring Indicators  | Cost (TK)                          | Status of EMP |                  |           | Remarks / Additional Corrective Measures Required |                     |
|----------|--------|-------------|--|-------------------------------------|-----------------------|--|------------------------------------|---------------|------------------|-----------|---|---------------------|
|          |        |             |  |                                     |                       |  |                                    | (Yes / No)    | Progress Grading | EMP Score |   |                     |
|          |        |             | Conducting works at dry season and moving large quantity of materials may create dusts and increase in concentration of vehicle-related pollutants (such as carbon monoxide, sulphur oxides, particulate matter, nitrous oxides, and hydrocarbons) which will affect people who live |                                     |                       |  |                                    |               |                  |           |   |                     |
| 23       |        |             | - Use tarpaulins to cover soils, sand and other loose material when transported by trucks.   |                                     |                       | • Location of stockpiles.  |                                    | Y             | N                | 3         |   | Yet to Start (YTS). |
| 24       |        |             | - Unpaved surfaces used for haulage of materials within settlements shall be maintained dust-free.   |                                     |                       | • Numbers of complaints from sensitive receptors.  |                                    | Y             |                  | 3         |   |                     |
| 25       |        |             | - Arrangements to control dust through provision of windcreens, water sprinklers, and dust extraction systems shall be provided at all hot-mix plants, batching plants and crushers (if these establishments are being   |                                     |                       | • Heavy equipment and Heavy equipment and pollution control devices.   |                                    |               | N                | 2         |   | Practice to start   |
| 26       |        |             | - Monitor air quality.   |                                     |                       | • Certification that vehicles are compliant with air quality standards.  |                                    |               | N                | 1         |   | Testing to start    |
| 27       |        |             | - Involve the community in planning the work program so that any particularly noisy or otherwise invasive activities can be scheduled to avoid sensitive times.  | Contractor                          |                       | • Monthly visual inspection by PIU and PMSC (frequency and sampling sites to be finalized during design stage and agreed during construction stage). | Mitigation measures: Contract Cost | Y             |                  | 3         |   |                     |
| 28       |        |             | - Plan activities in consultation with Local Authority so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance.  |                                     |                       | • Numbers of complaints from sensitive receptors.  |                                    | Y             |                  | 4         |   |                     |
| 29       |        |             | - Use of high noise generating equipment shall be stopped during night time.   |                                     |                       | • Use of silencers in noise producing equipment.   |                                    | Y             |                  | 3         |   |                     |
| 30       |        |             | - Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach.   |                                     |                       | • Use of sound barriers.   |                                    | Y             |                  | 3         |   |                     |
| 31       |        |             | - Utilize modern vehicles and machinery with the requisite adaptations to limit noise and exhaust emissions, and ensure that these are maintained to manufacturers' specifications at all times.   |                                     |                       | • Equivalent allowable day and night time noise levels maintained.   |                                    | Y             |                  | 3         |   |                     |
| 32       |        |             | - All vehicles and equipment used in construction shall be fitted with exhaust silencers. Use silencer-type generators (if required).  |                                     |                       | • Maintain records.  |                                    | Y             |                  | 3         |   |                     |
| 33       |        |             | - Monitor noise levels. Maintain maximum sound levels not exceeding 80 decibels (dBA) when measured at a distance of 10 m or more from the vehicles.   |                                     |                       |  |                                    |               | N                | 1         |   | Monitoring to start |
| 34       |        |             | - If it is not practicable to reduce noise levels to or below noise exposure limits, the contractor must post warning signs in the noise hazard areas. Workers in a posted noise hazard area must wear hearing protection.   |                                     |                       |  |                                    |               | N                | 1         |   | Yet to start        |
| 35       |        |             | - Identify any buildings at risk from vibration damage and avoiding any use of pneumatic drills or heavy vehicles in the vicinity. Complete work in these areas quickly.   |                                     |                       |  |                                    |               | Y                |           |   | Not Applicable      |
| 36       | 2.1.5  | Aesthetics: | - Prepare the Debris Disposal Plan   | Contractor/ District Authority      |                       | Monthly visual inspection by PIU and PMSC (frequency and sampling sites to be finalized during design stage and agreed during construction stage).   | Mitigation measures: Contract Cost |               | N                | 2         |   | To be instigated    |
| 37       |        |             | - Remove all construction and demolition wastes on a daily basis.  |                                     |                       | • Numbers of complaints from sensitive receptors.  |                                    |               | N                | 2         |   | To be instigated    |
| 38       |        |             | - Coordinate with Local Authority for beneficial uses of excess excavated soils or immediately dispose to designated areas. Avoid  |                                     |                       | • Work site clear of hazardous waste, oil/fuel, ..   |                                    | Y             |                  | 2         |   |                     |



**Contract Packages: CTEIP/MAT/RD/01 and CTEIP/GAL/RD/01**

**Table 6.2: Environmental Management Plan: Roads Monitoring Report**

| Ref. No. | Impacts   | Reference | Mitigation Measures   | Implementing Agency/ Responsibility | Monitoring Frequency:  | Monitoring Indicators                 | Cost (TK) | Status of EMP |    | EMP Score | Remarks / Additional Corrective Measures Required |                  |
|----------|---|-----------|---|-------------------------------------|--|---------------------------------------|-----------|---------------|----|-----------|---|------------------|
|          |   |           |   |                                     |  |                                       |           | Yes /         | No |           |   | Progress Grading |
|          | containers, spools, oil, tin cans, and other similar items. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.                                    | 39        | Status of EMP = Poor (0); Below Satisfactory (1); Satisfactory (2); Satisfactory (3 - 4); Excellent (5)<br>- Suitably dispose of collected materials from drainages, unutilized materials and debris either through filling up of pit/wasteland or at pre-designated disposal localities.   | Partially Satisfactory (2)          | Work site clear of any wastes collected materials from drainages, unutilized materials, debris;  |                                       |           | Y             | N  |           | Yet to Start (YTS);                               |                  |
|          |   | 40        | - All vehicles delivering lime materials to the site and carrying waste debris for disposal shall be covered to avoid spillage of materials. All existing roads used by vehicles of the contractor, shall be kept clear of all dust/mud or other extraneous materials dropped by such vehicles.<br>- Lighting on construction sites shall be pointed downwards and away from oncoming traffic and nearby houses.  |                                     | • Transport routes to and fro site, within site, cleared of any dust/mud;<br>• Maintain records,   |                                       |           | Y             |    | 2         | Not Applicable                                    |                  |
|          |   | 41        | - Lighting on construction sites shall be pointed downwards and away from oncoming traffic and nearby houses.   |                                     | • Maintain records,  |                                       |           | Y             |    | 2         | Not fully applied                                 |                  |
|          |   | 42        | - In areas where the visual environment is particularly important or privacy concerns for surrounding buildings exist, the site may require screening. This could be in the form of shade cloth, temporary walls, or other suitable materials prior to the beginning of construction.   |                                     |  |                                       |           |               |    |           |   | Not Applicable   |
|          |   | 43        | - The site must be kept clean to minimize the visual impact of the site. Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal in designated areas.   |                                     |  |                                       |           | Y             |    | 2         |   |                  |
| 2.2      | <b>Biological Characteristics</b>   |           |   |                                     |  |                                       |           |               |    |           |   |                  |
| 2.2.1    | <b>Biodiversity:</b>  |           |   |                                     |  |                                       |           |               |    |           |   |                  |
|          | Activities being located in the built-up area of Pourashava. There are no protected areas in or around subproject sites, and no known areas of ecological interest. There are no trees at the site that need to be removed. | 44        | - Check if tree-cutting will be required during detailed design stage. No trees, shrubs, or groundcover may be removed or vegetation stripped without the prior permission of the environment management specialist.  | Contractor                          | Monthly inspection by PIU and PMSC (frequency and sampling sites to be finalized during design stage and agreed during construction stage);<br>OR<br>More frequently as the need arises; | Mitigation measures:<br>Contract Cost |           | Y             |    | 3         |   |                  |
|          |   | 45        | - If during detailed design cutting of trees will be required, compensatory plantation for trees lost at a rate of 10 trees for every tree cut. In addition to tree plantation as specified in the design, will be implemented by the contractor, who will also maintain the saplings for the duration of his contract.<br>- All efforts shall be made to preserve trees by evaluation of minor design adjustments/ alternatives (as applicable) to save trees. |                                     |  |                                       |           | Y             |    | 3         |   |                  |
|          |   | 47        | - Special attention shall be given for protecting giant trees and locally-important trees (with religious importance) during implementation.  |                                     |  |                                       |           | Y             |    | 3         |   |                  |
|          |   | 48        | - Prevent workers or any other person from removing and damaging any flora (plant/vegetation) and fauna (animal) including fishing in any water body in the subproject vicinity.  |                                     |  |                                       |           | Y             |    | 3         |   |                  |
|          |   | 49        | - Prohibit employees from poaching wildlife and cutting of trees for firewood.  |                                     |  |                                       |           | Y             |    | 3         |   |                  |





