Environmental Monitoring Report

PUBLIC

Project Number: 53276-002
Semi Annual Report (October 2024 - March 2025)
July 2025

India: Tripura Urban and Tourism Development Project

PART A

Prepared by Project Management Unit, Urban Development Department, Government of Tripura for Asian Development Bank (ADB).

TRIPURA URBAN AND TOURISM DEVELOPMENT PROJECT (TUTDP)

PROJECT MANAGEMENT UNIT

2nd SEMI ANNUAL ENVIRONMENT MONITORING REPORT
ADB Loan 4375-IND
(Period October 2024 to March 2025)

July 2025

URBAN DEVELOPMENT DEPARTMENT
GOVT. OF TRIPURA
Tripura Urban Planning & Development Authority (TUDA) || Tripura Tourism Development Corporation Limited (TTDCL)

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ABBREVIATIONS

AC	-	Asbestos Cement
ADB	-	Asian Development Bank
ASI	-	Archaeological Survey of India
BOD	-	Biochemical Oxygen Demand
CGWA	-	Central Ground Water Authority
COD	-	Chemical Oxygen Demand
CPCB	-	Central Pollution Control Board
CPHEEO	-	Central Public Health and Environmental Engineering Organization
CTE	-	Consent to Establish
CTO	-	Consent to Operate
DBO	-	Design Build Operate
DG	-	Diesel Generator
DO	-	Dissolved Oxygen
DTW	-	Deep Tube well
DWS	-	Drinking Water & Sanitation (wing of PWD)
EA	-	Executing Agency
EHS	-	Environment, Health & Safety
EIA	-	Environmental Impact Assessment
EMP	-	Environmental Management Plan
EMR	-	Environment Monitoring Report
ESSR	-	Environment and Social Safeguard Unit
GESI	-	Gender Equality and Social Inclusion
GLSR	-	Ground Level Storage Reservoir
GRC	-	Grievance Redressal Committee
GRM	-	Grievance Redress Mechanism
HDPE	-	High Density Poly ethylene
IEE	-	Initial Environmental Examination
LOA	-	Letter of Acceptance
LPG	-	Liquefied Petroleum Gas
MoEFCC	-	Ministry of Environment and Forest & Climate Change, Government of India
NOC	-	No Objection Certificate
NTP	-	Notice to Proceed
O&M	-	Operation and Maintenance
OHSR	-	Overhead Storage Reservoir
PIU	-	Project Implementation Unit
PMSC	-	Project Management Supervision Consultant
PMU	-	Project Management Unit
PMx	-	Particulate Matter with size x micron
PUC	-	Pollution Under Control
RP	-	Resettlement Plan

SEMP	-	Site Environment Management Plan
SGS	-	Safeguard and Gender Cell
SPS	-	Safeguard Policy Statement
TMP	-	Traffic Management Plan
TSPCB	-	Tripura State Pollution Control Board
TTDCL	-	Tripura Tourism Development Corporation Limited
TUDA	-	Tripura Urban Planning & Development Authority
UDD	-	Urban Development Department
ULB	-	Urban Local body
USD	-	US Dollar
WTP	-	Water Treatment Plant

I. INTRODUCTION

A. Background – Overall Project Description and Objective

1. Urban Development Department (UDD), Govt of Tripura (the Executing Agency) through its Project Management Unit and Project Implementing Unit is implementing the "**Tripura Urban and Tourism Development Project**" (**TUTDP**)". The Loan for TUTDP (ADB Loan – 4375 IND) was signed on 22nd December 2023 (Loan effective 20th March 2024) between Government of India and the Asian Development Bank. Government of India has agreed to make the proceeds of the loan available to the Government of Tripura upon terms and conditions satisfactory to the Asian Development Bank.

2. The Government of Tripura acting through the Urban Development Department (UDD) will be the project executing agency, and the Tripura Urban Planning and Development Authority (TUDA) and Tripura Tourism Development Corporation Limited (TTDCL) will be the implementing agencies and will be wholly responsible for implementing ADB-financed projects, as agreed jointly between the borrower and ADB, and following the policies and procedures of the government and ADB. ADB staff is responsible for supporting implementation, including monitoring compliance by UDD, TUDA, and TTDCL of their obligations and responsibilities for project implementation following ADB policies and procedures and the loan and project agreements.

3. Aligned with the Government of India's vision, Tripura has prepared a long-term plan to be a fully developed state by 2047, hundredth year of the country's independence. The plan identifies a set of 251 cross-sector development indicators and specifically aims at making urban areas more liveable, citizen-friendly, sustainable, and resilient and at enhancing the quality of life of its urban inhabitants[1]. The state will also benefit from the Government of India's support on urban sector policies, capacity building, urban planning, implementation, and governance.

4. The project, TUTDP will improve the municipal infrastructure and public services for 12 out of 20 urban local bodies (ULBs) along the main national highways in Tripura[2]. In addition, the project will strengthen the capacities of those ULBs for integrated planning, including climate and disaster resilience, project management, operation and maintenance (O&M) of water supply and road, service delivery, and financial sustainability through improved resource mobilization and creditworthiness. The project also aims to upgrade key tourism sites that are accessible from selected project towns and build the capacity of the state tourism agency, the Tripura Tourism Development Corporation Limited (TTDCL), with a 10-year business plan and marketing strategy.

5. Total TUTDP investment envisaged is USD 125 million and based on 80% ADB financing. ADB's loan would be USD 100 million ADB funding (Ordinary Capital Resources) and 20% counterpart funding by Government of Tripura would be around USD 25 million. The implementation period of TUTDP is 6 years, from 2024 to 2030.

6. The project is aligned with the following impacts: clean and sustainable environment in ULBs achieved, and Tripura's upgraded destinations attracting more tourists[3] The project will have the following outcome: urban services in ULBs, and sustainable tourism improved in project areas.

[1] Government of Tripura, Planning Department. 2022. *Lakshya 2047*. Agartala.
[2] The 12 project ULBs are Amarpur, Ambassa, Belonia, Bishramganj, Dharmanagar, Kailasahar, Khowai, Kumarghat, Melaghar, Mohanpur, Ranirbazar, and Udaipur.
[3] Government of India, Ministry of Housing and Urban Affairs. 2015. *Smart Cities Mission Guidelines*. New Delhi; and Government of Tripura, Department of Tourism. 2020. *Tourism Policy 2020–2025*. Agartala.

- **Output 1: Municipal reforms and capacity of ULBs strengthened.** The project will strengthen (i) the capacity of ULBs' staff in project management, service delivery, and O&M of urban infrastructure; (ii) preparation and implementation of plans for enhancement of ULBs' creditworthiness through improved own-source revenues (e.g., property taxes) and financial management; (iii) city-wide inclusive sanitation complementing government schemes; (iv) integrated urban planning incorporating climate and disaster resilience, universal design principles, and gender equality and social inclusion (GESI) analysis in Dharmanagar and Udaipur; and (v) building regulations and by-laws.

- **Output 2: Climate-resilient urban infrastructure improved.** The project will improve urban infrastructure, such as (i) water supply system with four new water treatment plants (total capacity of at least 23.15 million liters per day), 42 kilometres (km) new transmission and distribution pipes, and 52 district metered areas covering 74,700 households with water meters (with 24/7 supply and non-revenue water target of 15%); (ii) 55 km of stormwater drains; and (iii) 21 km of municipal roads for the 12 project ULBs, by three sub-regional groups: (a) Ambassa, Dharmanagar, Kailasahar, and Kumarghat; (b) Khowai, Mohanpur, and Ranirbazar; and (c) Amarpur, Belonia, Bishramganj, Melaghar, and Udaipur. Project implementation units (PIU) will be set up in Kumarghat, Agartala and Udaipur respectively for close project implementation monitoring and supervision.

- **Output 3: Tourist destination improved.** The project will strengthen the public infrastructure that is vital for climate-resilient and ecotourism such as (i) tourism destination development (e.g., two temples and a campsite) with improved climate and disaster resilience and green infrastructure retrofitted (e.g. use of light emitting-diode [LED] lights and bio-composters), (ii) a digital museum development at the Neermahal Palace on the history and cultural heritage, (iii) an improved tourist accommodation (Unakoti) and a family-oriented adventure park (Sonamukhi), and (iv) tourism-related goods and equipment for selected tourism destinations.

- **Output 4: Capacity of tourism development corporation's operational services improved. TTDCL** will (i) develop a 10-year business plan including marketing and coordination with the private sector (e.g., outsourcing of O&M of tourism facilities and assets to local businesses, small and medium enterprises, especially those run by women); (ii) demonstrate community-based tourism development; (iii) design and implement stakeholder tourism capacity and skill development program; and (iv) conduct marketing and tourism promotion activities.

7. The following figures show the area covered under TUTDP works, both Urban and Tourism.

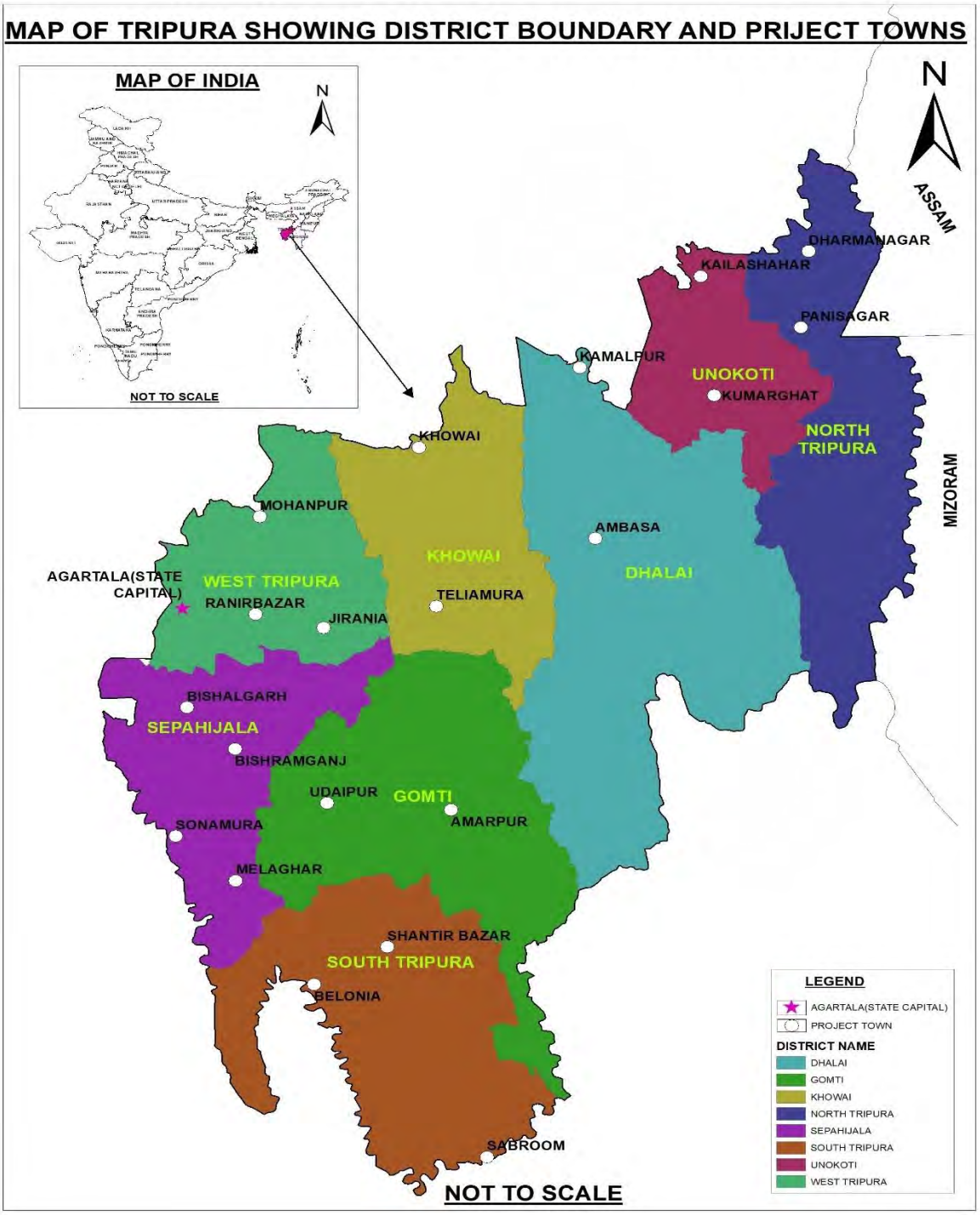

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Figure 1: District and Town map of Tripura