Contract Packages: CTEIP/MAT/RD/01 and CTEIP/GAL/RD/01

Table 6.2: Environmental Management Plan: Roads Monitoring Report

| Ref. No. | Field:  | Reference | Mitigation Measures   | Implementing Agency/ Responsibility | Monitoring Frequency:   |                                    | Cost (TK) | Status of EMP |                  | EMP Score      | Remarks / Additional Corrective Measures Required |
|----------|---|-----------|---|-------------------------------------|---|------------------------------------|-----------|---------------|------------------|----------------|---|
|          |   |           |   |                                     | Monitoring Indicators   |                                    |           | Yes / No      | Progress Grading |                |   |
| 2.3.3    | Other existing amenities for community welfare:   | 65        | Status of EMP = [Poor (0); Below Satisfactory (1); Partially Satisfactory (2); Satisfactory (3 - 4); Excellent (5)]<br>Obtain details from Pourashava nature and location of all existing infrastructure, and plan excavation carefully to avoid any such sites to maximum extent possible.   | Contractor                          | Monthly Inspection by PIU and PMSC during design stage and agreed during construction stage:  | Mitigation measures: Contract Cost | Y         | N             | 3                | Not Applicable |   |
|          | Although construction of subproject components involves quite simple techniques of civil work, the invasive nature of excavation and the subproject sites being in built-up areas of the Pourashava where there are a variety of human activities, will result in impacts to the sensitive receptors such as residents, businesses, and the community in general. | 66        | Integrate construction of the various infrastructure subprojects to be conducted in the Pourashava (roads, water supply, etc.) so that different infrastructure be located on opposite sides of the road where feasible and roads and inhabitants are not subjected to repeated disturbance by construction in the same area at different times for different purposes. |                                     | OR  |                                    |           |               |                  |                |   |
|          | Excavation may also damage existing infrastructure (such as water distribution pipes, electric pylons, etc.) located alongside the roads. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.  | 67        | Consult with local community to inform them of the nature, duration and likely effects of the construction work, and to identify any local concerns so that these can be addressed.   |                                     | More frequently as the need arises:   |                                    |           |               |                  |                |   |
|          |   | 68        | Existing infrastructure (such as water distribution pipes, electric pylons, etc.) shall be relocated before construction starts at the subproject sites.  |                                     | Utilities contingency plan.   |                                    |           |               |                  |                | Not Applicable                                    |
|          |   | 69        | Prior permission shall be obtained from respective local authority for use of water for construction. Use of water for construction works shall not disturb local water users.  |                                     | Numbers of complaints from sensitive receptors.   |                                    |           |               |                  |                | Not Applicable                                    |
|          |   | 70        | If construction work is expected to disrupt users of community water bodies, notice to the affected community shall be served 7 days in advance and again 1 day prior to start of construction.   |                                     |   |                                    |           |               |                  |                | Not Applicable                                    |
|          |   | 71        | Ensure any damage to properties and utilities will be restored or compensated to pre-work conditions.   |                                     |   |                                    |           |               |                  |                | YTS   |
| 2.3.4    | Community Health and Safety:  | 72        | Contractor's activities and movement of staff will be restricted to designated construction areas.  | Contractor                          | Monthly Inspection by PIU and PMSC (frequency and sampling sites to be finalized during design stage and agreed during construction stage): | Mitigation measures: Contract Cost | Y         |               | 3                |                |   |
|          | Construction works will impede the access of residents and businesses in limited cases. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.  | 73        | Locations of hot-mix plants, batching plants and crushers (if these establishments are being set up exclusively for the subproject) shall be located at least 100 m away from the nearest dwelling preferably in the downwind direction.  |                                     | OR  |                                    |           |               |                  |                |   |
|          |   | 74        | Consult with the Local Authority on the designated areas for stockpiling of soils, gravel, and other construction materials.  |                                     | More frequently as the need arises:   |                                    |           |               |                  |                |   |
|          |   | 75        | If the contractor chooses to locate the work camp/storage area on private land, he must get prior permission from the environment management specialist and landowner.  |                                     | Number of permanent signages, barricades and legmen on worksite as per Traffic Management Plan.   |                                    | Y         |               | 2                |                | Not Applicable                                    |
|          |   | 76        | Use small mechanical excavators to attain faster excavation progress. For rock and concrete breaking, use non-explosive blasting chemicals, silent rock cracking chemicals, and concrete breaking chemicals. [1]  |                                     | Numbers of complaints from sensitive receptors:   |                                    |           |               |                  |                | Not Applicable                                    |
|          |   | 77        | Under no circumstances may open areas or the surrounding bushes be used as a toilet facility.   |                                     | Number of walkways signages, and metal sheets placed at project location.   |                                    | Y         |               | 4                |                |   |

| Ref. No. | Impacts   | Reference | Mitigation Measures  | Implementing Agency/ Responsibility | Monitoring Frequency: | Monitoring Indicators  | Cost (TK) | Status of EMP |     | EMP Score | Remarks / Additional Corrective Measures Required |                                |
|----------|---|-----------|--|-------------------------------------|-----------------------|--|-----------|---------------|-----|-----------|---|--------------------------------|
|          |   |           |  |                                     |                       |  |           | Yes /         | No) |           |   | Progress Grading               |
| 78       |   |           | <p>Status of EMP = <b>Poor (0): Below Satisfactory (1); Partially Satisfactory (2); Satisfactory (3 - 4); Excellent</b></p> <ul style="list-style-type: none"> <li>- Recycling and the provision of separate waste receptacles for different types of waste shall be encouraged.</li> <li>- A general regard for the social and ecological well-being of the site and adjacent areas is expected of the site staff. Workers need to be made aware of the following general rules: <ul style="list-style-type: none"> <li>- no alcohol/drugs on site; (ii) prevent excessive noise; (iii) construction staff are to make use of the facilities provided for them, as opposed to ad hoc alternatives (e.g. fires for cooking, the use of surrounding bushes as a toilet facility); (iv) no fires permitted on site except if needed for the construction works.</li> <li>- (v) trespassing on private/commercial properties adjoining the site is forbidden; (vi) other than pre-approved security staff, no workers shall be permitted to live on the construction site; and (vii) no worker may be forced to do work that is potentially dangerous or that he/she is not trained to do.</li> </ul> </li> </ul> |                                     |                       | <ul style="list-style-type: none"> <li>• Agreement between landowner and contractors in case of using private lands as work camps, storage areas etc.</li> </ul> |           | Y             | N   | 2         | To be improved                                    |                                |
| 79       |   |           |  |                                     |                       |  |           | Y             |     | 4         |   |                                |
| 80       |   |           |  |                                     |                       |  |           | Y             |     | 3         |   |                                |
| 81       |   |           |  |                                     |                       |  |           |               |     | 1         | Yet to be followed                                |                                |
| 82       |   |           |  |                                     |                       |  |           |               |     | 2         | Yet to be followed                                |                                |
| 83       | <p><b>Worker's health and safety:</b></p> <p>There is invariably a safety risk when construction works such as excavation and earthmoving are conducted in urban areas. Workers need to be mindful of the occupational hazards which can arise from working in height and excavation works. Potential impacts are negative and long-term but reversible by mitigation measures.</p> |           | <p>Comply with requirements of Government of Bangladesh Labour Law of 2006 and all applicable laws and standards on workers health and safety (H&amp;S).</p>   | Contractor                          |                       |  |           |               |     | N         | 2   | Poorly Recored Labour Register |
| 84       |   |           |  |                                     |                       |  |           |               |     | 1         | Training to Start                                 |                                |
| 85       |   |           |  |                                     |                       | <p>Monthly inspection by PIU and PMSC (frequency and sampling sites to be finalized during design stage and agreed during construction stage):</p>               |           |               |     | N         | 0   | H&S Plan remains Outstanding   |
| 86       |   |           |  |                                     |                       |  |           |               |     | Y         | 2   | To be improved                 |



| Ref. No. | Field: | Reference | Mitigation Measures  | Implementing Agency/ Responsibility                         | Monitoring Frequency:  | Monitoring Indicators              | Cost (Tk) | Status of EMP |                  | EMP Score           | Remarks / Additional Corrective Measures Required |
|----------|--------|-----------|--|---|--|------------------------------------|-----------|---------------|------------------|---------------------|---|
|          |        |           |  |   |  |                                    |           | (Yes / No)    | Progress Grading |                     |   |
| 78       |        |           | <p><b>Status of EMP = Poor (0); Below Satisfactory (1); Partially Satisfactory (2); Satisfactory (3 - 4); Excellent</b></p> <ul style="list-style-type: none"> <li>- Recycling and the provision of separate waste receptacles for different types of waste shall be encouraged.</li> <li>- A general regard for the social and ecological well-being of the site and adjacent areas is expected of the site staff. Workers need to be made aware of the following general rules:                             <ul style="list-style-type: none"> <li>- no alcohol/drugs on site; (ii) prevent excessive noise; (iii) construction staff are to make use of the facilities provided for them, as opposed to ad hoc alternatives (e.g. fires for cooking, the use of surrounding bushes as a toilet facility); (iv) no fires permitted on site except if needed for the construction works;</li> <li>- (v) trespassing on private/commercial properties adjoining the site is forbidden; (vi) other than pre-approved security staff, no workers shall be permitted to live on the construction site; and (vii) no worker may be forced to do work that is potentially dangerous or that he/she is not trained to do.</li> </ul> </li> </ul> | Partially Satisfactory (2); Satisfactory (3 - 4); Excellent | <ul style="list-style-type: none"> <li>• Agreement between landowner and contractors in case of using private lands as work camps, storage areas etc.</li> </ul> | Y                                  | N         | 2             | To be improved   | Yet to Start (YTS); |   |
| 79       |        |           |  |   |  |                                    | Y         |               | 4                |                     |   |
| 80       |        |           |  |   |  |                                    | Y         |               | 3                |                     |   |
| 81       |        |           |  |   |  |                                    |           | N             | 1                |                     | Yet to be followed                                |
| 82       |        |           |  |   |  |                                    |           | N             | 2                |                     | Yet to be followed                                |
| 83       |        |           | <p><b>Worker's health and safety:</b></p> <ul style="list-style-type: none"> <li>- Comply with requirements of Government of Bangladesh Labour Law of 2006 and all applicable laws and standards on workers health and safety (H&amp;S).</li> <li>- Ensure that all site personnel have a basic level of environmental awareness training. If necessary, the environmental management specialist and/or a translator shall be called to the sites to further explain aspects of environmental or social behaviour that are unclear.</li> </ul>   | Contractor  | DAILY INSPECTION BY CONTRACTOR'S SUPERVISOR  | Mitigation measures: Contract Cost |           | N             | 2                |                     | Poorly Recorded Labour Register                   |
| 84       |        |           | <ul style="list-style-type: none"> <li>- There is invariably a safety risk when construction works such as excavation and earthmoving are conducted in urban areas. Workers need to be mindful of the occupational hazards which can arise from working in height and excavation works. Potential impacts are negative and long-term but reversible by mitigation measures.</li> </ul>   |   |  |                                    |           | N             | 1                |                     | Training to Start                                 |
| 85       |        |           | <ul style="list-style-type: none"> <li>- Produce and implement a site H&amp;S plan which include measures as: (i) excluding the public from work sites; (ii) ensuring all workers are provided with and required to use personal protective equipment (reflectored vests, footwear, gloves, goggles and masks) at all times; (iii) providing H&amp;S training [2] for all site personnel; (iv) documenting procedures to be followed for all site activities; and (v) maintaining accident reports and records.</li> </ul>   |   | Monthly inspection by PIU and PMSO (frequency and sampling sites to be finalized during design stage and agreed during construction stage);                      |                                    |           | N             | 0                |                     | H&S Plan remains Outstanding                      |
| 86       |        |           | <ul style="list-style-type: none"> <li>- Arrange for readily available first aid unit including an adequate supply of sterilized dressing materials and appliances</li> </ul>  |   | OR   |                                    |           | Y             | 2                |                     | To be improved                                    |

Table 6.2: Environmental Management Plan: Roads Monitoring Report

| Ref. No. | Field: | Impacts   | Reference | Mitigation Measures   | Implementing Agency/ Responsibility | Monitoring Frequency:               | Monitoring Indicators  | Cost (TK)                          | Status of EMP |                  | EM Score | Remarks / Additional Corrective Measures Required |                |
|----------|--------|---|-----------|---|-------------------------------------|-------------------------------------|--|------------------------------------|---------------|------------------|----------|---|----------------|
|          |        |   |           |   |                                     |                                     |  |                                    | (Yes / No)    | Progress Grading |          |   |                |
| 87       |        |   |           | Status of EMP = Poor (0); Below Satisfactory (1); Partially Satisfactory (2); Satisfactory (3 - 4); Excellent<br>- Maintain necessary living accommodation and ancillary facilities in functional and hygienic manner in work camps. Ensure (i) uncontaminated water for drinking, cooking and washing; (ii) clean eating areas where workers are not exposed to hazardous or noxious substances; and (iii) sanitation facilities are available at all times.                           |                                     | More frequently as the need arises. | Site-specific H&S Plan;<br>Equipped first-aid stations;  |                                    | Y             | N                | 2        | To be improved                                    |                |
| 88       |        |   |           | - Provide medical insurance coverage for workers;   |                                     |                                     |  |                                    | Y             | N                | 4        |   |                |
| 89       |        |   |           | - Provide H&S orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;  |                                     |                                     |  |                                    |               | N                | 1        | Remains Outstanding                               |                |
| 90       |        |   |           | - Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitors do not enter hazard areas unescorted;   |                                     |                                     |  |                                    | Y             |                  | 3        |   |                |
| 91       |        |   |           | - Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas;   |                                     |                                     |  |                                    | Y             |                  | 2        |   |                |
| 92       |        |   |           | - Ensure moving equipment is outfitted with audible back-up alarms;   |                                     |                                     |  |                                    | Y             |                  | 3        |   |                |
| 93       |        |   |           | - Mark and provide sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate; and - Disallow worker exposure to noise level greater than 85 dBA for a duration of more than 8 hours per day without hearing |                                     |                                     | <ul style="list-style-type: none"> <li>Records of accidents;</li> <li>Number of accidents;</li> <li>Records of supply of uncontaminated water;</li> <li>Condition of eating areas of workers;</li> <li>Record of H&amp;S orientation trainings;</li> <li>Use of personal protective equipment;</li> <li>Percentage of moving equipment outfitted with audible back-up alarms;</li> <li>Permanent sign boards for hazardous areas;</li> <li>GAP compliance record;</li> <li>Signages for storage and disposal areas;</li> </ul> |                                    | Y             |                  | 2        |   |                |
| 94       | 2.4    | Historical, Cultural and Archaeological   |           |   | Contractor                          |                                     | <ul style="list-style-type: none"> <li>Condition of hygiene and sanitation facilities for workers;</li> </ul>  |                                    |               |                  |          |   |                |
| 94       | 2.4.1  | Physical and cultural heritage  |           |   | Contractor                          |                                     | <ul style="list-style-type: none"> <li>Monthly inspection by PIU and PMSC;</li> <li>Records of chance finds;</li> </ul>  | Mitigation measures: Contract Cost |               |                  |          |   | YTS            |
| 95       |        | Construction works will not be in built-up areas of the Poushshava built risk for chance finds maybe low. |           |   |                                     |                                     | <ul style="list-style-type: none"> <li>Prevent workers or any other persons from removing and damaging any fossils, coins, articles of antiquity, structures and other remains of archaeological interest;</li> <li>Stop work immediately to allow further investigation if any finds are</li> </ul>   |                                    |               |                  |          |   | YTS            |
| 96       |        |   |           |   |                                     |                                     |  |                                    |               |                  |          |   | YTS            |
| 97       | 3      | Others  |           |   | Contractor                          |                                     |  |                                    |               |                  |          |   |                |
| 97       | 3.1    | Submission of EMP Implementation Report   |           |   | Contractor                          |                                     | <ul style="list-style-type: none"> <li>Appointment of Supervisor to ensure EMP implementation;</li> <li>Timely submission of monitoring reports including pictures;</li> </ul>   | Mitigation measures: Contract Cost |               | N                | 0        |   | To be followed |
| 98       |        | Unsatisfactory compliance to EMP  |           |   |                                     |                                     | <ul style="list-style-type: none"> <li>Monthly monitoring report to be submitted by PIU and PMSC</li> <li>PMU to submit semi-annual monitoring report to ADB;</li> <li>Availability and competency of appointed Supervisor;</li> <li>Monthly Report;</li> </ul>  |                                    |               | N                | 0        |   | To be followed |