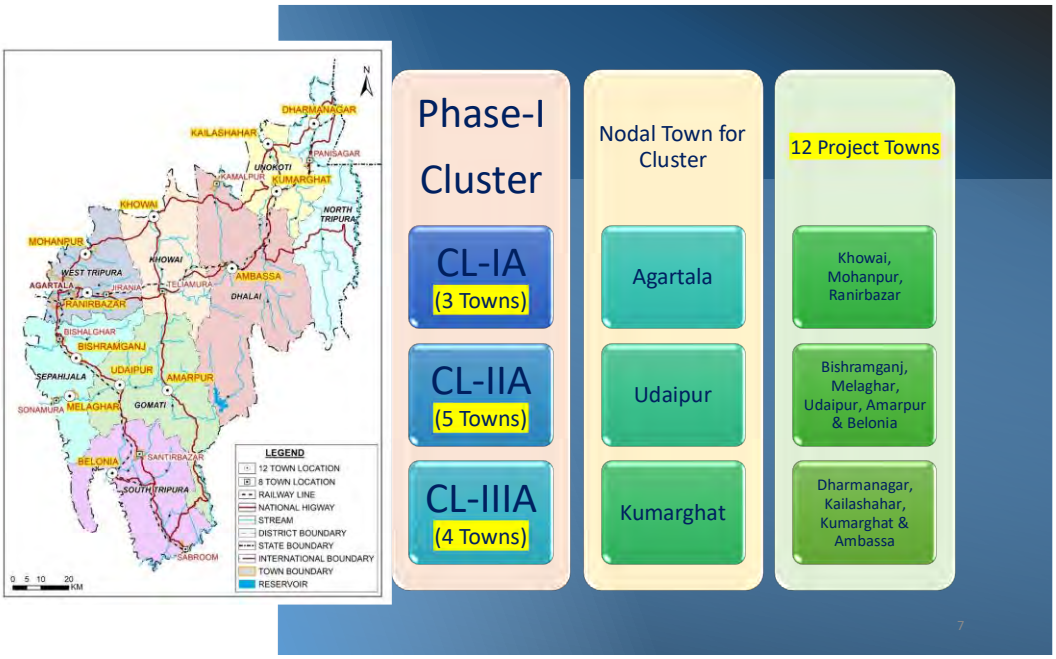


Figure 2: Phase I Cluster Towns for Urban Projects

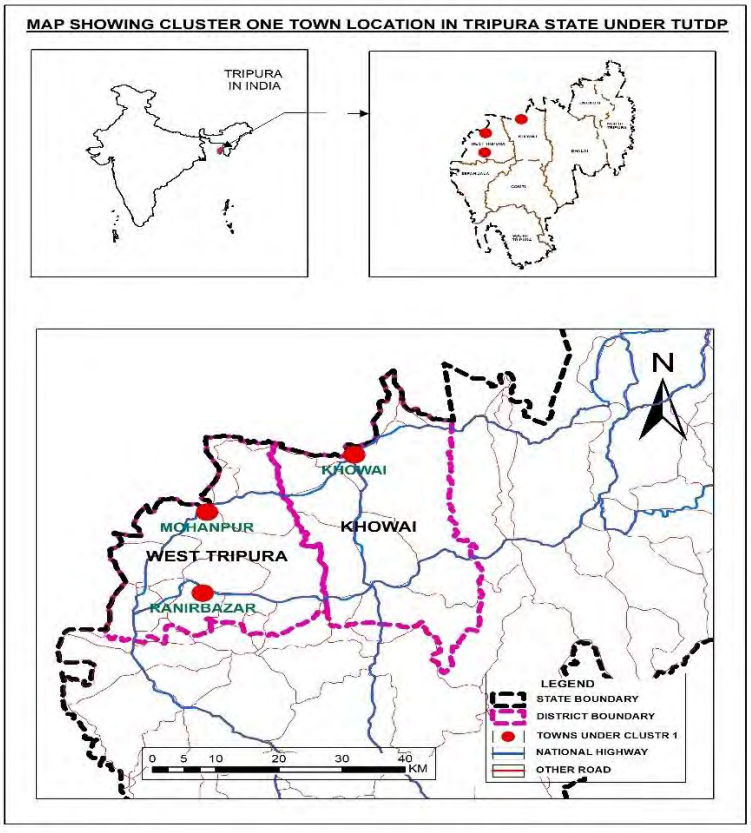


Figure 3: Cluster IA Towns – Urban projects

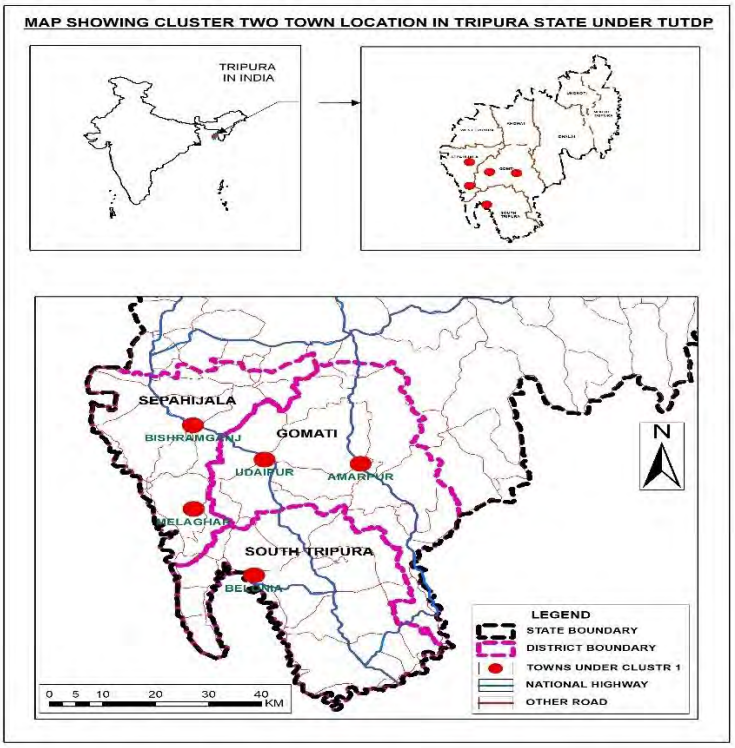


Figure 4: Cluster IIA Towns – Urban projects

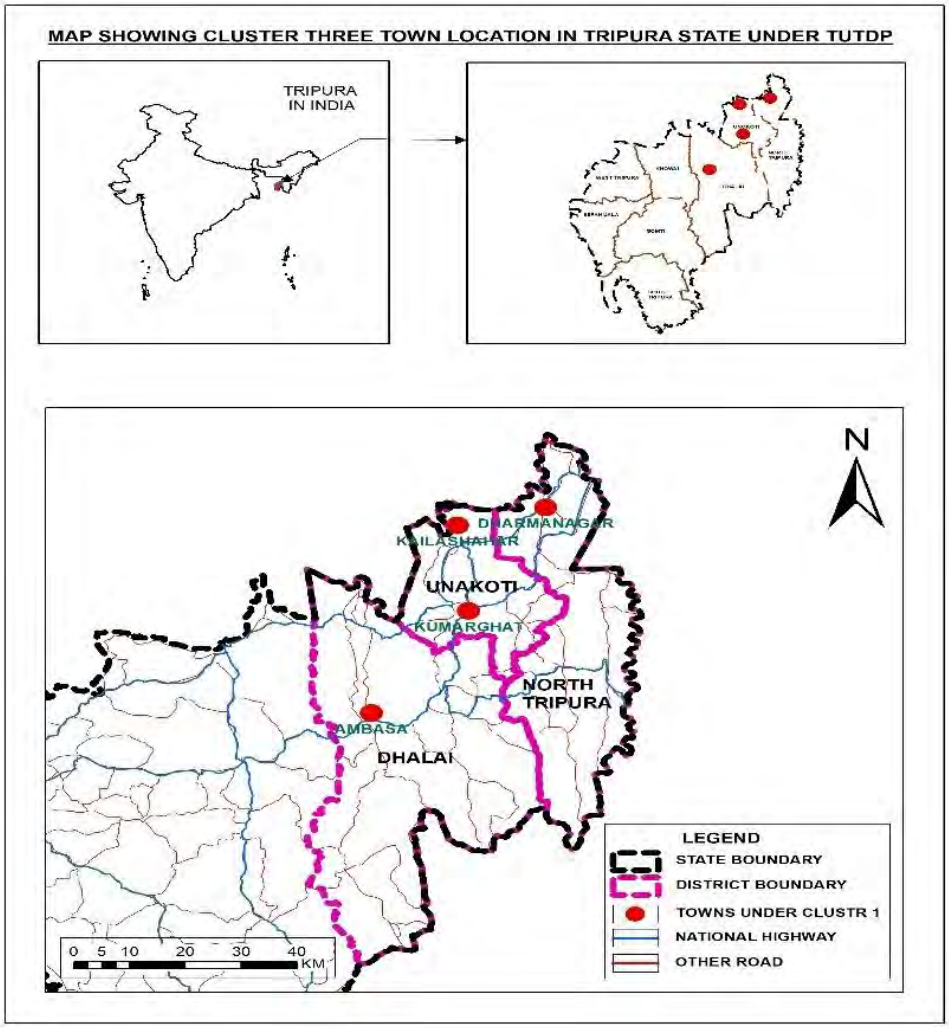


Figure 5: Cluster IIIA Towns – Urban projects

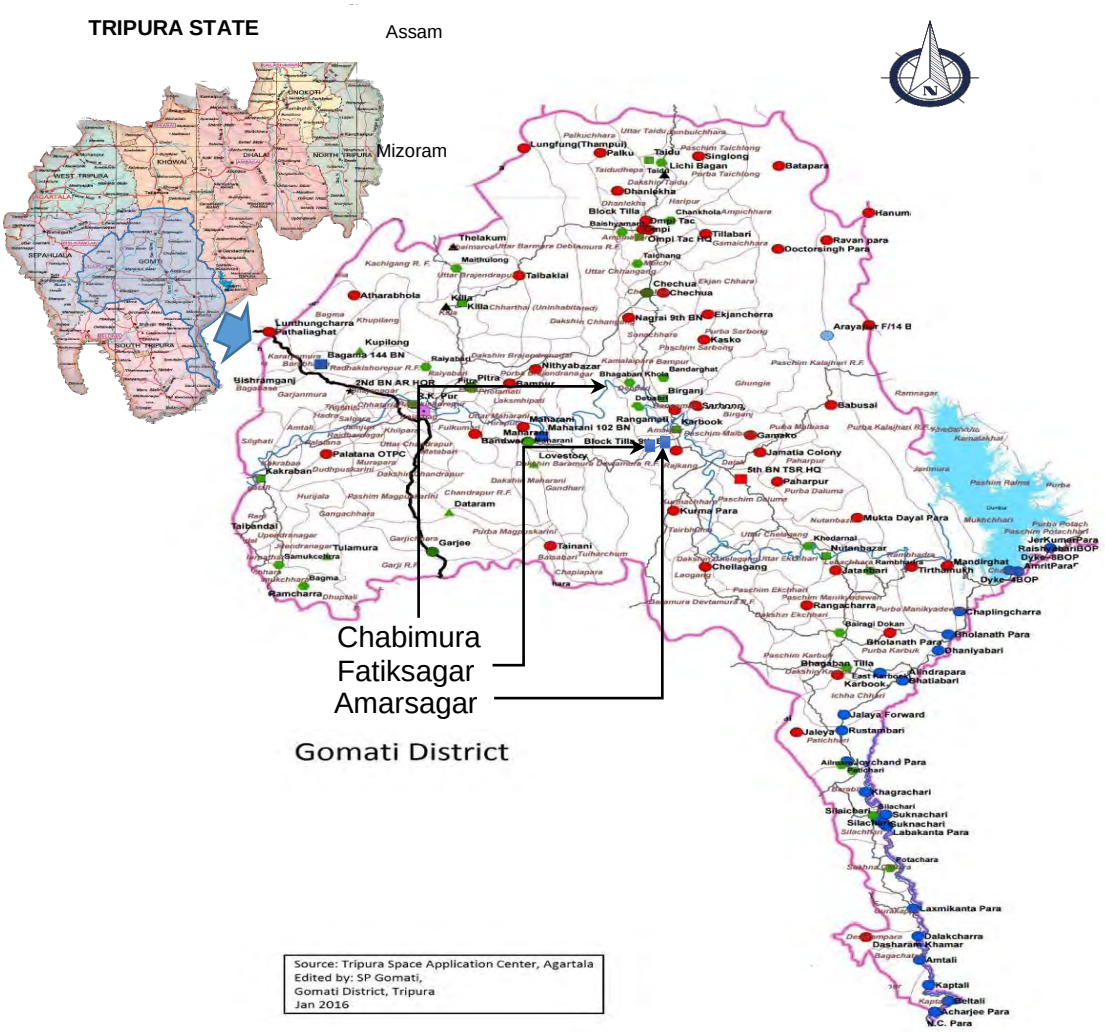


Figure 6: Location of Tourism Destination Development at Chabimura and Visitor Amenities/ Facilities at Fatik Sagar and Amar Sagar

Figure 7: Project Location- Development of Sonamukhi Eco Accommodation & Adventure Park and Rehabilitation of Unakoti Tourist Lodge at Kailashahar

Figure 8A: Geographical location of Chaturdash Temple and Yatri Niwas

Figure 8B: Geographical location of Kasba Kali Temple in district Sepahijala

B. Environmental category as per ADB Safeguard Policy Statement, 2009

8. Sub Projects under **TUTDP** has been classified by ADB as environmental assessment **Category B** (some temporary impacts but less significant than category A) and the impacts of subprojects were assessed through Initial Environmental Examination (IEE), prepared according to ADB's Safeguard Policy (SPS 2009).

C. Environmental category of each subproject as per national laws and regulations

9. There are 6 urban sector projects and 4 tourism sector projects (civil works contracts) - None of the 6 urban sector subprojects under TUTDP are included in the list of projects requiring Environmental Clearance, therefore EIA and Environmental Clearance (EC) is not required. There are 3 area development projects under tourism sector. Since the area development work is less than 20,000 sqm, "Environment Clerance" are not required for those. It was confirmed by State Level Environment Impact Assessment Authority. Letters are attached in **Appendix 5.**

D. Project Safeguards Team

10. Environment safeguard team for the project is given in **Table 1.**

Table 1: Project Safeguard Team

Name	Designation/Office	Email Address	Contact Number
URBAN & TOURISM SECTOR			
1. PMU			
Er. Mongsi Mog	Project Coordinator (Urban & Tourism) PMU TUTDP and In-charge- Safeguard & Gender Cell (SGC)	tuda.trp@gmail.com	9436122818
Dr. Mahaveer Saini	Environmental Safeguards Officer- IC	sainimp170779@gmail.com	9509557249
2. PIUs			
Cluster IA Towns – PIU- Urban (HQ- Agartala)			
Er Dibyendu Chakma	Executive Engineer, In-charge Environment Safeguard	eedibyendu@gmail.com	7629039641
Er Sukumar Debbarma	Assistant Engineer, Assistant Environment Safeguard	sukumardebbarma1971@gmail.com	9862129334
Cluster IIA Towns – PIU- Urban (HQ- Udaipur)			
Er Natya Kumar Jamatia	Executive Engineer, In-charge Environment Safeguard	jamatianatyakumar@gmail.com	7005344544
Er Sukumar Debbarma	Assistant Engineer, Assistant Environment Safeguard	sukumardebbarma1971@gmail.com	9862129334
Cluster IIIA Towns – PIU- Urban (HQ-Kumarghat)			
Er Rabindra Debbarma	Executive Engineer, In-charge Environment Safeguard	debbarmarabi@gmail.com	9612841897
Er Swarup Pal	Assistant Engineer, Assistant Environment Safeguard	swrppal@gmail.com	9436120709
TOURISM SECTOR			

Name	Designation/Office	Email Address	Contact Number
PIU (Tourism) Agartala			
Er. Uttam Pal	Executive Engineer, In-charge Environment Safeguard	tripuratourism09@rediffmail.com	8974870221
Er. Sunil Podder	Executive Engineer, Assistant Environment Safeguard	poddarsunil1976@gmail.com Tripuratourism09@rediffmail.com	9330851223
PIU (Tourism) Udaipur			
Er. Sunil Podder	Executive Engineer, In-charge Environment Safeguard	poddarsunil1976@gmail.com Tripuratourism09@rediffmail.com	9330851223
Er. Jhutan Das	Junior Engineer, Assistant Environment Safeguard	das.jhutan82@gmail.com	9862843578
PIU (Tourism) Kumarghat			
Er. Sunil Podder	Executive Engineer, In-charge Environment Safeguard	poddarsunil1976@gmail.com tripuratourism09@rediffmail.com	9330851223
Er. Hero Debbarma	Junior Engineer, Assistant Environment Safeguard	herodebbarma041@gmail.com	8974656267
3. Consultants			
PMSC- Urban & Tourism			
Dr. Ardhendu Mitra	Environment Specialist	ardhendumitra@gmail.com	9830415953
Mr. Prithwiraj Kundu	Support Environment	prithwiraj96@gmail.com	7890094318

11. Safeguard management system for the project is shown below.

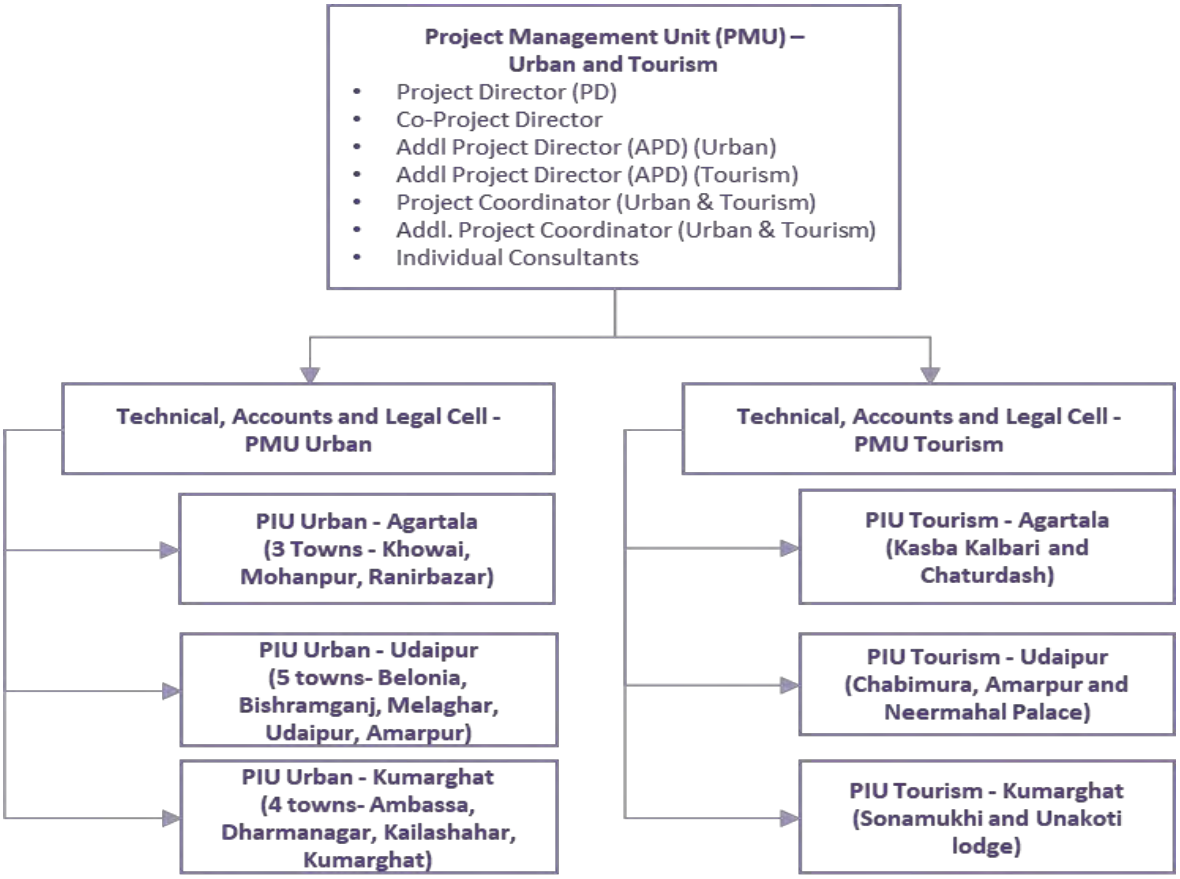


Figure 9: Project Organization structure

E. Overall project and sub-project progress and status

12. There are 10 civil work sub project packages under TUTDP**.** Summary of work contracts including type of contract (**up to 31st March, 2025**) is shown below.

Parameters	DBO Type Contract	Item Rate Contract
Urban projects		
Total Number of Packages	3	3
Contracts Executed/Completed	0	0
Contracts under Implementation	3	0
Bidding under Progress	0	3
Planning and Design	0	0
Tourism projects		
Total Number of Packages	0	4
Contracts Executed/Completed	0	0
Contracts under Implementation	0	3
Bidding under Progress	0	0
Planning and Design	0	1

13. Other than 10 above packages, there are 4 small packages considered under tourism sector. Three packages are “procurement of goods” packages and one “Tourism Promotion, Marketing and Capacity building consultant” package

14. **Table 2** shows the sub projects and the work packages including the status of award of contracts as on **31st March, 2025**. The contract agreements for 6 packages (3 nos. urban and 3 nos. tourism) have been signed and project work is ongoing for the 5 packages (3 urban and 2 tourism) and for 1 tourism package, preliminary activities to be started.

Table 2: Summary status of Subprojects under TUTDP (on 31st March, 2025)

Sr. No.	Package No.	Packages	Status
URBAN PROJECT			
1	TUDA/WS-01/P-01	Design, Build, and Operate Contract for Comprehensive Water Supply Improvement Works for Cluster IA Towns (Khowai, Mohanpur and Ranirbazar) of Tripura	Commencement date: **06.02.2024** Work under progress, detail in Table 3
2	TUDA/WS-02/P-02	Design, Build, and Operate Contract for Comprehensive Water Supply Improvement Works in Cluster IIA Towns Towns (Udaipur, Amarpur, Bishramganj, Melaghar, and Belonia) of Tripura	Commencement date: **06.02.2024** Work under progress, detail in Table 3
3	TUDA/WS-03/P-03	Design, Build, and Operate Contract for Comprehensive Water Supply Improvement Works in Cluster IIIA Towns (Dharmanagar, Kailashahar, Kumarghat and Ambassa) of Tripura	Commencement date: **06.02.2024** Work just started, detail in Table 3
4	TUDA/R &SD -01/P-04	Improvement of Roads and Storm Water Drainage System in Khowai, Ranirbazar and Mohanpur (**Cluster IA Towns**)	Bid under evaluation. Technical bid evaluation report sent to ADB on 29.03.25.
5	TUDA/R &SD -02/P-05	Improvement of Roads and Storm Water Drainage System in, Melaghar, Bishramganj, Udaipur, Amarpur and Belonia (**Cluster IIA Towns**)	Technical bid is opened on 24th December, 2024. Scrutiny Report submitted for Approval. Technical bid evaluation report sent to ADB on 29.03.25.
6	TUDA/R &SD -03/P-06	Improvement of Roads and Storm Water Drainage System in, Dharman-agar, Kailasahar, Kumarghat and Ambassa (**Cluster IIIA Towns**)	NOL on the financial bid evaluation report has been received from ADB on 24th January 2025. LOA is issued on 13th March, 2025. Contract agreement will be signed soon.
TOURISM PROJECT			
7	TTDCL/CHB/W01	Tourism Destination Development at Chabimura and Upgradation/ Beautification of Visitor Amenities/ Facilities at Fatik Sagar and Amar Sagar	Commencement date: **07.02.2024** Work under progress, detail in Table 3

Sr. No.	Package No.	Packages	Status
8	TTDCL/UKT/W04	Development of Sonamukhi Eco Accommodation & Adventure Park and Rehabilitation of Unakoti Tourist Lodge at Kailashahar	Commencement date: **02.03.2024** Work under progress, detail in Table 3
9	TTDCL/CKM/W03	Upgradation of visitor amenities/ facilities, enhancement of built and natural features at Chaturdash Devta Temple and Kasba Kalibari Temple and Reconstruction of Yatri Niwas at Chaturdash Devta Temple	NOL is received from ADB and LOA is Issued. **Contract Agreement Signed on 25th March, 2025.** Project Site handed over to the contractor.
10	TTDCL/NER/W02	Adaptive reuse of Neermahal as Digital Museum including planning and design	Revised DPR Complying to ADB Comments submitted
PROCUREMENT and CONSULTANCY PACKAGE- TOURISM			
11	TTDCL/G-01	Supply of items (i) FRP Kayaks and Accessories (ii) Supply of 30-seater Battery Operated Boats all complete (iii) Supply of Floating Pontoon and Accessories all complete	Bid Document Ready. Bids will be Invited in the Year 2025
12	TTDCL/G-03	Supply and Installation of (i) Children play and Gym Equipment for Chabi-mura, Fatik Sagar and Sonamukhi and (ii) Supply and installation of ad-venture activity equipment and accessories all complete at Sonamukhi	Bid Document Ready. Bids will be Invited in the Year 2025
13	TTDCL/G-02:	Supply of Battery-Operated Cart and accessories all complete (8 Carts) for Chabimura and Sonamukhi	Bid Document Ready. Bids will be Invited in the Year 2025
14	TTDCL/CS-01	Tourism Promotion, Marketing and Capacity building consultant	No progress

15. For the awarded packages, except pkg. no. TTDCL/CKM/W03, contractors have been mobilized and works are ongoing. Photo illustration of project activities (sample) is shown in **Appendix 1.**

F. Description of subprojects (package-wise) and status of implementation

16. **Table 3** below shows implementation status of awarded sub project packages up to **31st March, 2025.**

Table 3: Status of Implementation of Sub project (31st March, 2025)

Package Number (Contractor)	Components/List of Works- as per IEE	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)[4]	Contract Status (specify if under bidding or contract awarded)	If On-going Construction	
				% Physical Progress	Expected Completion Date
URBAN PROJECTS					
TUDA/WS-01/P-01 (M/s Eco Protection Engineers Pvt. Ltd)	Comprehensive Water Supply Improvement Works for Cluster IA Towns (Khowai, Mohanpur and Ranirbazar) **<u>Khowai</u>** Work components include: (i) Construction of 2 nos. Deep Tube Well (DTW) with IRP at 2 different locations, (ii) Construction of 1 no. OHSR, 400 KL capacity near WTP Campus ward no. 12, (iii) laying of approx. 1.43 km transmission main, (iv) laying of Approx. 12.51 km (6.749 km remodelling & 5.766 km expansion) water distribution pipeline and (v) installation of bulk flow meter and consumer meter. **<u>Mohanpur</u>** Work components include: (i) Construction of 5 nos. Deep Tube Well (DTW) at 5 different locations, (ii) Construction of 3 no. Iron Removal Plant (IRP) in 2 OHSR locations (iii) Construction of 2 nos. OHSR, one number 850 KL capacity at old MMC ward no. 15, another 750 KL capacity at Tulabagan, Ward No-12 (iv)	**Khowai-** • Validation of water demand approved, in Khowai. • 400 KL OHSR design & GFC drawing approved for Khowai • 2 Nos DTW Completed; Validation of water demand, CWRM, distribution network design approved in Khowai. • 1st lot of DI & HDPE Pipe procurement completed. Work to be started. • 400 KL OHSR up to 3rd brace beam completed. **Mohanpur –** 5 Nos DTW Completed, • Validation of water demand approved,750 KL, 800 KL OHR design approved in Mohanpur. • Construction of 750 KL & 800 KL OHSR under progress. ✓ 1st brace beam above column concrete work is completed, and the 2nd brace beam reinforcement tying	Contract awarded	**Total – 22%** Khowai - 9 % Mohanpur – 6% Ranirbazar – 7%	05.02.2027

[4] If on-going construction, include %physical progress and expected date of completion

Package Number (Contractor)	Components/List of Works- as per IEE	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)[4]	Contract Status (specify if under bidding or contract awarded)	If On-going Construction	
				% Physical Progress	Expected Completion Date
	laying of approx. 7.083 km transmission main (raw & clear) , (v) laying of Approx. 11.70 km (10.10 km remodeling & 1.60 km expansion) water distribution pipeline and (vi) installation bulk flow meter and consumer meter. **<u>Ranirbazar</u>** Work components include**:** (i) Construction of 3 nos. Deep Tube Well (DTW) at 3 different locations, (ii) Construction of 1 no. Iron Removal Plant (IRP) with a GLSR, (iii) Construction of 2 nos. OHSR, one number 350 KL capacity near Anganwadi ward no. 13, one number 800 KL capacity at Krishna talli, ward no. 11, (iv) laying of approx. 4.192 km transmission main (2.557 km raw water and 1.637 km clear water main), (v) laying of Approx. 17.32 km (10.895 km remodeling & 6.426 km expansion) water distribution pipeline and (vi) installation bulk flow meter and consumer meter.	work is in progress at Ramkrishna Palli (OLD MMC) Ward No. 15. ✓ 1st brace beam above column concrete work is completed, and the 2nd brace beam reinforcement tying is in progress at Tula Bagan Office Tilla ward- 12. • 1st lot of DI & HDPE Pipe procurement done. • Pipe laying just started. Only 171 m. HDPE pipe-laying work are completed at ward no. 01, 02 **Ranirbazar-** • 3 Nos DTW Completed; • Validation of water demand, RWRM, CWRM, distribution design approved in Ranirbazar. • OHSR Construction is ongoing at Nalgaria Anganwadi site. ✓ Completed all pile (24 Nos) casting work. ✓ Excavation for pile cap going on. • Raw water (DI K9): DN 200 mm-just commenced • Clear water pipe laying (DI K9): DN 200 mm- Just commenced			

Package Number (Contractor)	Components/List of Works- as per IEE	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)[4]	Contract Status (specify if under bidding or contract awarded)	If On-going Construction	
				% Physical Progress	Expected Completion Date
		• Distribution pipe laying (HDPE PE 100 PN6) continued: DN 90 mm- 988.50 m DN 110 mm- 764.00 m DN 125 mm- 98.50 m DN 140 mm- 534.00 m DN 160 mm- 553.00 m DN 250 mm- 429.00 m			
TUDA/WS-02/P-02 (M/s Eco Protection Engineers Pvt. Ltd)	Comprehensive Water Supply Improvement Works in Cluster IIA Towns (Udaipur, Amarpur, Bishramganj, Melaghar, and Belonia) **Udaipur** Work components include: (i) Construction of intake structure and approach bridge on River Gomati, (ii) Construction of 7.6 MLD WTP at Banduar, (iii) Laying of approx. 930.46 m, Dia. 400 mm DI K9 pipe - Raw water Transmission Main & culvert above *nallaha* for carrying pipe; (iv) Laying of approx. 9.62 km, Dia. (400mm to 250mm) DI K9 Pipes - Clear water Transmission main; (v) Construction of 2 nos. OHSR. one at Rajendra Palli, opposite of Bhagini Nivedita School (Capacity 900 KL), and one at Rajarshi Town Hall Complex (Capacity 750 KL); (vi) Laying of approx. 31.22 km	**Udaipur-** Validation of water demand approved, CWRM, RWRM, distribution network design approved. WTP HFD, BEP, Layout Plan, GAD of Clarifloculator, CWR cum Pump house, Structural design & drawing of Clarifloculator approved. 2Nos (750 KL,900 KL) OHRs design & GFC drawing approved. Work under progress. ➢ **Rajarshi town hall area ,750 KL OHSR-** • Column shuttering above plinth beam • Column Concrete Casting work above plinth Beam • Staging work continued • 1st Brace Beam Reinforcement Work & Shuttering Work • 1stBrace Beam Concrete Casting Work	Contract awarded	**Total - 20 %** Udaipur – 4% Amarpur- 2% Bishramganj – 4% Melaghar – 5% Belonia- 5%	05.02.2027

Package Number (Contractor)	Components/List of Works- as per IEE	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)[4]	Contract Status (specify if under bidding or contract awarded)	If On-going Construction	
				% Physical Progress	Expected Completion Date
	(Remodelling 7.85 km + Expansion 23.37 km) distribution network; and (vii) Installation of Bulk Flow meter and consumer meters. **Amarpur** Work involves, remodelling of distribution network of approx. 1.1 km length and expansion of approx. 9.37 km water distribution at newly expanded area with installation of bulk water meter and domestic consumer meter. **Bishramganj** Work components include: (i) Installation of pump and pump house for 6 nos. Deep Tube Well (DTW) at 6 different locations which are already sunk by DWS, (ii) Construction of 3 nos. Iron Removal Plant (IRP) near OHSR, (iii) Construction of 3 nos. OHSR, one number 300 KL capacity Near CSC District Manager office, one number 200 KL capacity OHSR at Purba Barjala and one number of 250 KL capacity OHSR at Chesrimai-I (iv) laying of approx. 5.507 km clear water transmission main, (v) laying of Approx. 39.172 km (5.606 km remodelling & 33.566 km expansion) water distribution pipeline and (vi) installation of	• Column reinforcement work above 1st Brace Beam • Column shuttering work above 1st Brace Beam • Column Concrete casting above 1st Brace Beam • 2nd Brace Beam Reinforcement work in progress ➢ Rajendra Palli, opposite of Bhagini Nivedita School **900 KL OHSR -** • Column concrete casting Bellow Plinth Beam • Soil back filling work • Dressing work for plinth beam PCC • Plinth Beam PCC work • Centre point checking, Plinth Beam Reinforcement work & plinth Beam shuttering work • Plinth Beam concrete Casting • Column Starter Work • Soil filling upto Plint Beam ➢ Pipe laying work is just started. **Amarpur-** • Validation of water demand approved. Distribution network design approved. 1st lot of DI & HDPE Pipe procurement done.			

Package Number (Contractor)	Components/List of Works- as per IEE	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)[4]	Contract Status (specify if under bidding or contract awarded)	If On-going Construction	
				% Physical Progress	Expected Completion Date
	bulk flow meter & consumer meter. **<u>Melaghar</u>** Work components include: (i) Construction of 1 no RCC OHSR of 450 KL at Radhamadhabpur JB School – Ward no 1, (ii) laying of Clear Water Transmission Main of approx. 2.0 Km (CWTM), (iii) laying of Approx. 15.668 km (5.787 km remodelling & 9.882 km expansion) water distribution pipeline and (iv) installation of bulk flow meter and consumer meter. **<u>Belonia</u>** Work components include: (i) Construction of Deep Tube Well (DTW) and Iron Removal Plant (IRP) at 5 locations, (ii) construction of OHSR 300 KL and 400 KL near Satmura S.B. School Playground and near Abul Kalam Azad Community Hall respectively, (iii) laying of approx. 4.7 km DI K9 pipe clear water transmission man and (iv) laying of Approx. 28.58 km new (only expansion) water distribution pipeline and (v) installation of bulk flow meter and consumer meter.	Pipe laying work just started in DMA 2 at ward no- 05, 09, 10, 11, 12 & 13 respectively. **<u>Bishramganj-</u>** Validation of water demand approved,250,300 KL OHR design approved. RWRM, CWRM, Distribution network design approved. ➢ 250 & 300 KL OHSR construction work under progress. **1. CSE District manager office. (Bishramganj GP) 300 KL OHSR –** • Reinforcement binding work of 1st lift Column above plinth beam. • Shuttering work of 1st lift Column above plinth beam. • Casted up to 1st lift Column above plinth beam. **2. Chesrimai (Chesrimai GP) 250 KL OHSR-** • Sand filling work at Foundation Level. • PCC work at Foundation Level. • Reinforcement binding work of Foundation.			

Package Number (Contractor)	Components/List of Works- as per IEE	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)[4]	Contract Status (specify if under bidding or contract awarded)	If On-going Construction	
				% Physical Progress	Expected Completion Date
		• Shuttering work of Foundation. • Concrete casting work of Foundation. • Reinforcement binding work of Column below plinth beam. • Concrete casting work of Column below Plinth beam. • Backfilling work from foundation level to plinth level. • Plinth beam PCC work. • Plinth beam reinforcement binding work. • Plinth beam Shuttering work. • Plinth beam Concrete casting work ➢ 1st lot of DI & HDPE Pipe procurement done. Distribution- HDPE PE 100 PN6 DN 90- just started. **Melaghar-** • Validation of water demand under review,450 KL OHSR design approved. RWRM, CWRM, Distribution network design under process			

Package Number (Contractor)	Components/List of Works- as per IEE	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)[4]	Contract Status (specify if under bidding or contract awarded)	If On-going Construction	
				% Physical Progress	Expected Completion Date
		• **Melaghar Town, Radhamadhabpur JB School OHSR-1 450 KL-** RCC work of 2nd Brace Beam completed, Column Reinforcement work above 2nd Brace Beam in progress **<u>Belonia-</u>** •. Validation of water demand approved. CWRM, distribution network design approved. 400 KL & 300 KL OHSR design approved. ➢ 5 Nos DTWs Construction completed ➢ Construction of 400 KL & 300 KL OHSR under progress. **1. At Satmura SB School OHSR, 300 KL** • Above PB 1st lift Column Concrete work has been completed (27.5m to 29m asper approved drawing level) • Above PB 2nd lift Column Concrete work has been completed (29m to 30.4 m asper approved drawing level)			

Package Number (Contractor)	Components/List of Works- as per IEE	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)[4]	Contract Status (specify if under bidding or contract awarded)	If On-going Construction	
				% Physical Progress	Expected Completion Date
		• 1st Brace beam reinforcement work going on. **2. Abul kalam community hall OHSR, 400 KL** • Pile cap found Sand filling & PCC work. • Pile cap foundation concrete work (14.475m to 15.375m asper approved drawing level) • Below PB column concrete work (15.375 m to16.2m asper approved drawing level) • Dynamic Pile load test done • Back filing work done. ➢ 1st lot of DI & HDPE Pipe procurement done. ➢ **Distribution Pipe line work-** Laying. of Distribution pipeline HDPE PE100 PN6(Asper approved drawing length) - Just started.			
TUDA/WS-03/P-03 {M/s Prem Construction Company -GCKC Projects and Works Pvt. Ltd. (JV)}	Comprehensive Water Supply Improvement Works in Cluster IIIA Towns (Dharmanagar, Kailashahar, Kumarghat, and Ambassa) **Dharmanagar** Work components include: (i) Construction of intake structure of 14 MLD and	**Dharmanagar**- Design Preparatory work is in progress. Dharmanagar WTP HFD, BEP & layout Plan approved. 250 KL & 350 KL OHSR design & drawing approved. RWRM, CWRM & distribution network design under approval stage.	Contract awarded	Total- 2 % Dharmanagar- 0.3% Kailashahar- 0.5% Kumarghat- 0.2%	05.02.2027

Package Number (Contractor)	Components/List of Works- as per IEE	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)[4]	Contract Status (specify if under bidding or contract awarded)	If On-going Construction	
				% Physical Progress	Expected Completion Date
	approach bridge of 15m on River Kakri/ Juri, (ii) Construction of 10.8 MLD WTP near existing WTP at College Road, (iii) Clear Water Reservoir of 6.8 Lakh litter tank within WTP campus, (iv) Laying of 100 m, Dia. 400 mm DI K9 pipe - Raw water Transmission Main; (v) Laying of 1.235 km, Dia. (150 mm and 200 mm) DI K9 Pipes - Clear water Transmission main; (vi) Construction of 2 nos. OHSR. one at Circuit House (Capacity 250 KL), one at ISBT (Capacity 350 KL); (vii) Laying of approx. 18.006 km (Expansion/ new pipeline of 2.429 km + Remodeling pipeline of 15.577 km) 90-350 mm HDPE/DI pipe distribution network; and (viii) Installation of Bulk Flow meter, consumer meters and SCADA system (at WTP). **Kailashahar** Work components include: (i) New 4.5 MLD intake structure and approach bridge of length 20 m on Manu River, (ii) New 2.45 MLD WTP, (iii) Laying of 990 m, Dia. 200 mm DI K9 Raw water Transmission Main; (iv) Laying of 3.23 km, Dia. (150mm to 200mm) DI K9 Clear water Transmission main; (v)	➢ **WTP 10.8 MLD & Intake well site-** Soil testing continued **Kailashahar-** Water Supply validation plan, 300 KL, 250 KL OHSR design & drawing approved. RWRM, CWRM & distribution network design approved. ➢ **Proposed Intake well capacity of 4.5 MLD near Dr.B.R.Ambedkar statue-** Geotechnical investigation and soil test continued. ➢ **Proposed WTP site capacity of 2.45 MLD-** Geotechnical investigation and soil test continued ➢ **Proposed 300 KL OHSR at Kalipur**- Preliminary activity started ➢ **Proposed 250 KL OHSR at Kacherghat-** Preliminary activity started **Kumarghat-** WTP HFD, BEP, & layout plan approved. RWRM, CWRM & distribution network design under approval stage.		Ambassa- 1%	

Package Number (Contractor)	Components/List of Works- as per IEE	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)[4]	Contract Status (specify if under bidding or contract awarded)	If On-going Construction	
				% Physical Progress	Expected Completion Date
	Construction of 2 nos. OHSR. one at Kalipur (Capacity 300 KL) and other at Kasherghat (Capacity 250 KL); (vi) Laying of approx. 32.58 km (Remodeling 1.58 km + Expansion 31.0 km) distribution network; and (vii) Bulk Flow meter and consumer meters **Kumarghat** Work components include: (i) New 4 MLD intake structure and approach bridge of length 20 m on Manu River, (ii) New 2.3 MLD WTP with clear water reservoir (iii) Raw water Transmission Main from intake to WTP 100 m, Dia. 200 mm DI K9 pipe; (iv) 3.4 km, (Dia 150mm to 300mm) DI K9 Pipes - Clear water Transmission main; (v) One OHSR at Segregation Centre (Capacity 250 KL), (vi) Approx. 40.89 km (Remodelling approx.7.42 km + Expansion/new approx. 33.47 km) distribution network; and (vii) Bulk flow meter and consumer meters. **Ambassa** Work components include: (i) New 4 nos. Deep Tube Well (DTW) with Iron Removal Plants (IRP) (ii) One new OHSR at Magazine para (Ward 14), (iii)	➢ **Kumarghat Town at Intake point-** Soil investigation is started. **Ambassa-** Design Preparatory work is in progress. ➢ 4 Nos DTWs construction Completed. ➢ 600 KL OHSR design approved. Construction of 600 KL OHSR under progress **at Magazine Para OHSR site** • Shuttering work done for foundation base PCC. • PCC completed for foundation base. ➢ RWRM, CWRM & distribution network design under approval stage.			

Package Number (Contractor)	Components/List of Works- as per IEE	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)[4]	Contract Status (specify if under bidding or contract awarded)	If On-going Construction	
				% Physical Progress	Expected Completion Date
	Approx. 4.643 km clear water transmission main, (iv) Approx. 20.25 km (4.330 km remodelling & 15.915 km expansion) water distribution pipeline and (v) bulk flow meter and consumer meter.				
TOURISM PROJECTS					
TTDCL/CHB/W01(M/s BVG India Ltd.)	**<u>1, Chabimura Ecotourism destination</u>** The whole area is divided into three zones – A, B and C. ***Zone A include***: (i) carpeting of existing external car parking area with cement paver blocks and Procurement of battery-operated boats and golf carts , (ii) remodeling of the entrance plaza by providing MS entry gate, feature wall and ticketing counter, (iii) plastering and painting of Interpretation centre, (iv) adaptive reuse of 4 nos. of TTDCL accommodation units as ticketing counter and guard room, (v) proposed toilet block type 1, (vi) installation of water ATM near entrance gate, (vii) refurbishment of main jetty by increasing seating capacity, (viii) establishment of tree plaza next to main jetty, (ix) provision of 3 x 10,000 litre capacity OHT and (x) refurbishment of the existing toilet block. (xi) provision of Gabion mattress along river	**<u>For Chabimura site</u>** • Excavation work of driveway is in progress • Foundation and column casting work of staff quarter completed upto tie beam bottom and plinth beam steel binding work • Foundation work completed for eco-restaurant • Excavation work, foundation work and angle work are in progress for boundary fence. Beam casting work is completed up to 150 m • Foundation steel binding work is in progress in multi-cuisine restaurant • Plinth beam has been completed for changing room and kayak storeroom • Bed preparation work and material procurement is in progress for gabion structure • Soil filling work completed for picnic area	Contract awarded	16 %	06.02.2026

Package Number (Contractor)	Components/List of Works- as per IEE	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)[4]	Contract Status (specify if under bidding or contract awarded)	If On-going Construction	
				% Physical Progress	Expected Completion Date
	edge, and (xii) sewerage network and treatment facility. ***The Zone B*** include: (i) redevelopment of the existing picnic area, (ii) redevelopment of the existing stage with open air theatre, seating arrangements and lawn, (iii) 18 nos. of new gazebos, (iv) development of children's play area with play equipment, (v) setting up new toilet block with store room, (vi) development of double storied 100 seater multi-cuisine restaurant, (vii) provision of kayak storage and changing room with FRP kayak jetty and (viii) a new water ATM, (ix) underground water supply network (x) Gabion matters along the river edge and (xi) sewerage network and treatment facility.. ***The Zone C*** have: (i) a new water ATM, (ii) landscape and pavement development around Swadesh Darshan 10 log huts, (iii) provision of decks with swings towards north of existing footbridge, (iv) 50 seater single storied eco-restaurant north of 6 Swadesh Darshan log huts, (v) broad walk and foot bridge connecting Swadesh Darshan log huts, (vi) development of 16	• A Proposal on Surface Water Source Based Water Supply Scheme Prepared for Approval.			

Package Number (Contractor)	Components/List of Works- as per IEE	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)[4]	Contract Status (specify if under bidding or contract awarded)	If On-going Construction	
				% Physical Progress	Expected Completion Date
	new eco-cottages, (vii) 6+6 male and female staff quarter with washroom and manager room, (viii) scent and butterfly garden, (ix) two mini roads, one 1.8 m wide and other 4.5 m wide along with two small bridges connecting the roads near eco-restaurant, (x) retaining wall and fencing wherever required along with driveway, underground water supply network, sewerage network and septic tank systems (xi) provision of waste collection bins for segregated waste and composting facility for biodegradable waste (xii) sewer network and treatment facility, and xiii) Gabion mattress along the river edge. **2. Waterfront development of Fatiksagar lake** ***North Bank development:*** (i) laying paver's block 900 mm pathway from north west ghat to end of north bank and 1800 mm pathway from north ghat to north east ghat, (ii) refurbishment of northwest ghat, (iii) setting up bamboo wood benches with viewing deck, (iv) renovating outlet on north bank, (v) establishing equipment for open air gym and children's play area at northeast bank, (vi) installation				

Package Number (Contractor)	Components/List of Works- as per IEE	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)[4]	Contract Status (specify if under bidding or contract awarded)	If On-going Construction	
				% Physical Progress	Expected Completion Date
	of a tube well with minimum yield of 35 cum/hr at maximum 20 m drawdown and (vii) a guard wall with railing towards north east side of the lake ***Southern bank development:*** (i) refurbishment of southwest ghat, (ii) laying of pathway from southwest ghat to southeast ghat, (iii) provision of 3 nos. of gazebos and rain shelters. **Overall area-** Provision of Water ATMs and portable bio-toilets will be installed for use by the tourists. **3. Waterfront development of Amarsagar lake** Development towards north, west and 70 m of south bank will comprise of: (i) repairing existing pathway at west bank to south west bank, (ii) repairing existing retaining wall of north bank and repairing of existing railing at ghat staircases, (iii) construction of railing for 7 existing ghat staircases, (iv) provision of wooden and MS frame benches, (v) setting up MS framed pergolas over 3 seating area (2 at north, 1 at south) along the bank, (vi) provision of 2 nos. of 10X6 sq. m vending area, (vii) constructing 5 access pathways from road to existing pathways				

Package Number (Contractor)	Components/List of Works- as per IEE	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)[4]	Contract Status (specify if under bidding or contract awarded)	If On-going Construction	
				% Physical Progress	Expected Completion Date
	together with lighting & electrical fittings, one water ATM and 44 litre pole mounted dustbins. Portable bio-toilets will be installed for use by the tourists.				
TTDCL/UKT/W04 (M/s Tribeni Constructions Ltd.)	1. **Development of Eco-Accommodation and adventure park at Sonamukhi** ***Eco-accommodation zone:*** (i) Development of entrance gate and parking area for about 55 cars and procurement of battery-operated golf carts (ii) Development of 16 standard cottages, 12 deluxe cottages and 4 suites; (iii) Administrative building including office and reception along with 75 seater restaurant, swimming pool, indoor games, gymnasium, and conference room; (iv) development of a 680 sq. m banquet hall; (v) Staff and manager quarters; (vi) Lawn with open seating; (vii) Camping area with toilets; (viii) Toilets at parking area; (ix) Pathways and driveways for internal movement; (x) Two tube wells for water supply; and water supply network and (xi) sewerage network and treatment facility. (xii) Diesel generator sets and Fire extinguishers ***The Adventure Zone***	**For Sonamukhi Eco-Accommodation and adventure park:** • Formation works ongoing for driveway • Lower ground floor slab shuttering ongoing for banquet hall • Plinth beam completed for managers quarters • Foundation casting work for 3 out of 4 grids completed in Admin Block • Excavation work, foundation and angle work are in progress.950 mt. Angle fixing and PCC work completed, rest is in progress • Plinth beam completed for staff quarters • 4 nos. upto foundation casting completed for standard cottage • 3 nos. upto foundation casting completed for suite cottage	Contract awarded	16 %	01.03.2026

Package Number (Contractor)	Components/List of Works- as per IEE	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)[4]	Contract Status (specify if under bidding or contract awarded)	If On-going Construction	
				% Physical Progress	Expected Completion Date
	(i) Entrance foyer and Parking area for accommodating 72 cars, 32 two wheelers, 2 bus parking, 2 ambulances and a fire tender (ii) Kiosks and toilets (iii) A 75 seater restaurant (iv) Children play areas, (v) Adventure gaming zone (vi) Hiking trail (vii) Other facilities – ticketing, toilets, water ATM (viii) Utilities such as water supply, sewerage network, treatment facilities, solid waste management (ix) pathways, driveways, service road, (x) retaining wall and fencing wherever required (xi) provision of waste collection bins for segregated waste and composting facility for biodegradable waste and (xii) sewer network and treatment facility. (xiii) Diesel generator sets and Fire extinguishers. **2. Refurbishment of Unakoti Tourist Lodge at Kailashahar** The works in this sub-component will comprise of: (i) Dismantling of existing flooring in all rooms and ancillary facilities; (ii) Dismantling of existing toilets and provision of new toilets with fittings; (iii) Rearrangement of Kitchen, dining and meeting rooms; (iv) Dismantling of existing staircase railing and	• 5 nos. upto foundation casting completed for deluxe cottage **For Unakoti Tourist Lodge:** • Dismantling old plastering work is in progress. Plastering work inside and outside is in progress. • Implementation of external elevation as per drawing in progress • 1 no Borewell construction done. • Celling plastering 90% work is completed for first and second floor.			