| Ref. No. | Field:   | Reference | Mitigation Measures   | Implementing Agency/ Responsibility | Monitoring Frequency:  |                       | Cost (TK) | Status of EMP |                  | EMP Score | Remarks / Additional Corrective Measures Required |
|----------|--|-----------|---|-------------------------------------|--|-----------------------|-----------|---------------|------------------|-----------|---|
|          |  |           |   |                                     | Monitoring Indicators  |                       |           | Yes / No      | Progress Grading |           |   |
| 4        | Post-Construction Activities   |           |   |                                     |  |                       |           |               |                  |           |   |
| 4.1      | Post-construction clean-up   | 99        | - Remove all spoils wreckage, rubbish, or temporary structures (such as buildings, shelters, and latrines) which are no longer needed.<br>- All excavated roads shall be reinstated to original condition.  | Contractor                          | Prior to turn-over of completed Works to the Pourashava:   |                       |           |               |                  |           | Not Applicable                                    |
|          | Damage due to debris, spoils, excess construction materials.   | 100       | - All excavated roads shall be reinstated to original condition.  |                                     | PMU/PMSC report in writing that (i) worksite is restored to original conditions; (ii) camp has been vacated and restored to pre-project conditions; (iii) all construction related structures not relevant to O&M are removed and (iv) worksite cleanup is satisfactory. |                       |           |               |                  |           | Not Applicable                                    |
|          |  | 101       | - All disrupted utilities restored;   |                                     |  |                       |           |               |                  |           | Not Applicable                                    |
|          |  | 102       | - All affected structures rehabilitated/compensated;  |                                     |  |                       |           |               |                  |           | Not Applicable                                    |
|          |  | 103       | - The area that previously housed the construction camp is to be checked for spills of substances such as oil, paint, etc. and these shall be cleaned up;   |                                     |  |                       |           |               |                  |           | Not Applicable                                    |
|          |  | 104       | - All hardened surfaces within the construction camp area shall be ripped;  |                                     |  |                       |           |               |                  |           | Not Applicable                                    |
|          |  | 105       | - All imported materials removed and the area shall be top soiled and regressed using guidelines set out in the re-vegetation specification that forms part of this document;   |                                     |  |                       |           |               |                  |           | Not Applicable                                    |
|          |  | 106       | - The contractor must arrange the cancellation of all temporary services;   |                                     |  |                       |           |               |                  |           | Not Applicable                                    |
|          |  | 107       | - Request PMU/PMSC to report in writing that worksites and camps have been vacated and restored to pre-project conditions before acceptance of work.  |                                     |  |                       |           |               |                  |           | Not Applicable                                    |
| 5        | Operation and Maintenance Phase  |           |   |                                     |  |                       |           |               |                  |           |   |
| 5.1      | Physical Characteristics   |           |   |                                     |  |                       |           |               |                  |           |   |
| 5.1.1    | Acoustic environment   | 108       | - Plan activities in consultation with the Local Authority so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance.<br>- Identify any buildings at risk from vibration damage and avoiding any use of pneumatic drills or heavy vehicles in the vicinity. Complete work in these areas quickly. | Contractor and Pourashava           | During repair works:   | Included in O&M Costs |           |               |                  |           | YTS   |
|          | Temporary increase in noise level and vibrations. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures. | 109       |   |                                     | No complaints from sensitive receptors.  |                       |           |               |                  |           | YTS   |
| 5.2      | Socioeconomic Characteristics  |           |   |                                     |  |                       |           |               |                  |           |   |
| 5.2.1    | Workers health and safety  | 110       | - Comply with requirements of Government of Bangladesh Labour Law of 2006 and all applicable laws and standards on workers H&S.   | Pourashava                          | During repair works:   | Included in O&M Costs |           |               |                  |           | YTS   |
|          | Workers need to be mindful of the occupational hazards. Potential impacts are negative and long-term.  | 111       | - Ensure that all site personnel have a basic level of H&S training.  |                                     | No complaints from sensitive receptors   |                       |           |               |                  |           | YTS   |
|          |  | 112       | - Mark and provide sign boards. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate.  |                                     | No complaints from workers related to O&M activities.  |                       |           |               |                  |           | YTS   |
|          |  |           |   |                                     | Zero accidents.  |                       |           |               |                  |           | YTS   |

Overall EMP Compliance Rating: **Key Non-Compliance Record:**

|                           |     |                          |
|---------------------------|-----|--------------------------|
| Notes: YTS/Not Applicable | 199 |                          |
| Numerator Value           | 30  |                          |
| Overall Score             | 82  |                          |
| Non Compliance Recorded   | 19  | 2.4 Partial Satisfactory |

| Date | Description | Amount |
|------|-------------|--------|
| 1890 | ...         | ...    |
| 1891 | ...         | ...    |
| 1892 | ...         | ...    |
| 1893 | ...         | ...    |
| 1894 | ...         | ...    |
| 1895 | ...         | ...    |
| 1896 | ...         | ...    |
| 1897 | ...         | ...    |
| 1898 | ...         | ...    |
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| 1901 | ...         | ...    |
| 1902 | ...         | ...    |
| 1903 | ...         | ...    |
| 1904 | ...         | ...    |
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| 1906 | ...         | ...    |
| 1907 | ...         | ...    |
| 1908 | ...         | ...    |
| 1909 | ...         | ...    |
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| 1913 | ...         | ...    |
| 1914 | ...         | ...    |
| 1915 | ...         | ...    |
| 1916 | ...         | ...    |
| 1917 | ...         | ...    |
| 1918 | ...         | ...    |
| 1919 | ...         | ...    |
| 1920 | ...         | ...    |
| 1921 | ...         | ...    |
| 1922 | ...         | ...    |
| 1923 | ...         | ...    |
| 1924 | ...         | ...    |
| 1925 | ...         | ...    |
| 1926 | ...         | ...    |
| 1927 | ...         | ...    |
| 1928 | ...         | ...    |
| 1929 | ...         | ...    |
| 1930 | ...         | ...    |
| 1931 | ...         | ...    |
| 1932 | ...         | ...    |
| 1933 | ...         | ...    |
| 1934 | ...         | ...    |
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| 1938 | ...         | ...    |
| 1939 | ...         | ...    |
| 1940 | ...         | ...    |
| 1941 | ...         | ...    |
| 1942 | ...         | ...    |
| 1943 | ...         | ...    |
| 1944 | ...         | ...    |
| 1945 | ...         | ...    |
| 1946 | ...         | ...    |
| 1947 | ...         | ...    |
| 1948 | ...         | ...    |
| 1949 | ...         | ...    |
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| 1956 | ...         | ...    |
| 1957 | ...         | ...    |
| 1958 | ...         | ...    |
| 1959 | ...         | ...    |
| 1960 | ...         | ...    |
| 1961 | ...         | ...    |
| 1962 | ...         | ...    |
| 1963 | ...         | ...    |
| 1964 | ...         | ...    |
| 1965 | ...         | ...    |
| 1966 | ...         | ...    |
| 1967 | ...         | ...    |
| 1968 | ...         | ...    |
| 1969 | ...         | ...    |
| 1970 | ...         | ...    |
| 1971 | ...         | ...    |
| 1972 | ...         | ...    |
| 1973 | ...         | ...    |
| 1974 | ...         | ...    |
| 1975 | ...         | ...    |
| 1976 | ...         | ...    |
| 1977 | ...         | ...    |
| 1978 | ...         | ...    |
| 1979 | ...         | ...    |
| 1980 | ...         | ...    |
| 1981 | ...         | ...    |
| 1982 | ...         | ...    |
| 1983 | ...         | ...    |
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| 1990 | ...         | ...    |
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| 1993 | ...         | ...    |
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| 1995 | ...         | ...    |
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| 1997 | ...         | ...    |
| 1998 | ...         | ...    |
| 1999 | ...         | ...    |
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| 2001 | ...         | ...    |
| 2002 | ...         | ...    |
| 2003 | ...         | ...    |
| 2004 | ...         | ...    |
| 2005 | ...         | ...    |
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| 2013 | ...         | ...    |
| 2014 | ...         | ...    |
| 2015 | ...         | ...    |
| 2016 | ...         | ...    |
| 2017 | ...         | ...    |
| 2018 | ...         | ...    |
| 2019 | ...         | ...    |
| 2020 | ...         | ...    |
| 2021 | ...         | ...    |
| 2022 | ...         | ...    |
| 2023 | ...         | ...    |
| 2024 | ...         | ...    |
| 2025 | ...         | ...    |
| 2026 | ...         | ...    |
| 2027 | ...         | ...    |
| 2028 | ...         | ...    |
| 2029 | ...         | ...    |
| 2030 | ...         | ...    |
| 2031 | ...         | ...    |
| 2032 | ...         | ...    |
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| 2037 | ...         | ...    |
| 2038 | ...         | ...    |
| 2039 | ...         | ...    |
| 2040 | ...         | ...    |
| 2041 | ...         | ...    |
| 2042 | ...         | ...    |
| 2043 | ...         | ...    |
| 2044 | ...         | ...    |
| 2045 | ...         | ...    |
| 2046 | ...         | ...    |
| 2047 | ...         | ...    |
| 2048 | ...         | ...    |
| 2049 | ...         | ...    |
| 2050 | ...         | ...    |



**Annexure 7:  
Gender Action Plan Monitoring**

**Annexure 7a: Cyclone Shelter Contracts**

**Annexure 7b: Road Contracts**

COASTAL TOWNS ENVIRONMENTAL INFRASTRUCTURE PROJECT (CTEIP)

ENVIRONMENTAL IMPACT STATEMENT (EIS)

**Annexure 7a: Monitoring of Gender Action Plan: Cyclone Shelter Contracts**

Cyclone Shelter Contract Packages: Gender Action Plan:

| S.No | Activity   | Indicators/Targets | Responsibility  | Schedule | Status of GAP |   | Grading                     | Score  | Remarks / Additional Corrective Measures Required |   |  |  |
|------|--|--------------------|---|----------|---------------|---|-----------------------------|--------|---|---|--|--|
|      |  |                    |   |          | (Yes / No.)   |   |                             |        |   |   |  |  |
| 1    | CS Contracts under Implementation: CTEIP/MAT/CS/01; CTEIP/GAL/CS/01; CTEIP/PR/CS/01<br><br>Poor (0); Below Satisfactory (1); Partially Satisfactory (2); Satisfactory (3 - 4); Excellent (5) | Reference          | Community Participation In Planning and Design  | Year 1   | Y             | N   | 2                           |        |   |   |  |  |
|      |  |                    |   |          | 1             | Women actively participate in consultation for siting and design of community facility (Target: at least 50% of participant are women).   | Contractor                  | Year 1 | Y   |   |  |  |
|      |  |                    |   |          | 2             | Gender related data and information documented in all consultations and included in progress reports.   | Monitored by PIU/PMSC/ICCDC | Year 1 | Y   |   |  |  |
| 2    | Overall Gender-Focused Awareness Building and Social Mobilization Activities   | Reference          | At Construction Camp: Adequate measures such as provision of septic tanks with soak pit around the construction camp sites. Community and public toilets with equal share of toilets for women and men. | Year 1   | Y             | N   | 3                           |        | Less than 30%                                     |   |  |  |
|      |  |                    |   |          | 3             | Equal and separate facility for men and women at cyclone shelter such as room space, toilet number and seats for women and men.   | Contractor                  | Year 1 | Y   |   |  |  |
|      |  |                    |   |          | 4             | Separate provisions given for pregnant women care.  | Monitored by PIU/PMSC/ICCDC | Year 1 | Y   |   |  |  |
| 3    | Monitoring of Building construction Progress;  | Reference          | Monitoring of Infrastructure during Construction  | Year-1   | Y             | N   | 0                           |        |   |   |  |  |
|      |  |                    |   |          | 6             | TLCOC members including female members; household headed by female and household with BPL status; Targets: HHs (FHHs - 10%, BPL HHs-15% and others HHs-10%)   | Contractor                  | Year-1 | Y   | 2 |  |  |
|      |  |                    |   |          | 7             | Maintenance personnel should not perform dangerous tasks when alone, enter the manholes without checking for gas and without proper protective clothing, enter the manholes without ropes and harnesses firmly tied | Monitored by PIU/PMSC/ICCDC | Year-1 | Y   | 3 |  |  |
| 3    | Workers Health & Safety  | Reference          | Monitoring of Infrastructure during Construction  | Year-1   | Y             | N   | 0                           |        | Not done  |   |  |  |
|      |  |                    |   |          | 8             | Proper housekeeping of the site to prevent unsanitary conditions  | Monitored by PIU/PMSC/ICCDC | Year-1 | Y   | 2 |  |  |
|      |  |                    |   |          | 9             | Regular medical checkups and immediate treatment of workers (numbers treatment M & F)   | TLCOC/ULB                   | Year-1 | N   | 0 |  |  |

### Annexure 7a: Monitoring of Gender Action Plan: Cyclone Shelter Contracts

Cyclone Shelter Contract Packages: Gender Action Plan:

| S.No                                  | Activity  | Reference | Indicators/Targets   | Responsibility   | Schedule | Status of GAP |   | Grading | Score | Remarks / Additional Corrective Measures Required  |
|---------------------------------------|---|-----------|--|--|----------|---------------|---|---------|-------|--|
|                                       |   |           |  |  |          | (Yes / No.)   |   |         |       |  |
|                                       |   |           |  |  |          | Y             | N |         |       |  |
|                                       | <b>CS Contracts under Implementation:</b><br>CTE/PMAT/CS/01; CTE/PGAL/CS/01; CTE/PP/RC/CS/01<br><br>d) Occupational Health and Safety Management provisions |           | In safeguarding the lives of people/workers during construction due to inadequate safety measures the following indicators shall be enforced:<br><br>10 • Provision of PPE available for females comparable to their role and construction site activities.<br>11 • Strong safety policy for workers (male and female) in accordance with the Contractor's H&S Plan incorporating salient points given in the Health and Safety Manual.<br>12 • Contractor to include gender targets according to percentage of female workers employed.<br>13 • Guardrails for protection of workers, (male and female) and public / pedestrians at all exposed trenches site locations.<br>14 • Monitor gender provisions regarding Occupational Health and Safety Management of the Contractor's Health and Safety Plan | Contractor<br>Monitored by<br>PIU/PMSC/<br>ICCDC<br>TLCC/ULB | Year-1   |               |   | 3       |       | H&S Plan yet to be submitted<br><br>Low % Female<br><br>Partially done<br><br>H&S Plan yet to be submitted |
|                                       |   |           |  |  |          | Y             |   | 0       |       |  |
|                                       |   |           |  |  |          |               | N | 1       |       |  |
|                                       |   |           |  |  |          | Y             |   | 2       |       |  |
|                                       |   |           |  |  |          |               |   | 25      |       |  |
| <b>Overall EMP Compliance Rating:</b> |   |           |  |  |          |               |   |         |       |  |
| <b>Key Non-Compliance Record:</b>     |   |           |  |  |          |               |   |         |       |  |
| Notes: YTS/Not Applicable             |   |           |  |  |          |               |   |         |       |  |
|                                       |   |           |  | Numerator Value  |          |               |   | 0       |       |  |
|                                       |   |           |  | Overall Score  |          |               |   | 14      | 1.8   |  |
|                                       |   |           |  | Non Compliance Recorded                                      |          |               |   | 5       |       | Below Satisfactory   |



Annexure 7b: Monitoring of Gender Action Plan: Road Contracts

Road Contract Packages: Gender Action Plan:

| S.No                  | Activity  | Indicators/Targets | Responsibility                    | Schedule | Status of GAP  |   | Grading                               | Score         | Remarks / Additional Corrective Measures Required |   |   |  |
|-----------------------|---|--------------------|-----------------------------------|----------|--|---|---------------------------------------|---------------|---|---|---|--|
|                       |   |                    |                                   |          | (Yes / No.)  |   |                                       |               |   |   |   |  |
| 5<br>5<br>5<br>5<br>5 | Roads Contracts under Implementation:<br>CTEIP/MATR/RD/01; CTEIP/GAL/RD/01<br>Poor (0); Below Satisfactory (1); Partially Satisfactory (2); Satisfactory (3 - 4); Excellent (5)   | Reference          |                                   |          | Y  | N   |                                       |               |   |   |   |  |
|                       |   |                    |                                   |          | Community Participation In Planning and Design                               |   |                                       |               |   |   |   |  |
|                       |   |                    |                                   |          | 1  | • Women actively participate in consultation for siting and design of community facility (Target: at least 50% of participant are women).   | Contractor                            | Year 1        | Y   |   | 2 |  |
|                       |   |                    |                                   |          | 2  | • Gender related data and information documented in all consultations and included in progress reports.   |                                       |               | Y   |   | 2 |  |
|                       |   |                    |                                   |          | 3  | • Equal number of toilets for women and men and separate provision for pregnant women.  | Contractor                            | Year 1        | Y   |   | 3 |  |
| 1                     | a) Consult local group including the women on location, facility to be provided (water supply, sanitation, tube well, toilets) , using local knowledge of climate issues (storm surge height, flood and tide levels; roof rain water harvesting, septic and soak pit for waste water treatment and disposal); inclusive of all related employment opportunities for women under the Project;<br>b) Equal and separate facility for men and women at cyclone shelter such as room space, toilet number and seats for women and men.<br>c) Separate provisions given for pregnant women care. |                    | Monitored by PIU/PMSC/ ICCDC      | Year 1   | Y  |   | 2                                     |               |   |   |   |  |
|                       |   |                    |                                   |          | 4  | • At Construction Camp: Adequate measures such as provision of septic tanks with soak pit around the construction camp sites. Community and public toilets with equal share of toilets for women and men.             |                                       |               |   | 2 |   |  |
|                       |   |                    |                                   |          | Overall Gender-Focused Awareness Building and Social Mobilization Activities |   |                                       |               |   |   |   |  |
| 2                     | Build awareness on gender issues and ensure women's participation in the implementation and monitoring of shelter project activities  |                    | Monitored by PIU/PMSC/ ICCDC TLCC | Year-1   |  | N   | 0                                     | Less than 30% |   |   |   |  |
| 3                     | Monitoring of Infrastructure during Construction  |                    | Contractor                        | Year-1   | Y  |   | 2                                     |               |   |   |   |  |
|                       |   |                    |                                   |          | 6  | • TLCC members including female members; household headed by female and household with BPL status; Targets: HHs (FHHS - 10%, BPL HHs-15% and others HHs-10%)  | Monitored by PIU/PMSC/ ICCDC TLCC/ULB |               |   |   |   |  |
|                       |   |                    |                                   |          | 7  | • Maintenance personnel should not perform dangerous tasks when alone, enter the manholes without checking for gas and without proper protective clothing, enter the manholes without ropes and harnesses firmly tied | Contractor                            | Year-1        | Y   |   | 3 |  |
|                       |   |                    |                                   |          | 8  | • Proper housekeeping of the site to prevent unsanitary conditions  | Monitored by PIU/PMSC/ ICCDC TLCC/ULB |               | Y   |   | 2 |  |
| 9                     | • Regular medical checkups and immediate treatment of workers (numbers treatment M & F)   |                    |                                   |          |  | N   | 0                                     | Not done      |   |   |   |  |

**Annexure 7b: Monitoring of Gender Action Plan: Road Contracts**

| d) Occupational Health and Safety Management provisions  | In safeguarding the lives of people/workers during construction due to inadequate safety measures the following indicators shall be enforced: | Contractor   | Year-1 | Compliance |   | Remarks                      |
|--|---|--|--------|------------|---|------------------------------|
|  |   |  |        | Y          | N |                              |
| <ul style="list-style-type: none"> <li>10 • Provision of PPE available for females comparable to their role and construction site activities;</li> <li>11 • Strong safety policy for workers (male and female) in accordance with the Contractor's H&amp;S Plan incorporating salient points given in the Health and Safety Manual.</li> <li>12 • Contractor to include gender targets according to percentage of female workers employed.</li> <li>13 • Guardrails for protection of workers, (male and female) and public / pedestrians at all exposed trenches site locations;</li> <li>14 • Monitor gender provisions regarding Occupational Health and Safety Management of the Contractor's Health and Safety Plan.</li> </ul> | <p><b>Overall EMP Compliance Rating:</b></p>  | <p>Monitored by<br/>PIU/PMSC/<br/>ICCDC<br/>TLCC/ULB</p> |        | 3          | 0 | H&S Plan yet to be submitted |
|  |   |  |        | 1          | 2 | Low % Female                 |
|  |   |  |        |            |   | Partially done               |
|  |   |  |        |            |   | H&S Plan yet to be submitted |
| <p><b>Overall EMP Compliance Rating:</b></p>   |   | <p><b>Key Non-Compliance Record:</b></p>                 |        | 22         |   |                              |
| <p>Notes: YTS/Not Applicable</p>   |   |  |        | 0          |   |                              |
| <p>Numerator Value</p>   |   |  |        | 14         |   |                              |
| <p><b>Overall Score</b></p>  |   |  |        | 1.6        |   | <b>Below Satisfactory</b>    |
| <p><b>Non Compliance Recorded</b></p>  |   |  |        | 5          |   |                              |