Package Number (Contractor)	Components/List of Works- as per IEE	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)[4]	Contract Status (specify if under bidding or contract awarded)	If On-going Construction	
				% Physical Progress	Expected Completion Date
	provision of new stainless steel railing; (v) Procurement and installation of lift; (vi) provision of gym and indoor play area (vii) wall panelling, false ceiling, cupboards and other furnishings; (viii) Plastering and painting of interiors and exteriors of the building (ix) Integrated landscaping (x) Air conditioning for all rooms, reception, meeting and dining, indoor play area and gymnasium (xi) Provision of transformer, generator of 50 kVA and external lighting (xii) Provision of 150 mm bore well, 100 m deep with iron removal and chlorination system (xiii) Provision of waste collection bins for segregated waste and composting facility for biodegradable waste and (xiv) Sewage treatment facility – STP of 7.5 KLD capacity with MBR technology (xv) Provision of fire hydrant and sprinkler system, (xvi) Provision of sign board for all areas (male, female and staff toilet, room number, room description, directional, danger, etc.).(xvii) Dismantling of all existing doors and provision of new glass door and wooden door; Paver block flooring surrounding the main building				

Package Number (Contractor)	Components/List of Works- as per IEE	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)[4]	Contract Status (specify if under bidding or contract awarded)	If On-going Construction	
				% Physical Progress	Expected Completion Date
	(xvii) Water proofing on the terrace (xix) Provision of air condition unit in reception cum waiting area, indoor play room, gym area as well as meeting and dining room(xx) Diesel generator sets and Fire extinguishers.				

17. After award of contracts and during design few Deep tube well and water reservoir locations changed, due to non-availability of land and design issues. Package wise and town wise change locations are shown in Table below. New locations are not nearby any sensitive or protected areas. No additional impact is envisaged due to location change. PMU has submitted addendums to the IEEs to document the changes in locations, assessment of impacts for new locations, discussion on whether earlier EMP is still sufficient/will not require an update, and conclusion/ recommendations. IEE have already been updated for the package TUDA/WS-01/P-01 cluster IA water supply.

Table 4: Changed location and Environment Features

Package	Sr. No.	Town	Components - Old Location	Components- New Location	Change location details	Site photos-locations	Reason of Change locations
TUDA/ WS-01/P-01 Cluster IA water supply	1	**Mohanpur**	DTW- 3 no. Colony (Near Power station), ward no.10	DTW- Near old gram Panchayat office Manipuri Basti.	The proposed site near old Gram Panchayat Office (Lat. 23.979928, Long. 91.388236) is surrounded by residential area. There is no nearby forest area and no wildlife have been reported in and around the site. Cleaning of vegetation will be required. Current land use of the site is Agriculture land. Proper access needs to be constructed at tube well site, space is available. The land requirement is for the installation of deep tube well is around 64 sq.m. Soil type of proposed site is Reddish yellow brown sandy soils. There is no major water body near the proposed site. There is no sensitive area nearby. Land has been donated to the Mohanpur ULB through notarized donation, as well as MoU has been signed between 1st	 	There is an already existing DTW at the old location, and another DTW at the same location will cause the over-extraction of groundwater, providing hindrance to the availability of groundwater by the already existing families in the area through their borewells.

Package	Sr. No.	Town	Components - Old Location	Components- New Location	Change location details	Site photos-locations	Reason of Change locations
					party (land owners) and 2nd party (Mohanpur Municipal Council). Also, 3rd party certification has been done by Junior Engineer of MMC.		
	2	**Mohanpur**	DTW - Near Bhumihin Colony ward no. 13 Plot no. 4974	DTW - Near Bhumihin Colony ward no. 13 Plot no. 5106 (P)	Lat. 23.957513° Long. 91.37069° The new location is surrounded by rubber plantation. There is no nearby forest area and no wildlife has been reported in and around the site. Proper access is present near the tube well site, which has to be developed into access road. The land requirement for the installation of deep tube well is around 105 sq.m. No tree is noted within the proposed DTW land. Soil type of proposed site is Reddish yellow brown sandy soils. There is no major waterbody near the proposed site. There is no sensitive area nearby. There is a tea industry adjacent to the location, which is defunct now.	  	Old location was congested, with presence of temple and residential area nearby. Narrow approach road at the old location. Accordingly proposed DTW land is shifted at a distance of 800 m from earlier location within the same locality.

Package	Sr. No.	Town	Components - Old Location	Components- New Location	Change location details	Site photos-locations	Reason of Change locations
	3	**Ranirbazar**	DTW-Devinagar Ward No. 9	DTW-Krishnatali, Ward No. 11	DTW and OHSR With IRP located at Krishnatali, Ward No11 (Lat: 23.831818° Long: 91.377089°) Along with DTW the proposed OHSR with IRP land is also located at Krishna tali, which is open flat land and covered by *Colocasia esculenta (*Kachu). The site is connected with BT road. The barren land is under the ownership of Ranirbazar Municipal Council (RMC). The proposed DTW, IRP and OHSR site is located eastern side of the RMC. No trees are available on the land which requires to fell for the construction activity. There are few numbers of Banana trees. There is no major water body near proposed project location. The proposed site is surrounded by residential and agricultural area. Cleaning of vegetation is required. The nearest settlement is approximately 20 m far from the proposed site. Land use around the site is residential. Road available upto the site. Internal road	 	Approach road too narrow at the previous location. Accordingly, location of DTW is shifted from Devi nagar to Krishnatali

Package	Sr. No.	Town	Components - Old Location	Components- New Location	Change location details	Site photos-locations	Reason of Change locations
					needs to be constructed.		
	4	**Ranirbazar**	DTW- Near Durgapur Kalli-Mandir Ward No.1	DTW- Near Cremation ground, Kali Mandir	DTW location shifted to near Cremation ground, Kali Mandir ((Lat: 23.835928° Long: 91.370572°) Land is vacant land, access road to site is available. Residential area is located adjacent to construction area. One religious structure located nearby, outside of impact zone at a distance of around 25 m. One Cremation ground located near tube well location (50 m distance), no impacts on cremation ground are envisaged. No tree felling and utility shifting is required. No water body nearby the new site.	 	Approach road too narrow at the previous location. Difficult to transport construction materials and accordingly, location of DTW is shifted from Durga nagar Kali Mandir to Cremation ground Kali Mandir
TUDA/ WS-02/P-02 Cluster IIA water supply	5	**Udaipur**	Intake 12 MLD- Banduar, Kunj ban Panchayat (Lat.: 23.533558 Long.: 91.513061)	Intake 12 MLD- Banduar, Kunj ban Panchayat, ward no. 1 in Gomati River (Lat.: 23.533376 Long.: 91.511749)	Intake well proposed on the bank of Gomati River. There is an existing intake well which is approx. 400 m away from the proposed one. The Proposed intake is located south eastern side of the town. Distance between old proposed intake ad new proposed intake is 140 m downstream. The nearest settlement from the		Already an old intake was existed near the previously decided location. Also, to protect existing vegetation/ rubber garden. Accordingly, site has been shifted.

Package	Sr. No.	Town	Components - Old Location	Components- New Location	Change location details	Site photos-locations	Reason of Change locations
					proposed site is 100 m. The required land area to construct the proposed electric substation room, guard room etc. will be around 60-80 sq.m. There is no nearby designated forest area in and around the proposed project site. Earthen and brick road is available in the village which will be used during the construction activity and transportation of materials. But permanent approach road is required upto intake well. Soil type of this area is "Red loam" and sandy loam. Land of changed location has been donated to the Udaipur Municipal Council through notarized donation dated 14th November, 2024.		
	6	**Udaipur**	OHSR- Premises of Bhogini Nivedita Girls High School - 900 KL Capacity	OHSR- Rajendra Palli - 900 KL, Opposite of Bhagini Nivedita School playground and Hostel, Ward no. 3 (Lat.: 23.541589 Long.: 91.486385)	Proposed component is in the govt. land. Land presently vacant. Residential houses are located nearby. No trees are noted within the proposed land area. Access to site is available. Low lands are located nearby, but no as such water bodies nearby.		There was not enough space available & also the approach road was narrow in the previous location. Accordingly, location have been shifted.

Package	Sr. No.	Town	Components - Old Location	Components- New Location	Change location details	Site photos-locations	Reason of Change locations
							
	7	**Udaipur**	OHSR- Premises of Ramesh Higher Secondary School - 750 KL Capapsity	OHSR- Opposite of Rajarshi Town Hall Complex - 750 KL, ward no 10 (Lat.: 23.527893 Long.: 91.495389)	Proposed component is in the govt. land. Land presently vacant, waste disposed part of the land. Residential houses are located nearby. No trees are noted within the land area. Access to site is available. Low lands are located nearby, but no as such water bodies nearby. One DTW pump house nearby the proposed site. There is no protected and sensitive area nearby the proposed new location	 	NOC from Education dept. Govt. of Tripura not received for earlier location. For that, shifting of location has been decided
	8	**Belonia**	DTW - IRP- Nightangle Shelter House. (Ward no. 12)	DTW - IRP adjacent Dr. Abul Kalam Azad community Hall (Lat.: 23.254289 Long.: 91.460743)	Proposed new DTW land vacant govt. community land. Access road is available for the site. Houses and commercial area located near the new location. No tree felling is required. No water body is located nearby the location. No utility shifting is required.		After designing it is noted earlier land is not sufficient for DTW and water reservoir. Also low land nearby. Already there is one DTW present within 500 m of the

Package	Sr. No.	Town	Components - Old Location	Components- New Location	Change location details	Site photos-locations	Reason of Change locations
					No sensitive receptors nearby the site		proposed earlier site. Accordingly, site has been shifted
	9	**Belonia**	DTW- IRP - inside the Ishwar Chandra Vidyasagar College/ICV campus (Ward no. 16)	Nearby Machis Factory, ward no. 16 (Lat.: 23.244576 Long.: 91.473462)	Proposed new DTW land vacant govt. land. Access Road is available. Houses are located near the DTW location No tree felling is required. No water body nearby. No sensitive receptors nearby the site.		Earlier location rejected by DWS, since one tube well already located within 100 m of the of ICV college – earlier location. Also avoid tree felling at ICV campus, earlier DTW location is shifted
	10	**Belonia**	DTW- IRP-All India Radio (Ward no. 16)	DTW- IRP - near Satmura Kalibari, ward no. 6 (Lat.: 23.251458 Long.: 91.476875)	Proposed new DTW land vacant govt. land. Access road is available for the site. Houses are located near the new location. No tree felling is required. No water body nearby the location. No sensitive receptors nearby the site		All India Radio Station had previously given the NOC, but later revoked the same. Also, to avoid tree felling at earlier location, DTW site have been shifted.
	11	**Belonia**	OHSR- near Nightangle Shelter House	OHSR- 400 KL adjacent Dr. Abul Kalam Azad community Hall, near DTW (Lat.: 23.254289 Long.: 91.460743)	Proposed new OHSR land vacant govt. community land. Access road is available for the site. Houses and commercial area located near the new location. No tree felling is required. No water body nearby the		The previous land was found to be a low-lying land during construction , unsuitable for construction of OHSR Accordingly, location of

Package	Sr. No.	Town	Components - Old Location	Components- New Location	Change location details	Site photos-locations	Reason of Change locations
					location. No utility shifting is required. No sensitive receptors nearby the site		OHSR has been shifted.
	12	**Belonia**	OHSR- Near All India Radio Station	OHSR- Near Satmura S.B. School Playground - 300 KL, ward no. 6, (Lat.: 23.247317 Long.: 91.476767)	Proposed components are in school land- NOC received. Vacant undulating land will be used for construction of OHSR. One Anganwadi is located nearby, outside of impact zone, at a distance of 30 m from the proposed OHSR One tree is located, felling will depend on actual layout of reservoir Access at site available High tension line passing the land. Shifting is required as per final design	  	All India Radio Station had previously given the NOC, but later revoked the same. Also, to avoid tree felling at earlier location, OHSR site have been shifted
	13	**Bishramganj**	OHSR at Purba Barjala – 200 KL	OHSR near Barjala Panchayat Office	Proposed new land for OHSR is vacant govt. community land. Access road is available for the site. Houses located near the new location. No tree felling is required.		The access road at the previous location was found to be narrow and not suitable for transportatio

Package	Sr. No.	Town	Components - Old Location	Components- New Location	Change location details	Site photos-locations	Reason of Change locations
					No water body is located nearby the location. No utility shifting is required. No sensitive receptors nearby the site		n of materials and machinery. Accordingly, OHSR site is shifted nearby vacant land within the same area.

II. COMPLIANCE STATUS WITH NATIONAL/ STATE/ LOCAL SATATUTORY ENVIRONMENTAL REQUITREMENTS

18. For implementation of the project both national and state rules & regulations need to be followed. **Table 5** below indicates environment legal compliance status for the awarded projects under TUTDP.

19. Before and during implementation of the project, compliance with environmental policy, law and legislation is necessary.

20. Present status of Environment, forest and other clearances are mentioned below.

Table 5: National/State/Local Statutory Environmental Requirements (31st March 2025)

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
TUDA/WS-01/P-01	Design, Build, and Operate Contract for Comprehensive Water Supply Improvement Works for Cluster IA Towns (Khowai, Mohanpur and Ranirbazar) of Tripura	The EIA notification, 2006 (and its subsequent amendments in 2009) provides for categorization of projects into category A and B, based on extent of impact	The sub project is not covered in the ambit of the EIA notification, as this is not covered under either Category A or Category B of the notification. As a result, the categorization, and the subsequent environmental assessment and clearance requirements, either from the state or the central Government is not triggered. Environmental Clearance is not required for the proposed project	Not Applicable (NA)	None	NA
		Water (Prevention and Control of Pollution) Act of 1974, Rules of 1975, and amendments Act was enacted to provide for the prevention and	No project- water supply components attract provisions of Water act and not requiring CTE and CTO from TSPCB.	Not Applicable (NA)	None	NA

[5] Specify (environmental clearance? Permit/consent to establish? Forest clearance? Etc.)
[6] Specify if obtained, submitted and awaiting approval, application not yet submitted
[7] *Example: Environmental Clearance requires ambient air quality monitoring, Forest Clearance/Tree-cutting Permit requires 5 trees for every tree, etc.*