## Annexure 8: Compensation Matrix Monitoring

Environmental Impact Assessment  
Final Report

**Annexure 8: Monitored Compensation Matrix: Mathbaria Road Contract: CTEIP/MAT/RD/01**

**Road-wise Compensation Matrix to market value of 4 roads of Mathbaria Pourashava are presented in Table-1, 2 and 3**

**Table-1: R&H road to Bairatala Khal via Veterinary Hospital (ward no-5)**

| Chainage                       | Name              | Position | Sex           | Affected           | Qty    | Price rate | Total(Tk)      | Paid | Signature/initial | Remarks |
|--------------------------------|-------------------|----------|---------------|--------------------|--------|------------|----------------|------|-------------------|---------|
| 0+160 to 0+165                 | Md. Monirul Islam | HH       | Male          | Cocunut tree       | 4      | 200        | 800            |      |                   |         |
|                                |                   |          |               | Rain tree          | 4      | 200-1500   | 3700           |      |                   |         |
|                                |                   |          |               | Mehgoni            | 10     | 500=20000  | 44500          |      |                   |         |
|                                |                   |          |               | Cocunut            | 7      | 200-500    | 2700           |      |                   |         |
| 0+210 to 0+250                 | Bachhu Commander  | HH       | Male          | Areca nut          | 26     |            | 5200           |      |                   |         |
|                                |                   |          |               | Chumbul            | 2      | 2000       | 4000           |      |                   |         |
|                                |                   |          |               | <b>Sub-total</b>   |        |            | <b>56100</b>   |      |                   |         |
|                                |                   |          |               | <b>Sub-total</b>   |        |            | <b>2200</b>    |      |                   |         |
| 0+250 to 0+260                 | Md. Shahjahan     | HH       | Male          | Areca nut          | 2      | 100        | 200            |      |                   |         |
|                                |                   |          |               | coconut            | 2      | 1000       | 2000           |      |                   |         |
|                                |                   |          |               | <b>Sub-total</b>   |        |            | <b>2200</b>    |      |                   |         |
|                                |                   |          |               | <b>Sub-total</b>   |        |            | <b>175,000</b> |      |                   |         |
| 0+295 to 0+316 (Main Road End) | Md. Omar faruq    | HH       | Male          | Tollet             | 17 sqm | 175,000    | 175,000        |      |                   |         |
|                                |                   |          |               | Cocunut            | 3      | 3000       | 9000           |      |                   |         |
|                                |                   |          |               | Mehgoni            | 5      | 500        | 2500           |      |                   |         |
|                                |                   |          |               | Jack fruit (small) | 3      | 200        | 600            |      |                   |         |
|                                |                   |          |               | Areca nut          | 8      | 500        | 4000           |      |                   |         |
|                                |                   |          |               | Small mango        | 3      | 200        | 600            |      |                   |         |
| <b>Sub-total</b>               |                   |          | <b>191700</b> |                    |        |            |                |      |                   |         |
| 0+035 to 0+050 (Link Road)     | Md. Bashhar       | HH       | Male          | Areca nut          | 4      | 200        | 800            |      |                   |         |
|                                |                   |          |               | Chumbul            | 1      | 1500       | 1500           |      |                   |         |
|                                |                   |          |               | Jack fruit (small) | 1      | 200        | 200            |      |                   |         |
|                                |                   |          |               | Mehgoni            | 6      | 400        | 2400           |      |                   |         |
| <b>Sub-total</b>               |                   |          | <b>3900</b>   |                    |        |            |                |      |                   |         |
| 0+055 to                       | Md. Faruk         | HH       | Male          | Chumbul            | 1      | 1500       | 1500           |      |                   |         |

**Annexure 8: Monitored Compensation Matrix: Mathbaria Road Contract: CTEIP/MAT/RD/01**

| Chainage                         | Name                      | Position | Sex   | Affected                         | Qty               | Price rate  | Total(TK) | Paid          | Signature/initial | Remarks       |        |  |  |  |
|----------------------------------|---------------------------|----------|-------|----------------------------------|-------------------|-------------|-----------|---------------|-------------------|---------------|--------|--|--|--|
| 0+070<br>(Link Road)             |                           |          |       | Coconut                          | 1                 | 500         | 500       |               |                   |               |        |  |  |  |
|                                  |                           |          |       | Mehgoni                          | 3                 | 1000        | 3000      |               |                   |               |        |  |  |  |
|                                  |                           |          |       | <b>Sub-total</b>                 |                   |             |           |               |                   | <b>5000</b>   |        |  |  |  |
| 0+075 to<br>0+082<br>(Link Road) | Md. Abdul Berek<br>Sardar | HH       | Male  | Chumbul                          | 2                 | 2000        | 4000      |               |                   |               |        |  |  |  |
|                                  |                           |          |       | Mehgoni                          | 6                 | 1000        | 6000      |               |                   |               |        |  |  |  |
|                                  |                           |          |       | Areca nut                        | 4                 | 200         | 800       |               |                   |               |        |  |  |  |
|                                  |                           |          |       | Coconut                          | 1                 | 500         | 500       |               |                   |               |        |  |  |  |
|                                  |                           |          |       | Tin Shed Ver.                    | 2.5 sqm           | 5000        | 5000      |               |                   |               |        |  |  |  |
|                                  |                           |          |       | Toilet                           | 4.2               | 8000        | 8000      |               |                   |               |        |  |  |  |
|                                  |                           |          |       | <b>Sub-total</b>                 |                   |             |           |               |                   | <b>24300</b>  |        |  |  |  |
| 0+085 to<br>0+100<br>(Link Road) | Md. Jamal Kobiraaj        | HH       | Male  | Toilet                           | 3.1 sqm           | 8000        | 8000      |               |                   |               |        |  |  |  |
|                                  |                           |          |       | Bath Room                        | 4.5 sqm           | 6000        | 6000      |               |                   |               |        |  |  |  |
|                                  |                           |          |       | Mehgoni                          | 8                 | 600         | 4800      |               |                   |               |        |  |  |  |
|                                  |                           |          |       | <b>Sub-total</b>                 |                   |             |           |               |                   | <b>18800</b>  |        |  |  |  |
|                                  |                           |          |       | 0+115 to<br>0+155<br>(Link Road) | Hazi Md. Shajahan | HH          | Male      | Boundary Wall | 90 sqm            | 200000        | 200000 |  |  |  |
|                                  |                           |          |       |                                  |                   |             |           | Areca nut     | 12                | 200           | 2400   |  |  |  |
|                                  |                           |          |       |                                  |                   |             |           | Mehgoni       | 8                 | 20000         | 160000 |  |  |  |
| Jack fruit (small)               | 6                         | 3000     | 18000 |                                  |                   |             |           |               |                   |               |        |  |  |  |
| <b>Sub-total</b>                 |                           |          |       |                                  |                   |             |           |               |                   | <b>380400</b> |        |  |  |  |
| 0+165 to<br>0+195<br>(Link Road) | Md. Shajahan Mia          | HH       | Male  |                                  |                   |             |           | Areca nut     | 4                 | 250           | 1000   |  |  |  |
|                                  |                           |          |       |                                  |                   |             |           | Mehgoni       | 3                 | 700           | 2100   |  |  |  |
|                                  |                           |          |       | Coconut tree                     | 1                 | 200         | 200       |               |                   |               |        |  |  |  |
| <b>Sub-total</b>                 |                           |          |       |                                  |                   | <b>3300</b> |           |               |                   |               |        |  |  |  |
| 0+205 to<br>0+225<br>(Link Road) | Md. Mostofa               | HH       | Male  | Mehgoni                          | 4                 | 7000        | 28000     |               |                   |               |        |  |  |  |
|                                  |                           |          |       | Areca nut                        | 12                | 400         | 4800      |               |                   |               |        |  |  |  |
|                                  |                           |          |       | Chumbul                          | 1                 | 10000       | 10000     |               |                   |               |        |  |  |  |



**Annexure 8: Monitored Compensation Matrix: Mathbaria Road Contract: CTEIP/MAT/RD/01**

| Chainage  | Name | Position | Sex | Affected     | Qty | Price rate | Total(Tk) | Paid | Signature/ initial | Remarks |
|-----------|------|----------|-----|--------------|-----|------------|-----------|------|--------------------|---------|
|           |      |          |     | Coconut tree | 1   | 500        | 500       |      |                    |         |
| Sub-total |      |          |     |              |     |            | 43300     |      |                    |         |
| Total     |      |          |     |              |     |            | 729000    |      |                    |         |