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
		control of water pollution and the maintaining or restoring of wholesomeness of water, by Central and State Pollution Control Boards and for conferring on and assigning to CPCB/SPCBs powers and functions relating to water pollution control. Such projects have to obtain Consent to Establish (CTE) under Section 25 of the Act from Tripura State Pollution Control Board (TSPCB) before starting implementation and Consent to Operate (CTO) before commissioning.				
		The Air (Prevention and Control of Pollution) Act 1981, amended 1987 and The Air (Prevention and Control of Pollution) Rules, 1982 During implementation (construction phase) compliance will be required This Act was enacted to achieve prevention, control	Following will require CTE and CTO from TSPCB: Establishment of DG sets more than 1 MVA. Batching Plant, and Hot mix plants, if any If ready mix concrete and hot mix bitumen is procured from third	NA	CTO will be collected as per requirement and with advancement of project Compliance of condition. **Till report**	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
		and abatement of air pollution activities by assigning regulatory powers to Central and State boards for all such functions. The Act also establishes ambient air quality standards.	party, contractor must ensure that the plants, from where material is being purchased is having valid CTE & CTO and copy should be collected from third party and submitted in PIU. Purchase of materials started. Sample Royalty paid receipt is attached as **Appendix 6.** For casting – AJAX for concrete mixing and handling is used.		**period not applicable**	
		Pollution under control certificate (PUC) to be obtained by the contractor for all vehicles and equipment engaged in the project	Obtained for engaged vehicle and equipment	**Validity upto October 2025 (**sample attached as **Appendix 2)**	PUC certificate will be collected for new vehicle-equipment if any. Also, renewal will be required as per validity	
		Construction and Demolition Waste Management Rules, 2016 Rules to manage	Construction and demolition waste generated from the project construction	NA	None	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
		construction and to waste resulting from construction, remodeling, repair, and demolition of any civil structure. Rules define "construction waste" as waste comprising of building materials, debris resulting from construction, re-modeling, repair, and demolition of any civil structure.	shall be managed and disposed as per the rules Accordingly, NOC will be obtained for disposal of demolition waste Not required till report period			
		Ministry Of Jal Shakti (Mojs) Notification Dated 24.09.2020 With Amendment Notification Dated 29.03.2023], India Consolidated MoJS Guidelines to Regulate and Control Ground Water Extraction in India	NOC from CGWA for extraction of GW for construction purpose has been received for all the 3 towns. Copies of NOC from CGWA attached as **Appendix 5** NOC has been obtained from state PWD (Drinking water sanitation, DWS) for withdrawal of ground water for supply through Deep tube well. Application has been done to CGWA for	NOC for GW Abstraction for construction purpose validity: For Khowai: till 23.10.2029 For Ranirbazar: till 02.02.2030 For Mohanpur: till 09.01.2030	None For withdrawal of ground water for supply through Deep tube well NOC to be obtained from CGWA	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
			further NOC before commissioning of Deep Tube well for supply of drinking water			
		The Indian Forest Act, 1927; Forest (Conservation) Act, 1980, amended 1988; Forest (Conservation) Rules, 1981 amended 1992 and 2003 In case of tree felling NOC needs to be obtained from Forest dept./ concerned dept.	No forest land is involved. No tree felling required	NA To be updated if any tree felling required	None Till report period no tree felling is required. Tree felling NOC will be obtained if required with advancement of work	NA
		Wildlife (Protection) Act 1972, Amendment Act, 1993 and 2002 and Wildlife (Protection) Rules, 1995	No Wildlife protected area within or nearby the project area	NA	None	NA
		The Ancient Monument and Archaeological Sites and Remains (Amendment and Validation) Act 2010 Tripura Ancient Monuments and	No protected area within or nearby the project area. But chance find protocol will be maintained	NA	Chance finds protocol to be maintained	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
		Archaeological Sites and Remains Act 1997				
		Labour licence under The Contract Labour (Regulation & Abolition) Act, 1970. (Central Act w.e.f. 07-09-70)	Complied Labour licence obtained for all the 3 towns. (Attached as **Appendix 3)**	Obtained for Khowai – Date of Expiry -21.01.2026 Coverage – 35 heads Ranirbazar and Mohanpur- Date of Expiry: 10.06.2025 Coverage: 60 heads	To comply with the requirements as specified in the issued license.	NA
		Labour compensation insurance	Complied Worker compensation insurance policy obtained for all the 3 project towns under the package (Attached as **Appendix 4)**	Validity upto 21.08.2025	To ensure all potential risks are covered.	NA
TUDA/WS-02/P-02	Design, Build, and Operate Contract for Comprehensive Water Supply Improvement Works in Cluster IIA Towns (Bishramganj, Melaghar, Udaipur, Amarpur and Belonia) of Tripura	The EIA notification, 2006 (and its subsequent amendments in 2009) provides for categorization of projects into category A and B, based on extent of impact	The sub project is not covered in the ambit of the EIA notification, as this is not covered under either Category A or Category B of the notification. As a result,	NA	None	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
			the categorization, and the subsequent environmental assessment and clearance requirements, either from the state or the central Government is not triggered. Environmental Clearance is not required for the proposed project			
		Water (Prevention and Control of Pollution) Act of 1974, Rules of 1975, and amendments Act was enacted to provide for the prevention and control of water pollution and the maintaining or restoring of wholesomeness of water, by Central and State Pollution Control Boards and for conferring on and assigning to CPCB/SPCBs powers and functions relating to water pollution control. Such projects have to obtain Consent to	No project water supply components attract provisions of Water act and not requiring CTE and CTO from TSPCB.	Not Applicable (NA)	None	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
		Establish (CTE) under Section 25 of the Act from Tripura State Pollution Control Board (TSPCB) before starting implementation and Consent to Operate (CTO) before commissioning.				
		The Air (Prevention and Control of Pollution) Act 1981, amended 1987 and The Air (Prevention and Control of Pollution) Rules, 1982 During implementation (construction phase) compliance will be required This Act was enacted to achieve prevention, control and abatement of air pollution activities by assigning regulatory powers to Central and State boards for all such functions. The Act also establishes ambient air quality standards.	Following will require CTE and CTO from TSPCB: Establishment of DG sets more than 1 MVA. Batching Plant, and Hot mix plants, if any If ready mix concrete and hot mix bitumen is procured from third party, contractor must ensure that the plants, from where material is being purchased is having valid CTE & CTO and copy should be collected from third party and submitted in PIU Purchase of materials started. Sample Royalty paid receipt is	NA	CTO will be collected as per requirement and with advancement of project Compliance of condition. **Till report period not applicable**	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
			attached as **Appendix 6.** For casting – AJAX for concrete mixing and handling is used.			
		Pollution under control certificate (PUC) to be obtained by the contractor for all vehicles and equipment engaged in the project	Obtained for engaged vehicle and equipment	**Validity upto June 2025 (**sample attached as **Appendix 2)**	PUC certificate will be collected for new vehicle-equipment if any. Also, renewal will be required as per validity	
		Construction and Demolition Waste Management Rules, 2016 Rules to manage construction and to waste resulting from construction, remodeling, repair, and demolition of any civil structure. Rules define "construction waste" as waste comprising of building materials, debris resulting from construction, re-modeling, repair, and demolition of any civil structure.	Construction and demolition waste generated from the project construction shall be managed and disposed as per the rules Accordingly, NOC will be obtained for disposal of demolition waste Not required till report period	NA	None	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
		Ministry Of Jal Shakti (Mojs) Notification Dated 24.09.2020 With Amendment Notification Dated 29.03.2023], India Consolidated MoJS Guidelines to Regulate and Control Ground Water Extraction in India	NOC for withdrawal of ground water for NOC from CGWA has been received for Udaipur town and is under process for Melaghar, Bishramganj & Belonia towns. Copies of NOC from CGWA is attached as **Appendix 5** NOC has been obtained from state PWD (Drinking water sanitation, DWS) for withdrawal of ground water for supply through Deep tube well. Application has been done to CGWA for further NOC before commissioning of Deep Tube well for supply of drinking water	NOC for GW Abstraction for construction purpose validity: For Udaipur: till 23.10.2029	None For withdrawal of ground water for supply through Deep tube well NOC to be obtained from CGWA	NA
		The Indian Forest Act, 1927; Forest (Conservation) Act, 1980, amended 1988; Forest (Conservation) Rules, 1981 amended 1992 and 2003	No forest land is involved.	NA	None	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
		In case of tree felling NOC needs to be obtained from Forest dept./ concerned dept.	No tree felling required	To be updated if any tree felling required	Till report period no tree felling is required. Tree felling NOC will be obtained if required with advancement of work	
		Wildlife (Protection) Act 1972, Amendment Act, 1993 and 2002 and Wildlife (Protection) Rules, 1995	No Wildlife protected area within or nearby the project area	NA	None	NA
		The Ancient Monument and Archaeological Sites and Remains (Amendment and Validation) Act 2010 Tripura Ancient Monuments and Archaeological Sites and Remains Act 1997	No protected area within or nearby the project area. But chance find protocol will be maintained	NA	Chance finds protocol to be maintained	NA
		Labour licence under The Contract Labour (Regulation & Abolition) Act, 1970. (Central Act w.e.f. 07-09-70)	Complied Labour licence Obtained for all the towns. Copy attached in **Appendix 3.**	Obtained for Udaipur & Amarpur Date of Expiry: 20.09.2025 Coverage: 85 heads	To comply with the requirements as specified in the issued license.	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
				Obtained for Melaghar &Bishramganj Date of Expiry: 11.02.2026 Coverage: 35 heads Obtained for Belonia Date of Expiry: 23.01.2026 Coverage: 35 heads		
		Labour compensation insurance	Complied Worker compensation insurance policy obtained for all the 5 project towns under the package (Attached as **Appendix 4)**	Validity upto 21.08.2025	To ensure all potential risks are covered.	NA
TUDA/WS-03/P-03	Design, Build, and Operate Contract for Comprehensive Water Supply Improvement Works in Cluster IIIA Towns (Dharmanagar, Kailashahar, Kumarghat and Ambassa) of Tripura	The EIA notification, 2006 (and its subsequent amendments in 2009) provides for categorization of projects into category A and B, based on extent of impact	The sub project is not covered in the ambit of the EIA notification, as this is not covered under either Category A or Category B of the notification. As a result,	NA	None	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
			the categorization, and the subsequent environmental assessment and clearance requirements, either from the state or the central Government is not triggered. Environmental Clearance is not required for the proposed project			
		Water (Prevention and Control of Pollution) Act of 1974, Rules of 1975, and amendments Act was enacted to provide for the prevention and control of water pollution and the maintaining or restoring of wholesomeness of water, by Central and State Pollution Control Boards and for conferring on and assigning to CPCB/SPCBs powers and functions relating to water pollution control. Such projects have to obtain Consent to	No project water supply components attract provisions of Water act and not requiring CTE and CTO from TSPCB.	Not Applicable (NA)	None	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
		Establish (CTE) under Section 25 of the Act from Tripura State Pollution Control Board (TSPCB) before starting implementation and Consent to Operate (CTO) before commissioning.				
		The Air (Prevention and Control of Pollution) Act 1981, amended 1987 and The Air (Prevention and Control of Pollution) Rules, 1982 During implementation (construction phase) compliance will be required This Act was enacted to achieve prevention, control and abatement of air pollution activities by assigning regulatory powers to Central and State boards for all such functions. The Act also establishes ambient air quality standards.	Following will require CTE and CTO from TSPCB: Establishment of DG sets more than 1 MVA. Batching Plant, and Hot mix plants, if any If ready mix concrete and hot mix bitumen is procured from third party, contractor must ensure that the plants, from where material is being purchased is having valid CTE & CTO and copy should be collected from third party and submitted in PIU **Purchase of materials not yet started.**	NA	CTO will be collected as per requirement and with advancement of project Compliance of condition. **Till report period not applicable**	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
		Pollution under control certificate (PUC) to be obtained by the contractor for all vehicles and equipment engaged in the project	To be collected with progress of work	**NA**	None	
		Ministry Of Jal Shakti (Mojs) Notification Dated 24.09.2020 With Amendment Notification Dated 29.03.2023], India Consolidated MoJS Guidelines to Regulate and Control Ground Water Extraction In India	NOC for withdrawal of ground water for construction purpose applied to CGWA by the contractor. NOC has been obtained from state PWD (Drinking water sanitation, DWS) for withdrawal of ground water for supply through Deep tube well. Application to be done to CGWA for further NOC before commissioning of Deep Tube well for supply of drinking water	NA	Needs to be follow up for obtaining NOC from CGWA For withdrawal of ground water for supply through Deep tube well NOC to be obtained from CGWA	NA
		Construction and Demolition Waste Management Rules, 2016 Rules to manage construction and to waste	Construction and demolition waste generated from the project construction shall be managed and	NA	None	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
		resulting from construction, remodeling, repair, and demolition of any civil structure. Rules define "construction waste" as waste comprising of building materials, debris resulting from construction, re-modeling, repair, and demolition of any civil structure.	disposed as per the rules Accordingly, NOC will be obtained for disposal of demolition waste Not required till report period			
		The Indian Forest Act, 1927; Forest (Conservation) Act, 1980, amended 1988; Forest (Conservation) Rules, 1981 amended 1992 and 2003 In case of tree felling NOC needs to be obtained from Forest dept./ concerned dept.	No forest land is involved. No tree felling required	NA To be updated if any tree felling required	None Till report period no tree felling is required. Tree felling NOC will be obtained if required with advancement of work	NA
		Wildlife (Protection) Act 1972, Amendment Act, 1993 and 2002 and Wildlife	No Wildlife protected area within or nearby the project area	NA	None	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
		(Protection) Rules, 1995				
		The Ancient Monument and Archaeological Sites and Remains (Amendment and Validation) Act 2010 Tripura Ancient Monuments and Archaeological Sites and Remains Act 1997	No protected area within or nearby the project area. But chance find protocol will be maintained	NA	Chance finds protocol to be maintained	NA
		Labour licence under The Contract Labour (Regulation & Abolition) Act, 1970. (Central Act w.e.f. 07-09-70)	Not yet received. Application has been done	NA	To be obtained immediately	NA
		Labour compensation insurance	Complied Worker compensation insurance policy obtained for all the 4 project towns under the package (Attached as **Appendix 4)**	Validity upto 21.02.2026	To ensure all potential risks are covered.	NA
TTDCL/CHB/W 01	Tourism Destination Development at Chabimura and Upgradation/ Beautification of Visitor Amenities/ Facilities at Fatik Sagar and Amar Sagar	The EIA notification, 2006 (and its subsequent amendments in 2009) provides for categorization of projects into category A and B, based on extent of impact. Environment clearance is required for building and	As per components wise project details, built up area of the project is 6746.60 sq mts, less than or equal to 20,000 sq mts. Hence no environment clearance is required from SEIAA.	NA	None	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
		construction project. The Chabimura tourist destination triggers the provisions of Environment clearance from State Level Environment Impact Assessment Authority/ State level Expert Appraisal Committee, Tripura for built up area of ≥ 20000 sq m Sand mining for construction works (if required), requires environment clearance under EIA act. (list of already approved sand mines in Tripura is available on TSPCB website[8]) PIU/PMU has to ensure that contractor is procuring mining material from approved mines only or get EC for new mines.	Confirmation letter is attached as **Appendix 5.** In case of sand procurement necessary approval documents – permit / royalty receipt received from the contractor (sample attached as **Appendix 6)**			
		Water (Prevention and Control of Pollution) Act of 1974, Rules of 1975, and	CTE and CTOs are required for establishment of hotels	NA	Will be applied online to Pollution	NA

[8] https://tspcb.tripura.gov.in/sand-mining-ec/

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
		amendments Act was enacted to provide for the prevention and control of water pollution and the maintaining or restoring of wholesomeness of water, by Central and State Pollution Control Boards and for conferring on and assigning to CPCB / SPCBs powers and functions relating to water pollution control. Such projects have to obtain Consent to Establish (CTE) under Section 25 of the Act from Tripura State Pollution Control Board (TSPCB) before starting implementation and Consent to Operate (CTO) before commissioning.	having > 20 rooms and < 100 rooms under orange category After finalization of sewage treatment plant design CTE and CTO for entire project site of Chabimura covering all aspects of establishment will be taken from pollution control board.		Control Board	
		The Air (Prevention and Control of Pollution) Act 1981, amended 1987 and The Air (Prevention and Control of Pollution) Rules, 1982 During implementation (construction phase)	Following will require CTE and CTO from TSPCB: Establishment of DG sets more than 1 MVA. Batching Plant, and Hot mix plants, if any Green – Silent Diesel	NA	CTO will be collected as per requirement and with advancement of project	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
		compliance will be required This Act was enacted to achieve prevention, control and abatement of air pollution activities by assigning regulatory powers to Central and State boards for all such functions. The Act also establishes ambient air quality standards.	Generator in use. No requirement of CTE and CTO If ready mix concrete and hot mix bitumen is procured from third party, contractor must ensure that the plants, from where material is being purchased is having valid CTE & CTO and copy should be collected from third party and submitted in PIU Purchase of materials started. Also, AJAX is used during concreating. Royalty paid by the construction agency as per applicable charge. Sample receipt is attached as **Appendix 6.**	**NA**	Compliance of condition. Till report period not applicable None	
		Pollution under control certificate (PUC) to be obtained by the contractor for all vehicles and	Obtained for engaged vehicle and equipment	Validity upto July 2025 **(**sample attached as	PUC certificate will be collected for new vehicle-	

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
		equipment engaged in the project		**Appendix 2)**	equipment if any. Also, renewal will be required as per validity	
		Guideline for use of surface/ ground water for construction purpose	Applied to water resource department for getting NOC for withdrawal of surface water from Gomati River for construction purpose. Provisional approval is attached as **Appendix 5.**	NA	None	NA
		Construction and Demolition Waste Management Rules, 2016 Rules to manage construction and to waste resulting from construction, remodeling, repair, and demolition of any civil structure. Rules define "construction waste" as waste comprising of building materials, debris resulting from construction, re-modeling, repair, and demolition of any civil structure.	Construction and demolition waste generated from the project construction shall be managed and disposed as per the rules Accordingly, NOC will be obtained for disposal of demolition waste Not required till report period	NA	None	NA
		The Indian Forest Act,	No forest land is	NA	None	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
		1927; Forest (Conservation) Act, 1980, amended 1988; Forest (Conservation) Rules, 1981 amended 1992 and 2003 In case of tree felling NOC needs to be obtained from Forest dept./ concerned dept.	involved. No tree felling required	To be updated if any tree felling is required	Till report period no tree felling is required. Tree felling NOC will be obtained if required with advancement of work	
		Wildlife (Protection) Act 1972, Amendment Act, 1993 and 2002 and Wildlife (Protection) Rules, 1995	No Wildlife protected area within or nearby the project area	NA	None	NA
		The Ancient Monument and Archaeological Sites and Remains (Amendment and Validation) Act 2010 Tripura Ancient Monuments and Archaeological Sites and Remains Act 1997	No protected area within or nearby the project area. But chance find protocol will be maintained	NA	Chance finds protocol to be maintained	NA
		Labour licence under The Contract Labour (Regulation & Abolition)	Labour licence obtained. Attached in **Appendix 3**,	Validity upto 04.09.2025	To comply with the requirements	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
		Act, 1970. (Central Act w.e.f. 07-09-70)			as specified in the issued license.	
		Labour compensation insurance	Complied Worker compensation insurance policy obtained for the package (Attached as **Appendix 4)**	Validity upto 15.01.2026	To ensure all potential risks are covered.	NA
TTDCL/UKT/W04	**Development of Sonamukhi Eco Accommodation & Adventure Park and Rehabilitation of Unakoti Tourist Lodge at Kailashahar**	The EIA notification, 2006 (and its subsequent amendments in 2009) provides for categorization of projects into category A and B, based on extent of impact. Environment clearance is required for building and construction project. The Sonamukhi tourist destination triggers the provisions of Environment clearance from State Level Environment Impact Assessment Authority/ State level Expert Appraisal Committee, Tripura for built up area of ≥ 20000 sq m	As per components wise project details, built up area of the project is 13852.50 sq mts, less than or equal to 20,000 sq mts. Hence no environment clearance is required from SEIAA. Confirmation letter is attached as **Appendix 5.** In case of sand procurement necessary approval documents – permit / royalty receipt received from the contractor (sample attached as **Appendix 6)**	NA	None	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
		Sand mining for construction works (if required), requires environment clearance under EIA act. (list of already approved sand mines in Tripura is available on TSPCB website[9]) PIU/PMU has to ensure that contractor is procuring mining material from approved mines only or get EC for new mines.				
		Water (Prevention and Control of Pollution) Act of 1974, Rules of 1975, and amendments Act was enacted to provide for the prevention and control of water pollution and the maintaining or restoring of wholesomeness of water, by Central and State Pollution Control Boards and for conferring on and assigning to CPCB / SPCBs powers and	CTE and CTOs are required for establishment of hotels having > 20 rooms and < 100 rooms under orange category After finalization of sewage treatment plant design CTE and CTO for entire project site of Sonamukhi covering all aspects of establishment will be taken from pollution	NA	Will be applied online to Pollution Control Board	NA

[9] https://tspcb.tripura.gov.in/sand-mining-ec/

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
		functions relating to water pollution control. Such projects have to obtain Consent to Establish (CTE) under Section 25 of the Act from Tripura State Pollution Control Board (TSPCB) before starting implementation and Consent to Operate (CTO) before commissioning.	control board.			
		The Air (Prevention and Control of Pollution) Act 1981, amended 1987 and The Air (Prevention and Control of Pollution) Rules, 1982 During implementation (construction phase) compliance will be required This Act was enacted to achieve prevention, control and abatement of air pollution activities by assigning regulatory powers to Central and State boards for all such functions. The Act also establishes ambient air quality standards.	Following will require CTE and CTO from TSPCB: Establishment of DG sets more than 1 MVA. Batching Plant, and Hot mix plants, if any Green – Silent Diesel Generator in use. No requirement of CTE and CTO If ready mix concrete and hot mix bitumen is procured from third party, contractor must ensure that the plants, from where material is being purchased is having valid CTE &	NA	CTO will be collected as per requirement and with advancement of project Compliance of condition. Till report period not applicable	NA

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
			CTO and copy should be collected from third party and submitted in PIU Purchase of materials started. Royalty paid by the construction agency as per applicable charge. Sample of the receipt attached as **Appendix 6.**	**NA**	None	
		Pollution under control certificate (PUC) to be obtained by the contractor for all vehicles and equipment engaged in the project	Obtained for engaged vehicle and equipment	Validity upto June 2025 **(**sample attached as **Appendix 2)**	PUC certificate will be collected for new vehicle-equipment if any. Also, renewal will be required as per validity	
		Construction and Demolition Waste Management Rules, 2016 Rules to manage construction and to waste resulting from construction, remodeling, repair, and demolition of any civil structure. Rules define	Construction and demolition waste generated from the project construction shall be managed and disposed as per the rules Accordingly, NOC will be obtained for disposal	No	None	

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
		"construction waste" as waste comprising of building materials, debris resulting from construction, re-modeling, repair, and demolition of any civil structure.	of demolition waste NOC for disposal of waste/ garbage has been issued by Kailashahar MC (Copy attached as **Appendix 7)**			
		Ministry Of Jal Shakti (Mojs) Notification Dated 24.09.2020 With Amendment Notification Dated 29.03.2023], India Consolidated MoJS Guidelines to Regulate and Control Ground Water Extraction In India	NOC from CGWA for withdrawal of ground water for construction purpose obtained by the contractor. (copy of NOC attached in **Appendix 5**	Validity upto 17.10.2029		
		The Indian Forest Act, 1927; Forest (Conservation) Act, 1980, amended 1988; Forest (Conservation) Rules, 1981 amended 1992 and 2003	No forest land is involved.	NA	None	NA
		In case of tree felling NOC needs to be obtained from Forest dept./ concerned dept.	No tree felling required	To be updated if any tree felling required	Till report period no tree felling is required. Tree felling NOC will	

Package No.	Subproject Name	Statutory Environmental Requirements[5]	Status of Compliance[6]	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish[7]
					be obtained if required with advancement of work	
		Wildlife (Protection) Act 1972, Amendment Act, 1993 and 2002 and Wildlife (Protection) Rules, 1995	No Wildlife protected area within or nearby the project area	NA	None	NA
		The Ancient Monument and Archaeological Sites and Remains (Amendment and Validation) Act 2010 Tripura Ancient Monuments and Archaeological Sites and Remains Act 1997	No protected area within or nearby the project area. But chance find protocol will be maintained	NA	Chance finds protocol to be maintained	NA
		Labour licence under The Contract Labour (Regulation & Abolition) Act, 1970. (Central Act w.e.f. 07-09-70)	Labour licence obtained. Attached in **Appendix 3**,	Validity upto 04.08.2025	To comply with the requirements as specified in the issued license.	NA
		Labour compensation insurance	Complied Worker compensation insurance policy obtained for the package (Attached as **Appendix 4)**	Validity upto 04.02.2026	To ensure all potential risks are covered.	NA

21. Status of land clearances are provided in social safeguard monitoring report.

III. COMPLIANCE STATUS WITH ENVIRONMENTAL LOAN COVENANTS

22. The loan agreement for TUTDP was signed on 22nd December 2023 (Loan effective – 20th March 2024) and details are available in ADB website (https://www.adb.org/projects/documents/ind-53276-002-lna). **Table 6** provides a summary of compliance to the loan covenants related to environmental safeguards.

Table 6: Compliance of Loan Covenants – Environment

Serial No. as per Loan Agreement	Program Specific Covenants	Status / Issues	Action Required
SCHEDULE 4			
Conditions for Award of the Contract			
7	The Borrower shall ensure, or cause the EA and the Implementing Agencies to ensure, that no Works contracts are awarded for any Project activities that involves environmental impacts until the EA has (a) prepared, submitted, and obtained final approval of the relevant IEE from ADB and the relevant environment authority of the State and Borrower as applicable; and (b) incorporated the relevant provisions from the respective EMP into the related Works contract	**Being Complied** (a) Environment Impact assessment document – IEE have been prepared, submitted, and obtained final approval of relevant IEE from ADB and borrower. After that contracts have been awarded. (b) After environmental assessment relevant provisions of EMP attached in the bid document and works contract.	
SCHEDULE 4 **Safeguards – Environment**			
10	The Borrower shall ensure or cause the EA and implementing agencies to ensure that the preparation, design, construction, implementation, operation and decommissioning of the Project, and all projects' facilities comply with (a) all applicable laws and regulations of the Borrower and the State relating to environment, health, and safety; (b) the Environmental Safe-guards, (c) all measures and requirements set forth in the respective IEE (including the heritage impact assessment wherever applicable) and EMP, and (d) any corrective or preventative actions set forth in a Safeguards Monitoring Report.	**Being Complied** (a) Document preparation, design, construction, implementation of the Project, and all projects' facilities complying all relevant State and National Laws related to Environment, health, and safety, Safeguard Policy Statement (SPS 2009) of ADB. (b) Draft Initial Environmental Examination (IEE), Environment Management Plan (EMP) report prepared and approved by ADB at bidding stage. Updated IEE for cluster IA water supply submitted to ADB after finalization of design. For packages, Tourism Destination	**Urban packages** For DBO contracts - water supply package – Cluster IA design completed and Cluster IIA water supply packages – design completed mostly. As per construction contractor and technical team of PMSC, major design has been finalized. IEE for cluster IA water supply have been updated and submitted to ADB. Updated IEE for cluster IIA will be submitted

Serial No. as per Loan Agreement	Program Specific Covenants	Status / Issues	Action Required
		Development at Chabimura and Upgradation/ Beautification of Visitor Amenities/ Facilities at Fatik Sagar and Amar Sagar (TTDCL/CHB/W 01) and Development of Sonamukhi Eco accommodation & Adventure Park and Rehabilitation of Unakoti Tourist Lodge at Kailashahar (TTDCL/UKT/W 04)- updation of IEE have been done on May 2024 and March 2025 respectively after finalization of the design. (c) All measures set forth in respective IEE and EMP will be applied during implementation of the project. (d) Corrective or preventive action plans reflected in Environment Monitoring Report and project implementation authority take care of such actions as per requirement. Observed non-compliances are rectified through agreed corrective and preventive actions.	shortly. Follow up Is required. Design for Cluster IIIA water supply, progress slowly. As per construction contractor and technical team of PMSC, design will be over by June/July 2025. After receive of final design IEE for the package will be done by August 2025. For Road and Drainage package, in case of change in locations, scope IEE will be updated. Till date no road & drainage packages are awarded Since finalization of design delayed, Addendums – showing change locations details, assessment of additional impacts (if any) for new locations for cluster IA and IIA WS have been submitted. **<u>Tourism package</u>** Some design modification and Master planning under progress for Chabimura package. After finalization of design IEE will be updated.
Human and Financial Resources to Implement Safeguards Requirements			
14	The Borrower shall, or cause the EA and implementing Agencies to make available necessary budgetary and human resources to fully implement the EMPs (as applicable)	**Being Complied** Budgetary provisions have been included in EMP Project coordinator, in-charge of Environment and Social Safeguard is in place in Project Management Unit heading Safeguard Monitoring Unit. One Individual consultant – Environment safeguard has been	

Serial No. as per Loan Agreement	Program Specific Covenants	Status / Issues	Action Required
		recruited to support PMU for environmental compliance An Environment Specialist placed within Project Management and Supervision Consultant (PMSC) to support PMU and PIU	
Safeguards Related Provisions in Bidding Documents and Works Contracts			
15	The Borrower shall ensure, or cause the EA and the Implementing Agencies to ensure, that all bidding documents and contracts for Works contain provisions that require Contractors to: (a) comply with the measures and requirements relevant to the Contractor set forth in the IEE, EMP and any corrective or preventative actions set out in a Safeguards Monitoring Report; (b) make available a budget for all such environmental measures. (c) provide the EA and Implementing Agencies with a written notice of any unanticipated environmental risks or impacts that arise during construction, implementation or operation of the Project that were not considered in the IEE, EMP as applicable;	**Being Complied** EMP, BOQ line items, reinstatement to pre-project conditions included in the contract agreement. (a) Approved IEE, EMP is attached in Bidding documents. In case of any change of scope, updated IEEs with EMP(s) will be prepared and corrective measures will be disclosed to the Contractor and same will be reflected in the "Environment Monitoring Report". Both Urban and Tourism project contractors done base line pre-construction and construction phase monitoring and survey of pre-works condition. Budget has been allocated for EMP application and monitoring. Pre-construction documents submitted by Contractors for 2 tourism packages and 2 urban packages. During construction monitoring to be continued as per EMP and Environment Monitoring Plan. (b) IEE includes budgetary provisions for implementation of EMP for all the packages. (c) During implementation of any project if additional impacts/risks arise due to change in scope/area that will be reflected in the revised IEEs, EMPs and Environment Monitoring Report and accordingly project Executing Agency will inform the Construction Contractor for taking relevant corrective measures.	In case of any change in scope, updated IEEs with EMP(s) will be prepared and corrective measures will be disclosed to the Contractor For cluster IIIA package, Contractor submitted part of pre-construction documents. Instruction given for immediate submission.