**Annexure 8: Monitored Compensation Matrix: Mathbaria Road Contract: CTEIP/MAT/RD/01**

Table-2: Masua Road to Mathbaria Tushhal Khal via Women's College, Ward # 2.

| Chainage                       | Name                 | Position | Sex  | Affected                         | Qty      | Price rate | Total(Tk)     | Paid | Signature/ Initial | Remarks |
|--------------------------------|----------------------|----------|------|----------------------------------|----------|------------|---------------|------|--------------------|---------|
| 0+070 to 0+090                 | Md. Saku Mia         | HH       | Male | Trashed Building                 | 15 sqm   | 50000      | 50000         |      |                    |         |
| <b>Sub-total</b>               |                      |          |      |                                  |          |            | <b>50000</b>  |      |                    |         |
| 0+110 to 0+135                 | Alhaj Rashid Harunur | HH       | Male | Boundary Wall                    | 48 sqm   | 100000     | 100000        |      |                    |         |
| <b>Sub-total</b>               |                      |          |      |                                  |          |            | <b>100000</b> |      |                    |         |
| 0+150 to 0+175 (Main Road End) | Haidas Chowkidar     | HH       | Male | Trashed House                    | 10 sqm   | 20000      | 20000         |      |                    |         |
|                                |                      |          |      | Fence (Tin)                      | 32 sqm   | 15000      | 15000         |      |                    |         |
|                                |                      |          |      | Toilet                           | 2.3 sqm  | 5000       | 5000          |      |                    |         |
|                                |                      |          |      | Kitchen                          | 3.7 sqm  | 15000      | 15000         |      |                    |         |
| <b>Sub-total</b>               |                      |          |      |                                  |          |            | <b>55000</b>  |      |                    |         |
| 0+005 to 0+020 (Link Road)     | Dr. Siddikur Rahman  | HH       | Male | Trashed Building with Gate       | 14 sqm   | 75000      | 75000         |      |                    |         |
| <b>Sub-total</b>               |                      |          |      |                                  |          |            | <b>75000</b>  |      |                    |         |
| 0+025 to 0+030                 | Md. Atikur           | HH       | Male | Trashed House, Fence (Tin), Wall | 17 sqm   | 50000      | 50000         |      |                    |         |
| <b>Sub-total</b>               |                      |          |      |                                  |          |            | <b>50000</b>  |      |                    |         |
| 0+030 to 0+037                 | Md. Iqbal            | HH       | Male | Trashed House /Part              | 8.5 sqm  | 15000      | 15000         |      |                    |         |
|                                |                      |          |      | Kitchen                          | 3.5 sqm  | 15000      | 15000         |      |                    |         |
| <b>Sub-total</b>               |                      |          |      |                                  |          |            | <b>30000</b>  |      |                    |         |
| 0+040 to 0+045                 | Md. Shahid           | HH       | Male | Toilet                           | 2.7 sqm  | 20000      | 20000         |      |                    |         |
|                                |                      |          |      | Wall                             | 14.2 sqm | 15000      | 15000         |      |                    |         |
| <b>Sub-total</b>               |                      |          |      |                                  |          |            | <b>35000</b>  |      |                    |         |
| 0+045 to 0+052                 | Md. Shah Alam        | HH       | Male | Cocunut                          | 2        | 1000       | 2000          |      |                    |         |
|                                |                      |          |      | Rain tree                        | 3        | 1000       | 3000          |      |                    |         |
| <b>Sub-total</b>               |                      |          |      |                                  |          |            | <b>5000</b>   |      |                    |         |
| 0+055 to                       | Sultian Mawlana      | HH       | Male | Rain tree                        | 2        | 1000       | 2000          |      |                    |         |

**Annexure 8: Monitored Compensation Matrix: Mathbaria Road Contract: CTEIP/MAT/RD/01**

| Chainage                 | Name                            | Position | Sex    | Affected                   | Qty      | Price rate | Total(Tk)     | Paid | Signature/ Initial | Remarks |
|--------------------------|---------------------------------|----------|--------|----------------------------|----------|------------|---------------|------|--------------------|---------|
| 0+075                    |                                 |          |        | Coconut                    | 4        | 1000       | 4000          |      |                    |         |
|                          | <b>Sub-total</b>                |          |        |                            |          |            | <b>6000</b>   |      |                    |         |
| 0+077 to 0+090           | Bashar Professor                | HH       | Male   | Mehgoni                    | 5        | 700        | 3500          |      |                    |         |
|                          |                                 |          |        | Coconut tree               | 3        | 500        | 1500          |      |                    |         |
|                          | <b>Sub-total</b>                |          |        |                            |          |            | <b>5000</b>   |      |                    |         |
| 0+090 to 0+95            | Nur Islam                       | HH       | Male   | Coconut tree               | 2        | 1000       | 2000          |      |                    |         |
|                          | <b>Sub-total</b>                |          |        |                            |          |            | <b>2000</b>   |      |                    |         |
| 0+105 to 0+115           | Abdul Khaleq                    | HH       | Male   | Tinshed Building           | 10 sqm   | 15000      | 15000         |      |                    |         |
|                          | <b>Sub-total</b>                |          |        |                            |          |            | <b>15000</b>  |      |                    |         |
| 0+120 to 0+128           | Shahid Goldar                   | HH       | Male   | Tinshed Building           | 12.5 sqm | 18000      | 18000         |      |                    |         |
|                          | <b>Sub-total</b>                |          |        |                            |          |            | <b>18000</b>  |      |                    |         |
| 0+178 to 0+195           | Abdur Rashid                    | HH       | Male   | Churnbul                   | 5        | 2000       | 10000         |      |                    |         |
|                          |                                 |          |        | Mehgoni                    | 4        | 500        | 2000          |      |                    |         |
|                          |                                 |          |        | Coconut                    | 2        | 1000       | 2000          |      |                    |         |
|                          | <b>Sub-total</b>                |          |        |                            |          |            | <b>14000</b>  |      |                    |         |
| 0+200 (End of Link Road) | Momtaz Most Vulnerable (Beggar) | -        | Female | Tinshed Collage (Squatter) | 5 sqm    | 50000      | 50000         |      |                    |         |
|                          | <b>Sub-total</b>                |          |        |                            |          |            | <b>50000</b>  |      |                    |         |
|                          | <b>Total</b>                    |          |        |                            |          |            | <b>510000</b> |      |                    |         |

**Annexure 8: Monitored Compensation Matrix: Mathbaria Road Contract: CTEIP/MAT/RD/01**

Table-3: R&H Road to Govt. College via New Market. Ward # 7

| Chainage       | Name                            | Position | Sex  | Affected Asset                     | Qty            | Market price   | Total(Tk)      | Paid | Signature/Initial | Remarks |
|----------------|---------------------------------|----------|------|------------------------------------|----------------|----------------|----------------|------|-------------------|---------|
| 0+000 to 0+015 | Arnuljo Shaha                   | HH       | Male | Tinshed Restaurant                 | 10 sqm         | 10000          | 10000          |      |                   |         |
| Sub-total      |                                 |          |      |                                    |                |                | 10000          |      |                   |         |
| 0+015 to 0+020 | Shahidul Islam                  | HH       | Male | Steel Workshop                     | 12.5 sqm       | 15000          | 15000          |      |                   |         |
| Sub-total      |                                 |          |      |                                    |                |                | 15000          |      |                   |         |
| 0+025 to 0+045 | Dr. Shahidul Islam              | HH       | Male | Wall with Gate                     | 20 sqm         | 25000          | 25000          |      |                   |         |
| Sub-total      |                                 |          |      |                                    |                |                | 25000          |      |                   |         |
| 0+075 to 0+090 | Ashraf Ali                      | HH       | Male | Boundary Wall                      | 7 sqm          | 10000          | 10000          |      |                   |         |
| Sub-total      |                                 |          |      |                                    |                |                | 10000          |      |                   |         |
| 0+125 to 0+130 | Najrul Islam                    | HH       | Male | Tinshed House                      | 10 sqm         | 18000          | 18000          |      |                   |         |
| Sub-total      |                                 |          |      |                                    |                |                | 18000          |      |                   |         |
| 0+303 to 0+308 | Mujibur Rahman                  | HH       | Male | Boundary Wall                      | 7.5 sqm        | 12000          | 12000          |      |                   |         |
| Sub-total      |                                 |          |      |                                    |                |                | 12000          |      |                   |         |
| 0+317 to 0+330 | Mawana Abdul Aziz               | HH       | Male | 2-Stored Tinshed Building          | L.S.           | 50000          | 50000          |      |                   |         |
| Sub-total      |                                 |          |      |                                    |                |                | 50000          |      |                   |         |
| 0+340 to 0+355 | Md. Azizul Haque Selim Matubbor | HH       | Male | Compound wall<br>Steel Gate        | 20 sqm<br>L.S. | 10000<br>10000 | 10000<br>10000 |      |                   |         |
| Sub-total      |                                 |          |      |                                    |                |                | 20000          |      |                   |         |
| 0+375 to 0+390 | Prof. Abdul Khalek              | HH       | Male | Wear Shop<br>Computer Service Shop | 3 sqm<br>4 sqm | 15000<br>15000 | 15000<br>15000 |      |                   |         |
| Sub-total      |                                 |          |      |                                    |                |                | 30000          |      |                   |         |
| 0+424 to 0+427 | Md. Jakir (Hawker)              | HH       | Male | Temporary Kiosk                    | 3 sqm          | 10000          | 10000          |      |                   |         |
| Sub-total      |                                 |          |      |                                    |                |                | 10000          |      |                   |         |