Serial No. as per Loan Agreement	Program Specific Covenants	Status / Issues	Action Required
		Since finalization of design delayed, Addendum – showing change locations details, assessment of additional impacts (if any) for new locations for cluster IA and IIA WS have been submitted. Also, updated IEE for cluster IA water supply have been submitted. Under emergency flood condition contractor to inform the EA- IA through photographic evidence and letter and EA - IA stopped work under critical condition	
	(d) adequately record the condition of roads, agricultural land, and other infrastructure prior to starting to transport materials and construction; and (e) fully reinstate pathways, other local infrastructure, and agricultural land to at least their pre-project condition upon the completion of construction.	(d) Haul roads have marked properly (by avoiding residential and agricultural land) before commencement of transportation of materials. (e) Pathways, and land which are/ to be affected for varying periods during implementation of the sub project will be restored by concerned construction Contractor before acceptance of the work. Restoration status will also be reflected in post construction monitoring report. No impact still report period, pipe laying work just started.	
Safeguards Monitoring and Reporting			
16	The Borrower shall cause the EA to do the following: (a) submit semi-annual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission. (b) if any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project that were not	**Being Complied** (a) 1st SEMR for the period March to September 2024 has been submitted on December 2024 and after acceptance disclosed in ADB[10] and project website[11]. 2nd SEMR for the period October 2024 to March 2025 under preparation (b) During implementation of any project, if additional impacts/risks arise due to change in scope/area, those will be reflected in revised	IEE/ EMP will be revised in case of inclusion of additional impact and change in design, location/ scope for the project

[10] https://www.adb.org/projects/documents/ind-53276-002-emr

[11] https://tutdp.org.in/?&p=02e74f10e0327ad868d138f2b4fdd6f0

Serial No. as per Loan Agreement	Program Specific Covenants	Status / Issues	Action Required
	considered in the relevant IEEs, EMPs, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan; and (c) report any breach of compliance with the measures and requirements set forth in the relevant EMP, promptly after becoming aware of the breach.	IEEs with EMPs and accordingly Executing Contractor (EA) will inform the ADB such change along with corrective action plan which will be reflected in the subsequent Monitoring Reports. (c) in case of any breach of compliance with the measures and requirements set forth in the EMP, EA will promptly inform ADB and suitable corrective action program will be planned/initiated. Since finalization of design delayed, Addendum – showing change locations details, assessment of additional impacts (if any) for new locations for cluster IA and IIA WS have been submitted. Also, updated IEE for cluster IA water supply have been submitted. Recruitment of IC – Environment in PMU – has been done. Environment expert has been appointed. Health, safety officer is already in place for all the awarded packages. NOC from CGWA for withdraw of ground water for construction purpose by the contractor has been received for Cluster IA all towns and Udaipur in Cluster IIA. Application has been done for the cluster IIIA towns.	
Prohibited List of Investments			
17	The Borrower shall ensure or cause the EA to ensure that no proceeds of the Loan are used to finance any activity included in the list of prohibited investment activities provided in Appendix 5 of the SPS.	**Complied** There is no violation of prohibited investment activities as per ADB SPS (2009) Appendix 5.	
Labour Standards			
18	The Borrower shall ensure or cause the EA to ensure, that Works contracts under the Project follow all applicable labor laws of the Borrower and the State, and that these further include provisions to the effect that	**Being Complied** (i) Provision is included (as per EMP & BID document) to carry out HIV/AIDS awareness programs for Construction Contractor, application of all relevant labour	HIV- AIDS training program is being conducted on 6 monthly basis. In addition, H & S training needs to be continued for

Serial No. as per Loan Agreement	Program Specific Covenants	Status / Issues	Action Required
	Contractors: (i) carry out HIV/AIDS awareness programs for labor and disseminate information at worksites on risks of sexually transmitted diseases and HIV/AIDS as part of health and safety measures for those employed during construction; and (ii) follow and implement all statutory provisions on labor (including not employing or using children as labor, equal pay for equal work), health, safety, welfare, sanitation, and working conditions. Such contracts shall also include clauses for termination in case of any breach of the stated provisions by the contractors.	laws for health and safety including child labour law and engagement of local labours (preferably from economically backward group) covering women labours. HIV/ AIDS training program conducted (ii) No child labour engaged in the packages. Rules on equal pay for equal work to follow. Tie up with health institutes done by the contractors of 4 packages **(Appendix 8)** Health checkup done for 2 urban sector projects and for 2 tourism packages. **(Appendix 9)** Health related WC policy for workers available for two tourism packages, TTDCL/CHB/W 01 and TTDCL/UKT/W 04 and three urban water supply packages, TUDA/WS-01/P0, TUDA/WS-02P02 and TUDA/WS-03P03 **(Appendix 4)** In case of any breach of provision, necessary corrective measures as per contract clauses shall be taken up. All activities including awareness program reflected in "Monitoring Report".	the contract packages HSE induction training conducted and to be conducted at the time of the mobilization of workers. Tie up with health institutes and health check up needs to be conducted for TUDA/WS-03P03-cluster IIIA water supply package, immediately. Follow up is required.

IV. COMPLIANCE STATUS WITH THE ENVIRONMENTAL MANAGEMENT PLAN

23. There are 6 **civil works contract packages** (3 urban and 3 tourism) under implementation. Site Environment plans including site specific EMPs (SEMP) were submitted by the contractors before starting of each construction package. Compliance status of SEMPs is also available with PIU. **Table 7** shows package wise EMP implementation status.

Table 7: Package wise EMP Implementation Status[12] – upto March 2025

Package No	Components	Design status (Preliminary Design Stage/ Detailed Design Completed	Final IEE based on Detailed Design				Site specific EMP (or construction EMP) approved by project implementation agency (Yes/ No)
			Not yet due (detailed design not yet completed)	Submitted to ADB (provide date of submission)	Disclosed on ADB and project website (Provide link)	Final IEE provided to Contractors (Yes/No)	
Urban Project							
WS-01/P-01	Design, Build, and Operate Contract for Comprehensive Water Supply Improvement Works for Cluster IA Towns of Tripura	DBO contract: design of components of all 3 towns finalized.	Updated IEE have been submitted to ADB on March 2025.	IEE prepared before bidding Report submitted and accepted by ADB on June 2023 IEE has been updated as per finalisation of design and submitted on March 2025 to ADB for approval.	ADB website - https://www.adb.org/projects/documents/ind-53276-002-ie TUTDP website- https://tutdp.org.in/?&p=8e296a067a37563370ded05f5a3bf3ec	Yes. Disclosed draft IEE provided to contractor. After approval of updated IEE, final IEE will also be provided	Yes Prepared by contractor for Deep tube well, pipeline and OHSR locations
WS-02/P-02	Design, Build, and Operate Contract for Comprehensive Water Supply Improvement Works in Cluster IIA Towns of Tripura	DBO contract: design finalized for different components	Updated IEE Under preparation will be submitted shortly.	IEE prepared before bidding Report submitted and accepted by ADB on June 2023 Updation of IEE is under	ADB website – https://www.adb.org/projects/documents/ind-53276-002-iee-0 TUTDP website- https://tutdp.org.in/?&p=8e296a067a	Yes. Disclosed draft IEE provided to contractor. After updation and approval, final IEE will also be provided	Yes Prepared by contractor for WTP, Intake, Deep tube well and OHSR locations

[12] Package awarded and under implementation

Package No	Components	Design status (Preliminary Design Stage/ Detailed Design Completed	Final IEE based on Detailed Design				Site specific EMP (or construction EMP) approved by project implementation agency (Yes/ No)
			Not yet due (detailed design not yet completed)	Submitted to ADB (provide date of submission)	Disclosed on ADB and project website (Provide link)	Final IEE provided to Contractors (Yes/No)	
				progress, after finalization of design.	37563370ded05f5a3bf3ec		
WS-03/P-03	Design, Build, and Operate Contract for Comprehensive Water Supply Improvement Works in Cluster IIIA Towns of Tripura	DBO contract: design under process, will be finalized shortly.	Updated IEE will be submitted after finalization of all design PMU will update the IEEs/submit addendum to the IEEs based on completed designs before the start of relevant works.	IEE prepared before bidding Report submitted and accepted by ADB on June 2023	ADB website: https://www.adb.org/projects/documents/ind-53276-002-iee-1 TUTDP website: https://tutdp.org.in/?&p=8e296a067a37563370ded05f5a3bf3ec	Yes. Disclosed IEE provided to contractor After updation, final IEE will also be provided	Draft SEMP submitted Physical activity just started
Tourism Project							
TTDCL/CHB/W 01	Tourism Destination Development at Chabimura and Upgradation/ Beautification of Visitor Amenities/ Facilities at Fatik Sagar and Amar Sagar	Item rate contract-design completed.	Updated IEE submitted after finalization of all design	IEE prepared before bidding Further updated report submitted and accepted by ADB on May 2024	ADB website: https://www.adb.org/projects/documents/ind-53276-002-iee-9 TUTDP website https://tutdp.org.in/?&p=8e296a067a37563370ded05f5a3bf3ec	Yes. Updated disclosed IEE provided to contractor	Yes SEMP submitted for entire package and accepted by PIU In case of change in scope and design further updation will be carried out for IEE and SEMP
TTDCL/UKT/W 04	Development of Sonamukhi Eco Accommodation & Adventure Park and Rehabilitation of	Item rate contract-design completed.	Updated IEE submitted after finalization of all design	IEE prepared before bidding Further updated report submitted	ADB website: https://www.adb.org/projects/documents/ind-53276-002-iee-8	Yes. Updated disclosed IEE provided to contractor. After approval of	Yes SEMP submitted for entire package and accepted by PIU

Package No	Components	Design status (Preliminary Design Stage/ Detailed Design Completed	Final IEE based on Detailed Design				Site specific EMP (or construction EMP) approved by project implementation agency (Yes/ No)
			Not yet due (detailed design not yet completed)	Submitted to ADB (provide date of submission)	Disclosed on ADB and project website (Provide link)	Final IEE provided to Contractors (Yes/No)	
	Unakoti Tourist Lodge at Kailashahar			and accepted by ADB on May 2024 Further updation of report done on March 2025 after change in scope(additional component). Report accepted by ADB but not disclosed.	TUTDP website https://tutdp.org.in/?&p=8e296a067a37563370ded05f5a3bf3ec	updated IEE, final IEE will also be provided	In case of change in scope and design further updation will be carried out for IEE and SEMP
TTDCL/CKM/W03	Upgradation of visitor amenities/ facilities, enhancement of built and natural features at Chaturdash Devta Temple and Kasba Kalibari Temple and Reconstruction of Yatri Niwas at Chaturdash Devta Temple	Item rate contract- design completed.	Updated IEE will be submitted after finalization of all design	IEE prepared before bidding and disclosed on July 2023	ADB website: https://www.adb.org/projects/documents/ind-53276-002-iee-7 TUTDP website https://tutdp.org.in/?&p=8e296a067a37563370ded05f5a3bf3ec	Yes. Disclosed IEE provided to contractor	Work just awarded, Site specific EMP needs to be submitted

A. Implementation Arrangement

24. Urban Development Department (UDD) of Government of Tripura (GOT) is the executing agency, and the implementing agencies are Tripura Urban Planning and Development Authority (TUDA, for urban component) and Tripura Tourism Development Corporation Limited (TTDCL, for tourism component). A Project Management Unit (PMU) established with the secretary, UDD as the project director and secretary, Department of Tourism (DOT), GOT, as co-project director. The PMU also include two additional project directors (one each for urban and tourism), a project coordinator, and an additional project coordinator. Six project implementation units (PIUs) established to cover urban and tourism components separately and located at Agartala, Udaipur and Kumarghat. Project Management & Supervision Consultant (PMSC) already engaged to assist PMU and the PIUs for implementation of the project.

25. A Steering Committee, headed by Chief Secretary have been notified will provide strategic guidance, and oversee the implementation of the investment project. Project Executive Committee, headed by the secretary UDD established for monitoring program implementation. Terms of reference of the committee is included in the notification. Notification is also done for formation of PMU and PIUs. All notifications are attached in **Appendix 10.** Notification for Environment and Social safeguard team at PMU and PIU levels for urban and tourism project also done.

B. Environmental Safeguards Implementation Arrangements and Responsibilities

26. At PMU, the project coordinator at PMU is the nodal officer for environmental, social safeguards and gender and responsible for ensuring compliance with ADB's Safeguards Policy Statement (SPS), 2009, during the project implementation, including the monitoring and reporting. PMU engage a qualified and experienced consultant, designated as environmental safeguards officer (ESO), to support project coordinator in environmental safeguards tasks. Project manager or assistant project manager of PIU is designated as safeguards focal in each PIU. PMSC team included an Environmental Safeguards Specialist (ESS), and support environment safeguard staff, and provide all necessary support and expert guidance to PMU and PIUs. Contractor appointed Health and Safety (HS) officer for day-to-day monitoring at site.

27. **Project Management Unit (PMU).** The PMU is responsible for planning, management, coordination, supervision, and progress monitoring. The PMU has the responsibility of fulfilling environmental requirements of the government and ensuring effective implementation of the environmental management provisions in the IEEs, EMPs and civil works contracts. The following are the key environmental safeguard tasks and responsibilities of the ESO at the PMU:

- Ensure project compliance with the statutory environmental requirements, ADB SPS 2009, and loan covenants
- Ensure that draft IEEs prepared based on preliminary designs are updated to reflect the final project facility detailed designs, and are approved by ADB and disclosed prior to bid invitation (for works contracts) and commencement of works (for design-build contract)
- Ensure that IEEs including EMPs are included in bidding documents and contracts
- Ensure that baseline monitoring as suggested in the EMPs are conducted and base values established prior to commencement of works
- Ensure that detailed environmental audit conducted for existing facilities and corrective actions are included in project for implementation

- Coordinate with design engineers to avoid potential environmental impacts
- Ensure that SEMPs are submitted by contractor and cleared by PIU prior to commencement of works
- Ensure that construction works are not commenced until all applicable government clearances, permits (including those required by construction contractor) are obtained;
- Oversee and ensure that contractors and their subcontractors comply with labor laws and rules
- Ensure that the IEEs including EMPs are updated in case of any change project scope, design or location during implementation
- Confirm compliance with all measures and requirements set forth in the IEEs, the EMPs and any corrective or preventive actions set forth in safeguard monitoring reports;
- Finalize environmental sections quarterly progress reports, and environmental monitoring reports for submission to ADB
- Ensure availability of budget for safeguards activities
- Ensure adequate awareness campaigns, information disclosure among affected communities and timely disclosure of final IEEs/EMPs and SEMRs, including corrective action plans, if any, in project website and in a form accessible to the public;
- Assist in setting up of grievance redress mechanism (GRM), identifying grievance redressal committee (GRC) members and developing capacity of GRC members, PIUs, consultants, and contractors in addressing environmental safeguards-related issues/concerns/complaints;
- Ensure any grievances brought about through the GRM are redressed in a timely manner;
- Organize periodic capacity building and training programs on safeguards for PMU, PIUs and contractors.

28. **Project Implementation Units.** The PIUs are responsible for the day-to-day activities of project implementation in the field and have direct supervision of all contractors. PIUs will oversee and monitor the day-to-day progress and implementation including environmental safeguards. The following are the key environmental safeguard tasks and responsibilities of the safeguards focal at the PIU with the PMSC's support safeguard staffs.

- Promptly report to PMU on any changes in project design / location / scope during the design verification and implementation phase and coordinate with PMSC to update IEEs and EMPs
- Liaise with local offices of regulatory agencies and ensure that clearances /approvals are obtained timely;
- Take necessary action for obtaining right-of-way prior to start of works;
- Review and approve contractor SEMPs;
- Oversee implementation of SEMPs by contractors
- Ensure that contractors and their subcontractors comply with labor legislations and standards; ensure that workers are accommodated, paid and treated according to the requirements
- Ensure strict implementation of occupational health and safety requirements
- Review monthly reports from contractors on EMP implementation, and support PMU in preparing quarterly reports and SEMRs
- Ensure continuous public consultation and awareness.
- Coordinate grievance redress process and ensure timely actions by all parties;

- Support all other environmental safeguards-related activities and tasks of the PMU as may be needed.
- Recommend issuance of construction work completion certification to the contractor upon verification of satisfactory post-construction clean-up.

29. **Project Management and Supervision Consultant (PMSC).** The PMU and PIUs are supported by PMSC's Environmental specialist and support environment safeguard staff. Key tasks include, but not limited to, the following:

- Assist in preparing, updating, reviewing, implementing, monitoring, and reporting of all tasks related to environmental safeguards as required
- Monitoring of EMP implementation, regulatory compliance, grievance redress, reporting etc.,
- Provide all necessary support and expert guidance to ESO and SO in managing environmental safeguards tasks
- Work closely with design teams to include environmental considerations in project facility location, design and technical specifications
- Update IEEs and EMPs as needed to reflect detailed designs, changes in design verification and/or implementation phase of project facilities
- Assist in public consultations, feedback, and reporting
- Ensure that the relevant provisions of EMPs, including costs of implementing the EMPs, are fully included in bid and contract documents, particularly in the bill of quantities and cost line items;
- Identify statutory clearances / permissions / approvals required and assist in obtaining them;
- Assist in including standards/conditions of regulatory clearances and consents, if any, in the project design;
- Conduct training, capacity building activities for PMU, PIU and contractors
- Ensure compliance with ADB's disclosure requirements as per the SPS;
- Assist PMU/PIUs in reviewing and approving contractor SEMPs, and other associated plans
- Carry out site verification, and monitor the EMP implementation and ensure compliance by the contractors and subcontractors;
- Ensure that contractors and their subcontractors comply with labor legislations; ensure that workers are paid and treated according to the labor legislations
- Identify any non-compliances or unanticipated impacts and recommend corrective actions
- Prepare environmental safeguards section in quarterly reports
- Prepare semi-annual environmental monitoring reports
- Assist in operating GRM effectively
- Advise contractor on appropriate actions on grievances, ensure timely resolution and proper documentation; and
- Support all other environmental safeguards-related activities and tasks of the PMU and PIUs as may be needed.