Annexure 8: Monitored Compensation Matrix: Mathbaria Road Contract: CTEIP/MAT/RD/01

|       |    |                       |    |      |             |         |       |       |  |
|-------|----|-----------------------|----|------|-------------|---------|-------|-------|--|
|       |    | Sub-total             |    |      |             | 10000   |       |       |  |
| 0+445 | to | Habibur Rahman        | HH | Male | Chumbul     | 3       | 500   | 1500  |  |
| 0+467 |    |                       |    |      | Mehgoni     | 5       | 700   | 3500  |  |
|       |    | Sub-total             |    |      |             |         |       | 5000  |  |
| 0+478 | to | Dr. Sirazul Islam     | HH | Male | Coconut     | 4       | 1000  | 4000  |  |
| 0+493 |    |                       |    |      | Rain tree   | 1       | 30000 | 30000 |  |
|       |    |                       |    |      | Mahgoni     | 1       | 1000  | 1000  |  |
|       |    | Sub-total             |    |      |             |         |       | 35000 |  |
| 0+575 | to | Prof. Bashir          | HH | Male | Coconut     | 2       | 1000  | 2000  |  |
| 0+589 |    |                       |    |      | Areca nut   | 4       | 300   | 1200  |  |
|       |    |                       |    |      | Rain tree   | 3       | 1000  | 3000  |  |
|       |    |                       |    |      | Mahgoni     | 2       | 1500  | 3000  |  |
|       |    | Sub-total             |    |      |             |         |       | 9200  |  |
| 0+610 | to | Monir Kobir           | HH | Male | Chumbul     | 14      | 500   | 7000  |  |
| 0+628 |    |                       |    |      | Mehgoni     | 1       | 1000  | 1000  |  |
|       |    |                       |    |      | Palm        | 1       | 500   | 500   |  |
|       |    |                       |    |      | Date        | 1       | 300   | 300   |  |
|       |    | Sub-total             |    |      |             |         |       | 8800  |  |
| 0+637 | to | Dr. Halim             | HH | Male | Fence (Tin) | 30 sqm  | 15000 | 15000 |  |
| 0+662 |    |                       |    |      | Toilet      | 3.5 sqm | 10000 | 10000 |  |
|       |    | Sub-total             |    |      |             |         |       | 25000 |  |
| 0+663 | to | Md. Iqbal & Md. Imran | HH | Male | Wall        | 10 sqm  | 15000 | 15000 |  |
| 0+684 |    |                       |    |      | Toilet      | 2 sqm   | 8000  | 8000  |  |
|       |    | Sub-total             |    |      |             |         |       | 23000 |  |
| 0+685 | to | Abdul Aziz            | HH | Male | Rain tree   | 2       | 500   | 1000  |  |
| 0+700 |    |                       |    |      | Mehgoni     | 6       | 1000  | 6000  |  |

Annexure 8: Monitored Compensation Matrix: Mathbaria Road Contract: CTEIP/MAT/RD/01

|                |                   |                  |      |           |  |    |         |       |               |             |  |  |
|----------------|-------------------|------------------|------|-----------|--|----|---------|-------|---------------|-------------|--|--|
|                |                   |                  |      |           |  |    | Coconut | 1     | 500           | 500         |  |  |
|                |                   | <b>Sub-total</b> |      |           |  |    |         |       |               | <b>7500</b> |  |  |
| 0+725 to 0+757 | to Nasu Mia       | HH               | Male | Segun     |  | 1  | 5000    | 5000  |               |             |  |  |
|                |                   |                  |      | Nut       |  | 1  | 2000    | 2000  |               |             |  |  |
|                |                   |                  |      | Mehgoni   |  | 10 | 1000    | 10000 |               |             |  |  |
|                |                   | <b>Sub-total</b> |      |           |  |    |         |       | <b>17000</b>  |             |  |  |
| 0+765 to 0+789 | to Jahangir Khan  | HH               | Male | Cotton    |  | 1  | 3000    | 3000  |               |             |  |  |
|                |                   |                  |      | Mehgoni   |  | 12 | 700     | 8400  |               |             |  |  |
|                |                   |                  |      | Areca nut |  | 10 | 500     | 5000  |               |             |  |  |
|                |                   | <b>Sub-total</b> |      |           |  |    |         |       | <b>16400</b>  |             |  |  |
| 0+810 to 0+825 | to Khablur Khokon | HH               | Male | Areca nut |  | 8  | 500     | 4000  |               |             |  |  |
|                |                   |                  |      | Mehgoni   |  | 6  | 700     | 4200  |               |             |  |  |
|                |                   | <b>Sub-total</b> |      |           |  |    |         |       | <b>8200</b>   |             |  |  |
|                |                   | <b>Total</b>     |      |           |  |    |         |       | <b>355100</b> |             |  |  |

Annexure 8: Monitored Compensation Matrix: Galachippa Road Contract: CTEIP/GAL/RD/01

Road-wise Compensation Matrix to market value of 4 roads of Galachippa Pourashava are presented in Table-1, 2, 3 and 4

Table-1: College road and connecting road of proposed (CS) in Degree College, (Ward no. 8 to 9)

| Chainage | Name       | Position | Age | Occupation.                      | Member |   | Loss of Business | Rate of Comp. | Total (Tk) | Paid | Signature/initial | Remarks |
|----------|------------|----------|-----|----------------------------------|--------|---|------------------|---------------|------------|------|-------------------|---------|
|          |            |          |     |                                  | M      | F |                  |               |            |      |                   |         |
| 0+305    | Md. Emadul | Head     | 25  | Shopkeeper (Small Glossary Shop) | 1      | 2 | Shifting cost    | Tk-6500       | 6500       |      |                   |         |
| Total    |            |          |     |                                  |        |   |                  |               | TK-11000   |      |                   |         |

Table-2: Wapda Road (damaged parts) (Ward no. 1, 2, 3, 4)

| Chainage | Name        | Position | Age | Occup.     | Member |   | Loss of Business | Rate of Comp. | Total (Tk) |
|----------|-------------|----------|-----|------------|--------|---|------------------|---------------|------------|
|          |             |          |     |            | M      | F |                  |               |            |
| 0+705    | Md. Mostafa | Head     | 45  | Shopkeeper | 3      | 2 | 7 days           | 150           | 1050       |
| Total    |             |          |     |            |        |   |                  |               | 1050       |

Table-3: Banani road with Connecting Khalifa Road (Ward no. 9)

| Chainage       | Name                       | Position | Age | Occupation | Member |   | Affected Asset               | Qty      | Market price  | Compensation |
|----------------|----------------------------|----------|-----|------------|--------|---|------------------------------|----------|---------------|--------------|
|                |                            |          |     |            | M      | F |                              |          |               |              |
| 0+005          | Elias Khandakar            | Head     | 33  | Farming    | 3      | 2 | Rain tree<br>Chambul         | 1<br>1   | 1000<br>1000  | Tk-2000      |
| 0+005 to 0+040 | Owadud Khalifa             | Head     | 38  | Business   | 4      | 2 | Rain Tree<br>Mehguni (small) | 4<br>10  | 4000<br>1500  | Tk-5500      |
| 0+080          | Shahida Begum              | Head     | 36  | Housewife  | 2      | 3 | Chambul<br>Mehguni           | 1<br>1   | 1000<br>1000  | Tk-2000      |
| 0+140 to 0+160 | Md. Kamal Hossein (Shakib) | Head     | 52  | Business   | 2      | 2 | Mehguni<br>Chambul           | 20<br>03 | 20000<br>1600 | Tk-21600     |
| Total          |                            |          |     |            |        |   |                              |          |               | TK-31,100    |

Annexure 8: Monitored Compensation Matrix: Galachipa Road Contract: CTEIP/GAL/RD/01

Table-4:  
Shanti Bagh Road (Ward no. 3)

| Chainage  | Name                               | Position | Age | Occupation | Member |   | Affected Asset                  | Qty         | Market price       | Compensation |  |  |  |
|-----------|------------------------------------|----------|-----|------------|--------|---|---------------------------------|-------------|--------------------|--------------|--|--|--|
|           |                                    |          |     |            | M      | F |                                 |             |                    |              |  |  |  |
| 0+165     | Mr. Sabuj Khan                     | Head     | 35  | Business   | 3      | 2 | Coconut<br>Rain tree<br>(small) | 1<br>2      | 1000<br>300        | Tk-1300      |  |  |  |
| 0+170     | Md. Salam Miridha                  | Head     | 50  | Farming    | 2      | 4 | Coconut<br>Chumbul<br>Mango     | 1<br>2<br>1 | 1000<br>300<br>500 | Tk-1600      |  |  |  |
| 0+180     | Md. Rafique<br>(Counselor, ward-9) | Head     | 52  | Politician | 4      | 3 | Rain tree<br>Mehgoni            | 1<br>1      | 1000<br>1200       | Tk-2700      |  |  |  |
| Sub-total |                                    |          |     |            |        |   |                                 |             |                    | TK-5600      |  |  |  |