30. **Contractor.** The approved draft IEEs and EMPs are included in bidding and contract documents. The PMU and PIUs ensured that bidding and contract documents include specific provisions requiring contractors to comply with: (i) all applicable laws and regulations relating to environment, health and safety; (ii) reinstate pathways, other local infrastructure, and agricultural

land to at least to their pre-project condition upon the completion of construction; (iii) all applicable labor laws and core labor standards on (a) prohibition of child labor as defined in national legislation, international treaties for construction and maintenance activities;(b) equal pay for equal work of equal value regardless of gender, ethnicity, or caste; (c) no discrimination in respect of employment and occupation; (d) allow freedom of association and effectively recognize the right to collective bargaining, and (e) elimination of forced labor; and (iv) the requirement to disseminate information on sexually transmitted diseases, including HIV/AIDS, to employees and local communities surrounding the project sites. The contractor appointed a full-time Safety officer and appointed/ to be appointed Environment expert on-site to implement the EMP. Safety officer and Environment Expert will assist contractor in the following:

- Prepare SEMP and submit to PMU/PIU for approval prior to start of construction
- Comply with the measures mentioned in the IEEs, the EMPs, and SEMRs
- Ensure implementation of SEMP and report to PIU/PMSC on any new or unanticipated impacts
- Ensure that necessary pre-construction and construction permits are obtained
- Ensure to adequately record the condition of roads, agricultural land and other infrastructure prior to starting to transport materials and construction; and
- Conduct orientation, daily briefing sessions, toolbox talks, to workers on environment, health and safety;
- Provide appropriate worker facilities at the workplace and labor camps as per the requirements and contractual provisions;
- Carry out site inspections on a regular basis and prepare site inspection checklists/reports;
- Record EHS incidents and undertake remedial actions;
- Conduct environmental monitoring (air, noise, etc.,) as per the monitoring plan
- Prepare monthly EMP monitoring reports and submit to PIU
- Comply with labor legislations, and ensure that subcontractors also implement labor legislations requirements, through cascading of requirements to subcontractors—HR policy, labor management requirements, any worksite specific grievance redress mechanism.
- Work closely with PIU and PMSC to ensure communities are aware of project-related impacts, mitigation measures, and GRM;
- Receive, record, and redress grievances in an effective and timely manner.
- Provide the PIU/ PMU with a written notice of any unanticipated environmental, impacts that arise during construction, implementation or operation of the Project that were not considered in the IEE, the EMP;
- Reinstate pathways, other local infrastructure, and agricultural land to at least their pre-project condition upon the completion of construction;
- Site clearance and restoration after the completion of works

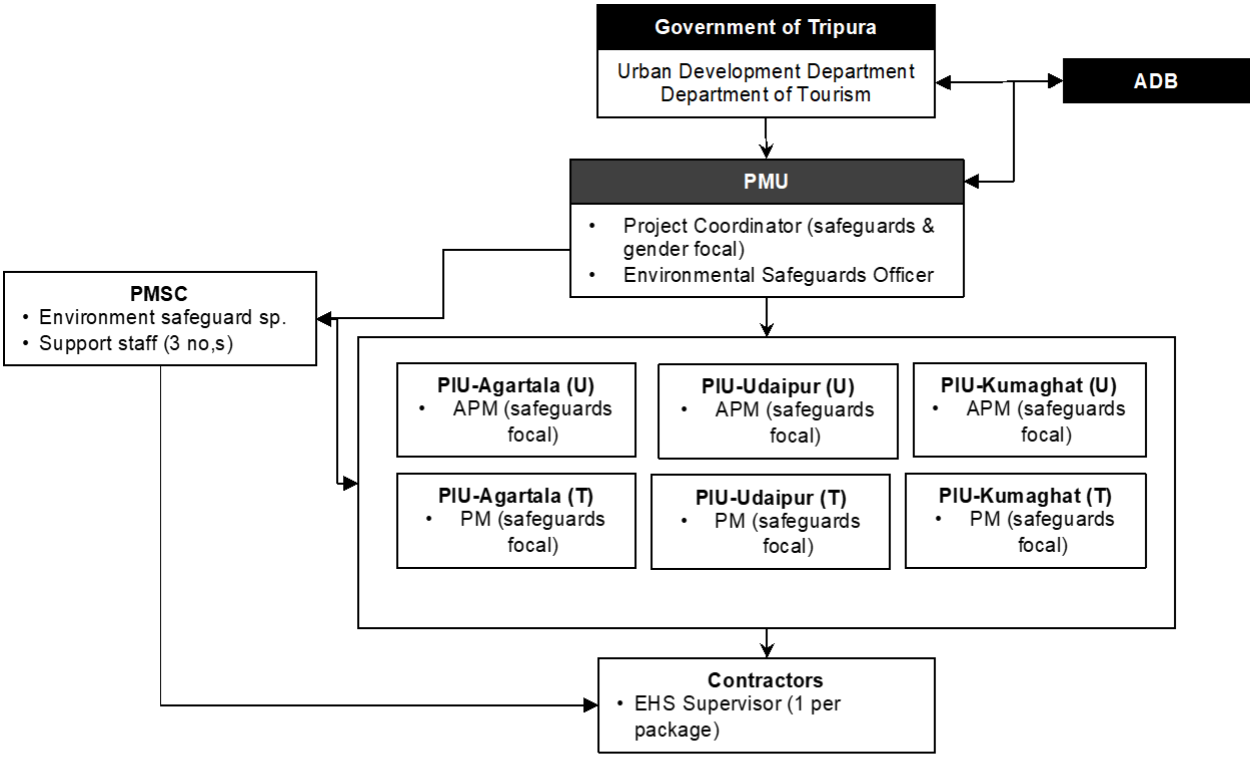
31. Environment Specialist of PMSC visited active construction sites every month for audit of EMP application, assess shortfall of EMP application and arranged onsite training program for contractors and supervisory staff and instructed contractors for application of corrective action measures to mitigate impacts. **Table 8** shows detail of safeguard personal from contractor. **Table 1** shows project safeguard Team.

Table 8: Details of Contractor's safeguard officer for TUTDP

Designation	Name and Contact Details
URBAN PACKAGES	
Contractor- Eco Protection Engineers Pvt. Ltd. **Package:** TUDA/WS-01/P-01 (Cluster IA water supply) **Safety Officer** **Environment Safeguard Expert:**	Name: Vignesh G. Phone: 7010650363 Email: mgvi90@gmail.com eco.tripura@gmail.com Name: Ajithkumar T Phone: 8754683565 Email: ajithkumar29011995@gmail.com
Contractor- Eco Protection Engineers Pvt. Ltd. **Package:** TUDA/WS-02/P-02 (Cluster IIA water supply) **Safety Officer**	Name: Selvaganapathy. S Phone: 7010855457 Email: selvam1496@gmail.com eco.tripura@gmail.com
Contractor- Prem Construction Company **Package:** TUDA/WS-03/P-03 (Cluster IIIA water supply) **Safety Officer**	Name: Vikram Singh Phone: 9828445139 Email: rathorevikram727@gmail.com
TOURISM PACKAGES	
Contractor- BVG India Ltd. **Package: TTDCL/CHB/W 01** (Tourism Destination Development at Chabimura and Upgradation/ Beautification of Visitor Amenities/ Facilities at Fatik Sagar and Amar Sagar) **Safety Officer** **Environment Safeguard Expert:**	Name: Mr. Sunny Kumar Phone: 6201497876 Email: sunnykumarray56@gmail.com Name: Mr. Photic Saikia Phone: 6201497876 Email: photicsaikia@gmail.com
Contractor: Tribeni Construction Limited **Package: TTDCL/UKT/W04** (Development of Sonamukhi Eco Accommodation & Adventure Park and Rehabilitation of Unakoti Tourist Lodge at Kailashahar) **Safety officer:** **Environment Safeguard Expert:**	Name: Mr. Sahed Parwez Phone: 9432586656 Email: shahidsafety28@gmail.com Name: Mr. Subrata Sinha

Designation	Name and Contact Details
	Phone: 9836006555 Email: sukamala1995@gmail.com

32. **Figure 10** shows institutional arrangement for safeguard implementations for the project.



ADB = Asian Development Bank; APM = Assistant project manager; EHS = Environment, Health & Safety; IA – Implementing Agency; PIU = Project Implementation Unit; PMSC = Project Management and Supervision Consultant; PMU = Project Management Unit; PM = project manager

Figure 10: Overall Institutional Arrangement – Safeguards

C. EMP implementation - Application of Mitigation measures

33. Environment Specialist and Environment support staff from PMSC carried out periodic monitoring of EMP implementation through desk review of contractor's documents and site inspections. Package wise status of Environment Monitoring for the package TUDA/WS-01/P-01 (Cluster IA water supply), TUDA/WS-02/P-02 (Cluster IIA water supply) and TUDA/WS-03/P-03 (Cluster IIIA water supply) is shown in **Table 9**. Monitoring is also started for the tourism packages, TTDCL/CHB/W01 (Tourism Destination Development at Chabimura and Upgradation/ Beautification of Visitor Amenities/ Facilities at Fatik Sagar and Amar Sagar) and TTDCL/UKT/W04 (Development of Sonamukhi Eco Accommodation & Adventure Park and Rehabilitation of Unakoti Tourist Lodge at Kailashahar). **Table 10 and 11** shows the compliance status, respectively.

34. Contractors for all the 4 packages (where construction started) has already complied pre construction/ implementation requirements like collection of PUC certificate, labour license (attached as **Appendix 3**), Workman Compensation Policy (attached as **Appendix 4**) and completed base line monitoring (Report certificate available with PMSC and PIU). Contractor for the package TUDA/WS-03/P-03 (cluster IIIA water supply) started submission of documents as required for package work implementation, but partially complied. Few documents are under process.

Table 9: Summary of Environmental Monitoring Activities for the Package WS-01/P-01: Design, Build, and Operate Contract for Comprehensive Water Supply Improvement Works for Cluster IA Towns of Tripura, Package WS-02/P-02: Design, Build, and Operate Contract for Comprehensive Water Supply Improvement Works in Cluster IIA Towns of Tripura and **Package WS-03/P-03: Design, Build, and Operate Contract for Comprehensive Water Supply Improvement Works in Cluster IIIA Towns of Tripura**

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
Design Phase									
Source sustainability and efficiency	▪ Select sustainable water source ▪ The entire system is designed to maintain optimal flow and terminal pressure, and optimizing the overall energy usage ▪ To meet the drinking water standards, implementation of a water quality surveillance program ▪ Using low-noise and energy efficient pumping systems ▪ Installing the noise-producing pumps and motors etc., in enclosed buildings with noise reducing walls, and also maintaining adequate buffer to the nearby inhabited areas ▪ Provision of appropriate personal protection equipment to the workers and staff	• Design philosophy • Project QA/QC plan • Selection methodology for distribution network	Document review and LOP Survey	All project locations	Before commencement of final design	Environment Specialist and support of PMSC; PIU	Detailed design has been finalized particularly water transmission and distribution pipeline, OHR. necessary points as mentioned in IEE are considered during finalization of design	Detailed design has been finalized particularly water transmission and distribution pipeline, OHR. WTP necessary points as mentioned in IEE are considered during finalization of design	Detailed design under process particularly water transmission and distribution pipeline, OHR, intake and WTP. Necessary points as mentioned in IEE are considered / to be considered during finalization of design
Nearby community may be affected due to increased pollution	▪ Sites should be selected so that nearby community may have no or minimum impact due to proposed works	• Checking of selected sites • Checking of mitigation measures of EMP	• Site observation • Desk review of	All project locations	During design	Environment Specialist and support of PMSC; PIU	Considered during detailed design	Considered during detailed design	Considered during detailed design

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
during construction and operation	▪ Mitigation measures are prepared and included in design and EMP is attached with contract documents		documents						
Impact on sensitive areas (ASI monuments, and Ramsar wetland) due to proposed construction works	▪ During the detailed design, PIU to consult ASI (in Udaipur / Agartala) with exact distance and depth of waterlines works within 300 m of the monuments, and include any feedback or measures as suggested by ASI in into design/construction; obtain prior ASI permission for construction if required ▪ Prior to commencement of construction, consult with concerned religious authorities of these temples, nearby people and devotees and explain the work method and duration of proposed works, take their suggestions and comments in scheduling and conducting the works ▪ Prevent dust, noise, accumulated water, and contaminated surface runoff from the work sites; take necessary measures as needed (these are presented in construction phase impacts-measures)	• Provision in final design and crosschecking of mitigation measures as prescribed in EMP	• Document checking	Specific project locations	During design	Environment Specialist and support of PMSC; PIU	• Fuel stored as per norms • Proper diversion of waste water • Selection of camp outside the sensitive areas. • Waste will be disposed at designated area These are considered in design and during implementation of the project	• All considered during detailed design • At present work not started near Ramsar site at Melaghar and ASI protected site at Udaipur. All mitigation measures will be applied during work near sensitive areas	• Fuel will be stored as per norms • Proper diversion of waste water • Selection of camp outside the sensitive areas. • Waste will be disposed at designated area These are all to be considered in design and during implementation of the project

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	▪ No construction camps (workers accommodation, material / waste / soil storage) should be established within 500 m of the monuments in Udaipur ▪ No construction camps (workers accommodation, material / waste / soil storage) should be established within 1000 m (1 km) from the boundary of Rudrasagar lake; camps should not be located close to drainage lines/streams that flow into Rudrasagar lake ▪ All project related site staff, construction workers and supervisors, shall be made aware of the sensitive sites, and prevent any harm or damage or disturbance to trees, vegetation, wildlife, birds etc., ▪ Proper accommodation and facilities shall be provided within the camps, and workers shall not use the lake or surroundings for open defecation, bathing, or fishing / hunting, collecting firewood etc. Contractor should put in place, a proper system to monitor the staff								

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	and workers to prevent damage/ disturbance. ▪ Do not use equipment that generate heavy noise, ground vibration, dust etc., (such as pneumatic drills, dozers etc., within 100 m of temples, or within 500 m of Rudrasagar lake ▪ Schedule works during dry season to avoid contaminated runoff from the work sites entering lake; clear the sites of materials, debris, and consolidated the refilled trenches prior to onset of monsoon ▪ Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies; ▪ Place storage areas for fuels and lubricants away from any drainage leading to water bodies; ▪ Store fuel, construction chemicals etc., on an impervious floor, also avoid spillage by careful handling ▪ Dispose any wastes generated by construction activities in designated sites; and ▪ Conduct surface quality inspection according								

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	to the environmental management plan (EMP). ▪ Conduct continuous consultations with the local people during the works								
Damage to infrastructure and potential risks: project area in High earthquake risk zone (Zone V)	Designs of project component structures shall comply with relevant codes of design such as Bureau of Indian Standard (BIS) specifications for earthquake resistant design (IS: 1893: Criteria for earthquake resistant design of structures).	• Design document	• Document checking	All project locations	Always – during design	Environment Specialist and support of PMSC; PIU	Considered in final design	Considered in final design	Considered in final design
Groundwater contamination	▪ Prevent flow of untreated wastewater in the drains ▪ Measures should be taken to control the open defecation, and to close all unsafe latrines (for example pit latrines). ▪ Awareness programs shall be conducted regarding the sanitation practices and its effect on groundwater quality	• Checking of provision in the design and consideration of facility • Awareness program document	Document checking	All project locations	Always – during design	Environment Specialist and support of PMSC; PIU	Provision considered in design to check contamination of ground water	Provision considered in design to check contamination of ground water	Provision considered in design to check contamination of ground water
Contamination from nearby non-functional septic tank – at Belonia	▪ Use of nonpermeable pipes MS/ PVC and other components for DTW construction ▪ Depth of DTW will be 200 m and strainer at 160 m and below reduces	• Final design drawing	• Document checking • Site observation	At Belonia DTW location	During design	Environment Specialist and support of PMSC; PIU	Not applicable	Considered in the design	Not applicable

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	chance of any contamination ▪ Ensure a minimum of 30 m distance from septic tank / its discharge point. If land available, this distance can be increased to 50 m ▪ The borewell and septic tank should be on the opposite corners and preferably diagonally opposite to each other with sufficient distance.								
Water quality and ecological impacts- River Intakes (at Udaipur, Kailashahar, Dharmanagar and Kumarghat)	▪ Do not utilize the environmental flow for supply; ensure that environmental flow is available in the river all times; limit the abstraction to allowable limits ▪ Design inlet of intake pipe in the river with appropriate screen to avoid entry of aquatic organisms into inlet ▪ Select a construction methodology that is least disturbing, and appropriate for the in-situ soil condition, and able to complete the construction work prior to onset of monsoon. ▪ Schedule the construction works during low water level period – late winter months to pre monsoon (November -	• Work plan • Design provision • Water quality and ecological status	• Design document checking • Site observation	At Udaipur intake site	During design	Environment Specialist and support of PMSC; PIU	Not applicable	Work of intake not started for Udaipur. Mitigation and monitoring will be conducted as per EMP provision	Work not started for Kailashahar, Dharmanagar and Kumarghat. Mitigation and monitoring will be conducted as per EMP provision

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	March); ensure that works are completed during the same period to prior to onset of monsoon; ▪ Erect temporary barriers to form enclosed construction area with least disturbance ▪ Allow adequate time to settle the distributed solids to prior to pumping out water; only clear/clarified water shall be pumped back into the reservoir; any silt laden water should be pumped to a silt pond ▪ Avoid/minimize use of fuels, chemicals and lubricants; ensure no spillage ▪ Clear the work site after completion at least to pre project conditions, ensure that there are no materials, debris, spills etc., and prior to removal of temporary barriers / coffer dam ▪ Implement work site safety at works in water body								
Water Treatment Plant (WTP) design (at Udaipur, Kailashahar,	▪ Design treatment process that is suitable for raw water source characteristics duly considering the seasonal variation in quality if any	• Design document • Ground water and surface water quality monitoring	• Design document checking	At Udaipur WTP	During design	Environment Specialist and support of PMSC; PIU	Not applicable	Work not started for Udaipur. Application of mitigation measures	Work not started for Kailashahar, Dharmanagar and Kumarghat.

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
Dharmanagar and Kumarghat)- Inefficient treatment, treated water characteristics not satisfying the standards	▪ Duly consider quality of groundwater that will be supplemented for surface water supply variations ▪ Treated water and supplied water at consumer end should meet the drinking water standards all times		• Quality report					and monitoring will be conducted as per EMP provision	Application of mitigation measures and monitoring will be conducted as per EMP provision
Water Treatment Plant (WTP) design (at Udaipur, Kailashahar, Dharmanagar and Kumarghat)- Design to prevent pollution due to wastewater and sludge	Ensure that the following are included in the WTP design: ▪ Backwash water reuse system and sludge recovery and disposal system ▪ Backwash recycling components: Filter backwash holding tank, recovered water storage tank and pumping for recycling ▪ Sludge management system components: Gravity thickeners for sludge from clarifiers, mechanical sludge dewatering system, storage facility for dewatered sludge ▪ Disposal of sludge at a landfill or the disposal site provided by the ULB	• Detailed design document	• Design checking	At project office- Udaipur	During design	Environment Specialist and support of PMSC; PIU	Not applicable	Backwash water reuse system and sludge recovery and disposal system, sludge management system are considered in the design.	Backwash water reuse system and sludge recovery and disposal system, sludge management system are considered in the design.
Water Treatment Plant (WTP) design	▪ Prepare sludge management plan for safe handling and disposal of sludge from WTP	• Detailed design document	Design checking	At project office- Udaipur	During design	Environment Specialist and support of PMSC; PIU	Not applicable	Work not started for Udaipur. All provision	Work not started for Kailashahar, Dharmanaga

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
(at Udaipur, Kailashahar, Dharmanagar and Kumarghat)- Sludge management	▪ Estimate the quantity of sludge / solids generated from the WTP during the detailed design phase, and likely composition based on the raw water quality and process chemicals ▪ Minimize the quantity of solids generated by the water treatment process through optimizing coagulation processes; ▪ Recover process chemicals to the extent possible to minimize / prevent the disposal ▪ Carryout pre-treatment prior to disposal ▪ Dispose dried sludge / solids from WTP at approved solid waste landfill / disposal site identified by ULB; this should be identified during the detailed design phase ▪ Evaluate the option of land application during the operation stage; conduct quality tests on the first batch of sludge generated from the WTP, check for physico-chemical characteristics including heavy metals ▪ Manage hazardous/harmful waste if							of mitigation under EMP will be considered. Sludge ,management and recycle process considered on the design of Udaipur.	r and Kumarghat. All provision of mitigation under EMP will be considered Sludge management and recycle process considered in the design

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	any, as per the Hazardous Waste Management Rules ▪ Employ safe and beneficial methods for disposal of dried sludge: in building and construction industry, brick / tile manufacturing etc.,								
Chlorine handling and application risk – health and safety risk to workers and public	In final design, the following measure will be provided at the chlorine application unit: ▪ Chlorine neutralization pit with a lime slurry feeder ▪ Chlorine absorption and neutralization facility ▪ Proper ventilation, lighting, entry and exit facilities ▪ Visible and audible alarm facilities to alert chlorine gas leak ▪ Facility for isolation in the event of major chlorine leakage ▪ Eye wash and shower facility ▪ Personal protection and safety equipment for the operators in the chlorine plant (masks, oxygen cylinders, gloves, etc.,) ▪ Provide training to the staff in safe handling and application of chlorine; this shall be included in the contract of Chlorinator supplier	• Project emergency management plan • Project safety and PPE use plan • Training plan	Document review	WTP site	During detail design, before commencement of work	Environment Specialist and support of PMSC; PIU	Not applicable	Work not started for WTP Provision considered within the design. Authorization under “The manufacture, storage and import of hazardous chemicals rules, 1989” should be followed.	Work not started for WTP Provision considered within the design. Authorization under “The manufacture, storage and import of hazardous chemicals rules, 1989” should be followed.

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	▪ Supplier of Chlorinator equipment shall provide standard operating manual for safe operation and as well as maintenance and repairs; preferably these shall be provided both in English and Bengali Languages. ▪ Guidelines for safety for Chlorine usage								
Existing WTPs -Environment and health impacts due to improper disposal of wastewater and sludge, poor chemical handling, waste management and occupational health and safety	▪ Conduct detailed technical assessment of WTP during the detailed design phase and identify the improvements required. ▪ Conduct raw and treated water quality monitoring (at inlet and outlet) ▪ Undertake necessary improvements at the WTPs either part of the project or through DWS ▪ Ensure that WTPs are improved as required, and ensure that treated water quality meets the drinking water standards, and waste management, material management and health and safety practices are improved	• Detailed design • Raw and treated water quality	Design document	Existing WTP	During detailed design	Environment Specialist and support of PMSC; PIU	Under DWS-PWD provision	Work of WTP not started Under DWS provision Undertake necessary improvements at the WTP by DWS	Work of WTP not started Under DWS provision Undertake necessary improvements at the WTP by DWS
Tree cutting	▪ Minimize removal of trees by adopting to site condition and with appropriate layout design of	Tree felling requirement and afforestation after final design	• Checking of records • Visual inspection of sites	Project locations	During final design, before commencement of work	Environment Specialist and support of PMSC; PIU	As of now, tree felling requirement is not envisaged.	As of now, tree felling requirement is not envisaged.	As of now, tree felling requirement is not envisaged.

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	OHSR, WTP and location of DTW- IRP-GLSR ▪ Obtain prior permission for tree cutting, if any ▪ Plant and maintain 5 trees for each tree that is removed								
Loss of natural resources	▪ Use energy efficient electrical equipment ▪ Provision of use of energy efficient equipment in contract agreements and BOQ	• Contract agreement • Design philosophy	• Document checking	Project locations	During final design, before commencement of work	Environment Specialist and support of PMSC; PIU	Considered in the design and contract agreement	Considered in the design and contract agreement	Considered in the design and contract agreement
Implementation of the EMP	▪ The EMP should be included in the Bid Document so that the selected Contractor understands the issues and makes necessary plans to prepare and implement the EMP ▪ Health and safety requirements should be incorporated as part of the contract bid document so that the selected Contractor understands the issues and makes necessary plans to prepare and implement the health and safety requirements.	• Contract document • Health and safety plan	Document checking	Project locations	During final design, before commencement of work	Environment Specialist and support of PMSC; PIU	Considered in the design and contract agreement	Considered in the design and contract agreement	Considered in the design and contract agreement
Encroachment / damage to protected monuments and chance	▪ Create awareness among the workers, supervisors and engineers about the chance finds during excavation work	• Awareness document	• Document checking	Project locations	During final design and before start of physical construction	Environment Specialist and support of PMSC; PIU	Provision in SEMP to follow	Provision in SEMP to follow	Provision in SEMP to follow

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
finds	▪ Stop work immediately to allow further investigation if any finds are suspected ▪ Inform local Archaeological Department if a find is suspected and take any action, they require to ensure its removal or protection in situ; and prepare a chance find protocol								
Pre-Construction Stage									
Environmental legal non-compliance may attract legal actions Failure to obtain necessary consents, permits, NOCs etc. can result to design revisions and/or stoppage of works	▪ All necessary consents, permits, clearance, NOCs, etc. prior to award of civil works must be obtained ▪ All necessary approvals for construction will be obtained by contractor before start of construction ▪ It is acknowledged in writing and report on compliance of all obtained consents, permits, clearance, NOCs, etc. are provided. ▪ Detailed design drawings and documents are included.	List of applicable legislation	Checking of documents	All project locations	Before commencement of construction	Environment Specialist and support of PMSC; PIU	Being Complied and to be continued as per requirement Till report period NOC obtained from CGWA for withdrawal of ground water for construction purposes of cluster IA. Copy of NOC already available under **Appendix 5**	Being Complied and to be continued as per requirement Till report period NOC obtained from CGWA for withdrawal of ground water for construction purposes of cluster IIA. Copy of NOC already available for only Udaipur town. Application letters for	Being Complied and to be continued as per requirement Till report period application for NOC from CGWA for withdrawal of ground water for construction purposes of cluster IIIA has been submitted, but NOC is yet to be received.

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
								other town and copy for Udaipur enclosed in **Appendix 5**	
Environmental monitoring of baseline conditions of air, noise, water and soil - To establish base line environmental conditions	Environmental monitoring through NABL approved laboratory	Monitoring report	Checking of documents	All project locations	Before commencement of construction	Environment Specialist and support of PMSC; PIU	Conducted base line monitoring on September 2024 as per monitoring plan	Conducted base line monitoring on September 2024 as per monitoring plan	Conducted base line monitoring on March 2025 as per monitoring plan
Affected- Telephone lines, electric poles and wires, water lines within proposed project area	▪ Operators of these utilities have been preliminary identified and included in the detailed design documents to prevent unnecessary disruption of services during construction phase; ▪ DBO Contractor will prepare and implement a contingency plan to include actions to be taken in case of unintentional interruption of services. ▪ Consult and provide prior information to affected households and business (at least 1 week prior) on the intended utility	▪ List of affected utilities if any and operators ▪ Contingency plan	Observation and document checking	Specific project location	Before commencement of construction	Environment Specialist and support of PMSC; PIU	Being complied as per site condition and requirement	Being complied as per site condition and requirement	Being complied as per site condition and requirement

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	shifting and likely disruptions in services								
Construction work camps, stockpile areas, storage areas, and disposal areas.- Conflicts with local community; disruption to traffic flow and sensitive receptors	(i) Construction camp to be set up near major work site WTP, DTW and OHSRs (ii) If it is deemed necessary to locate elsewhere, consider sites that will not promote instability and result in destruction of property, vegetation, irrigation, and drinking water supply systems (iii) Do not consider residential areas (iv) Extreme care will be taken in selecting sites to avoid direct disposal waste/ excess earth near water body which may inconvenience the community. If required, for excess spoil disposal, (a) sites will be selected from barren, infertile lands. In case agricultural land selected, written consent will be taken from landowners; (b) debris disposal site will be selected 200 m away from surface water bodies; (c) no residential areas be located within 50 m downwind side of the site; and (d) site will be selected 100 m away from sensitive locations like settlements, ponds/lakes or	• List of selected location for OHSRs • Involvement of traffic dept. • Road closure planning	• Site observation • Review of documents • Grievance Register	Specific project location	Before commencement of final design and commencement of construction	Environment Specialist and support of PMSC; PIU	Being Complied No disruption noted. Area selected nearby vacant place No excess spoil generated.	Being Complied No disruption noted. Area selected nearby vacant place No excess spoil generated.	Being Complied No disruption noted. Area selected nearby vacant place No excess spoil generated.

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	other water bodies.								
Extraction of materials can disrupt natural land contours and vegetation resulting in accelerated erosion, disturbance in natural drainage patterns, ponding and water logging, and water pollution.	• Construction materials are obtained only from government approved quarries with prior approval of cluster-PIUs/ PIU • Cluster-PIUs ensured that quarry sources have all necessary clearances/ permissions in place prior to approval • Contractor submits to PIU on a monthly basis documentation on material obtained from each source (quarry/ borrow pit) • Creation of new borrow areas, quarries etc., to be avoided for the project (work is small); if unavoidable, contractor to obtain all clearances and permissions as required under law, including Environmental Clearance prior to approval by PIU	• List of approved quarry sites and sources of materials • Construction Contractor documentation	• Checking of records • Visual Inspection of sites	Quarries and material source areas	Before commencement of work and during construction	Environment Specialist and support of PMSC; PIU	Being complied as per requirements Materials are procured from licensed source and royalty paid receipt obtained **(Appendix 6)**	Being complied as per requirements Materials are procured from licensed source and royalty paid receipt obtained. **(Appendix 6)**	Being complied as per requirements . Materials to be procured.
Location impacts of proposed components - project locations close to protected monuments in	▪ Obtain prior Archaeological Survey of India (ASI) permission for construction if required ▪ Prior to commencement of construction, consult with concerned religious	▪ NOC from ASI authority ▪ Consultation documents ▪ Scheduling of work ▪ Work plan and methodology	▪ Site observation ▪ Review of documents	Specific project location of Udaipur and Rudrasagar area at Melaghar	Before commencement of final design and commencement of construction	Environment Specialist and support of PMSC; PIU	Not applicable	Necessary application of mitigation measures as per requirement. Work not started near	Not applicable

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Udaipur and close to Rudrasagar Ramsar Wetland in Melaghar – Impact on sensitive areas (ASI monuments, and Ramsar wetland) due to proposed construction works	authorities of these temples, nearby people and devotees and explain the work method and duration of proposed works, take their suggestions and comments in scheduling and conducting the works ▪ Prevent dust, noise, accumulated of water, and contaminated surface runoff from the work sites; take necessary measures as needed (these are presented in construction phase impacts-measures) ▪ No construction camps (workers accommodation, material / waste / soil storage) should be established within 500 m of the monuments in Udaipur ▪ No construction camps (workers accommodation, material / waste / soil storage) should be established within 1000 m (1 km) from the boundary of Rudrasagar lake; camps should not be located close to drainage lines/streams that flow into Rudrasagar lake ▪ All project related site staff, construction workers and supervisors,	▪ Environment monitoring data ▪ Mitigation plan						Archaeological Survey of India (ASI) protected area at Udaipur and Ramsar wetland protected area at Melaghar.	

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	shall be made aware of the sensitive sites, and prevent any harm or damage or disturbance to trees, vegetation, wildlife, birds etc., ▪ Proper accommodation and facilities shall be provided within the camps, and workers shall not use the lake or surroundings for open defecation, bathing, or fishing / hunting, collecting firewood etc. Contractor should put in place, a proper system to monitor the staff and workers to prevent damage/ disturbance. ▪ Do not use equipment that generate heavy noise, ground vibration, dust etc., (such as pneumatic drills, dozers etc., within 100 m of temples, or within 500 m of Rudrasagar lake ▪ Schedule works during dry season to avoid contaminated runoff from the work sites entering lake; clear the sites of materials, debris, and consolidated the refilled trenches prior to onset of monsoon ▪ Install temporary silt traps or sedimentation								

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	basins along the drainage leading to the water bodies; ▪ Place storage areas for fuels and lubricants away from any drainage leading to water bodies; ▪ Store fuel, construction chemicals etc., on an impervious floor, also avoid spillage by careful handling ▪ Dispose any wastes generated by construction activities in designated sites; and ▪ Conduct surface quality inspection according to the environmental management plan (EMP). ▪ Conduct continuous consultations with the local people during the works								
Risk of archaeological chance finds Works near local religious / cultural places may inconvenience local community	Chance finds (i) Create awareness among the workers, supervisors and engineers about the chance finds during excavation work; (ii) Stop work immediately to allow further investigation if any finds are suspected; (iii) Inform local Archaeological Department if a find is suspected and take any action, they require to ensure its removal or	▪ Awareness, training program document ▪ Discussion MOM with religious authority ▪ Safety arrangement at site	▪ Document checking ▪ Site observation	Specific project location	Before commencement of final design and commencement of construction	Environment Specialist and support of PMSC; PIU	Protocol is being maintained accordingly and barricade-signage arranged at protected area wherever required	Protocol is being maintained accordingly and barricade-signage arranged at protected area wherever required	Protocol is being maintained accordingly and barricade-signage will be arranged at protected area wherever required

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	protection in situ; and prepare a chance find protocol Works near religious / cultural places (iv) Consult with concerned religious authorities, nearby people and devotees in pre-construction phase and explain the work method and duration of proposed works, take their suggestions and comments, and incorporate in design the mitigation measures required (v) Adjacent to religious/ social sites, undertake excavation and construction work in such a way that no structural damage is caused to the religious building. (vi) Observe the local rituals and important dates of festivals, weekly/monthly/annual religious occasions in the religious places and do not make any disturbance/hindrance/obstacles during such time to the religious places, (vii) Provide proper signage, barricades etc. to protect public and devotees from dangers of construction works.								
Construction Phase									

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
Irreversible impact to the environment, workers, and community, Impact due to effect of COVID 19	Project manager and all key workers will have undergone training on EMP implementation including spoils/waste management, Standard operating procedures (SOP) for construction works; occupational health and safety (OHS) including COVID-19(SOP), core labor laws, applicable environmental laws, etc.	▪ Induction & Awareness Trainings ▪ Toolbox Talks ▪ Safeguard Trainings	▪ Review of Training records ▪ Site Inspections	Project Locations	-	Environment Specialist and support of PMSC; PIU	Being Complied; Site Environmental Safety training and awareness arranged. However, number of trainings depends on arrival of new workers Sample training document is attached as **Appendix 12**	Being Complied; Site Environmental Safety training and awareness arranged. However, number of trainings depends on arrival of new workers Sample training document is attached as **Appendix 12**	Being Complied; Site Environmental Safety training and awareness needs to be recorded.
Emissions from construction related vehicles, equipment, machinery, resulting to dusts and increase in concentration of vehicle related pollutants such as carbon monoxide, sulfur oxides, particulate	**<u>For all construction works</u>** ▪ The soil and stockpiled material are damped down on site by water sprinkling ▪ Tarpaulins are used to cover the loose material (soil, sand, aggregate etc.,) when transported by trucks; ▪ A dust screen around the construction sites specifically at WTP, OHSRs site to be provided. Extra protection is required near sensitive receptors like school, Anganwadi,	o Location of stockpiles o Complaints from sensitive receptors o Monitoring data-PM10, PM2.5 NO2, SO2, CO o Heavy equipment and machinery with air pollution control o Water sprinkling arrangement o Cover materials	▪ Site inspection ▪ Document checking ▪ Public grievance register	Covering different locations. Air – monitoring: For e.g OHSRs, WTP and pipelaying sites	Continuous process Base line and during construction Base line air quality monitoring has been done on September 2024	Environment Specialist and support of PMSC; PIU	Being Complied; Pre-construction data has been collected results are available with PMSC, PIU Emission of equipment and vehicle tested. PUC certificate obtained for	Being Complied; Pre-construction data has been collected results are available with PMSC, PIU Emission of equipment and vehicle tested. PUC certificate obtained for	Being Complied; Pre-construction data has been collected results are available with PMSC, PIU Emission of equipment and vehicle tested. PUC certificate shall be

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
matter, nitrous oxides, and hydrocarbons	religious places located nearby the construction site. ▪ Wheels and undercarriage of haul trucks are cleaned prior to leaving construction site/quarry ▪ Sprinkling water and unloading inside the barricaded area will be made to Control dust generation while unloading the loose material (particularly aggregate, soil) at the site ▪ Water is used to maintain soils in a visible damp or crusted condition for temporary stabilization ▪ Water to be used prior to levelling or any other earth moving activity to keep the soil moist throughout the process ▪ Tarpaulins are used to cover the soil stocked at the sites ▪ Access to be controlled to work area, preventing unnecessary movement of vehicle, public trespassing into work areas; limiting soil disturbance to minimize dust generation ▪ All construction equipment and machineries should be fitted with pollution control devices and have a valid pollution						Vehicle. (Sample enclosed in **Appendix 2**) Relevant regulation under compliance. Other activities like dust suppression, covering of loose materials, dust screen arranged	Vehicle. (Sample enclosed in **Appendix 2**) Relevant regulation under compliance. Other activities like dust suppression, covering of loose materials, dust screen arranged	obtained for Vehicle as work progresses. Relevant regulation under compliance. Other activities like dust suppression, covering of loose materials, dust screen to be arranged with progress of the work. Pipe laying work yet to start.

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	under control (PUC) certificate <u>Pipeline works</u> ▪ Barricading the construction area using barricade or use of caution tape ▪ Confine all the material, excavated soil, debris, equipment, machinery (excavators, cranes etc.,), to the barricaded/ demarcated area ▪ Limit the stocking of excavated material at the site; remove the excess soil from the site immediately to the designated disposal area ▪ Undertake the work section wise: 100 – 200 m section should be demarcated and barricaded ▪ Conduct work sequentially - excavation, pipe laying, backfilling; conduct pipe testing section-wise (for a minimum length as possible) so that backfilling, stabilization of soil can be done. ▪ Remove the excavated soil of first section to the disposal site; as the work progresses, sequentially, by the time second section is								

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	excavated, the first section will be ready for back filling, use the freshly excavated soil for backfilling, this will avoid stocking of material, and minimize the dust. ▪ Backfilled trench at any completed section after removal of barricading will be the main source of dust pollution. The traffic, pedestrian movement and wind will generate dust from backfilled section. Road restoration shall be undertaken immediately.								
Contamination of ground water quality due to spillage of oil and lubricants	▪ Prepare and implement a spills management plan; ▪ Provide impermeable liner on the ground and place layer of mortar or concrete over it in the oil and lubricants storage areas, provide spillage trap in oil and lubricant store, use dip tray and pump to pour oil from oil and lubricant drums; ▪ Dispose any oil contaminated wastes generated by construction activities in scientific manner; and ▪ Conduct ground water quality monitoring according to the EMP	▪ Construction methodology ▪ Spillage/ spoil management plan ▪ Work schedule ▪ Ground water monitoring report as per requirement	▪ Do cument check ▪ Sit e inspection	All project locations	Visit of PMSC – support and Expert and PIU's safeguard in-charge throughout construction period	Environment Specialist and support of PMSC; PIU	Work is ongoing- no contaminati on of soil and water Fuel is stored separately wherever required	Work is ongoing- no contaminati on of soil and water Fuel is stored separately wherever required	Work just started- no contaminati on of soil and water Fuel to be stored separately wherever required

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River Intakes (at Udaipur, Kailashahar, Kumarghat and Dharmanagar)---Water quality and ecological impacts	▪ Select a construction methodology that is least disturbing, and appropriate for the in-situ soil condition, and able to complete the construction work prior to onset of monsoon. ▪ Schedule the construction works during low water level period – late winter months to pre monsoon (November - March); ensure that works are completed during the same period to prior to onset of monsoon; ▪ Erect temporary barriers to form enclosed construction area with least disturbance ▪ Allow adequate time to settle the distributed solids to prior to pumping out water; only clear/clarified water shall be pumped back into the reservoir; any silt laden water should be pumped to a silt pond ▪ Avoid/minimize use of fuels, chemicals and lubricants; ensure no spillage ▪ Clear the work site after completion at least to pre project conditions, ensure that there are no	▪ Construction methodology ▪ Work schedule ▪ Safety arrangement	▪ Do cument check ▪ Sit e inspection	Udaipur intake site	Visit of PMSC – support and Expert and PIU's safeguard in-charge throughout construction period	Environment Specialist and support of PMSC; PIU	Not applicable	Work not started for Udaipur intake. All measures will be applied during construction	Work not started for Kailashahar, Kumarghat and Dharmanagar intake. All measures will be applied during construction

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	materials, debris, spills etc., and prior to removal of temporary barriers ▪ Implement work site safety at works in water body								
Surface Water Quality- Mobilization of settled silt materials, and chemical contamination from fuels and lubricants during construction can contaminate nearby surface water quality. Ponding of water in the pits/foundation excavations	▪ All earthworks to be conducted during the dry season to prevent the problem of soil run-off during monsoon season; ▪ Stockpiling of earth fill especially during the monsoon season will be avoided unless covered by tarpaulins or plastic sheets; ▪ Excess spoils and debris will be re-used in the construction works. Only designated area, if required, will be used for soil disposal ▪ Install temporary silt traps or sedimentation basins ▪ Storage areas for fuels and lubricants will be selected away from any drainage leading to water bodies. ▪ Fuel, construction chemicals etc., will be stored on an impervious floor, also spillage is avoided by careful handling ▪ Construction wastes to be disposed in designated sites;	▪ Areas for stockpiles, storage of fuels and lubricants and waste materials ▪ Number of silt traps installed along drainages (in slope) leading to water bodies ▪ Entry routes of pollutant in nearby Waterbodies	▪ Site inspection ▪ Public grievance register	All project locations	Visit of PMSC – support and Expert and PIU's safeguard in-charge throughout construction period	Environment Specialist and support of PMSC; PIU	Silt traps have been arranged, fuel - lubricants purchased, designated site for waste disposal has been identified. Excess earth will be utilized mostly. All safety aspects are maintained.	Silt traps have been arranged, fuel - lubricants purchased, designated site for waste disposal has been identified. Excess earth will be utilized mostly. All safety aspects are maintained.	Silt traps to be arranged, fuel - lubricants to be purchased, designated site for waste disposal has been identified. All safety aspects to be maintained.

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	▪ Temporary drainage channels will be created around the work area to arrest the entry of runoff from upper areas into the work area ▪ The water collected in the pits / excavations will be pumped to a temporary sedimentation pond; dispose of only clarified water then dispose into drainage channels/streams after sedimentation in the temporary ponds ▪ Safety aspects will be considered related to pit collapse due to accumulation of water ▪ During construction of intake river bed earth needs to be removed quickly to control turbidity in the river water ▪ During construction of tube well – waste water generate from construction activity will be channelized to pit and later muck will be collected from the pit for disposal ▪ During development of tube well, waste water will be drained to nearby nalla ▪ Conduct surface water quality inspection								

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	according to the EMP. ▪ Implement measures to protect water quality in the wetland for Melaghar MC. Include measures such as installing sediment traps, using biodegradable lubricants, and minimizing the use of chemicals. ▪ Implement sediment and erosion control measures to prevent soil erosion and sedimentation in the wetland. This can include measures such as silt fences, sediment								
Increase in noise level due to earth-moving and excavation equipment, and the transportation of equipment, materials, and people	▪ Activities to be planned in consultation with cluster-PIUs so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance; ▪ Horns will be not used unless it is necessary to warn other road users or animals of the vehicle's approach; ▪ Vehicle silencers, fitting jackhammers with noise-reducing mufflers, and portable street barriers are used in construction equipment to minimize sound impact to	Day time and night time noise levels.	• Checking of records • Visual inspection of sites	Covering different work locations.	Monitoring continuous basis- pre construction and during construction	Environment Specialist and support of PMSC; PIU	Till report period complied all. Pre construction as well as construction phase noise monitoring has been conducted	Till report period complied all. Pre construction as well as construction phase noise monitoring has been conducted	Till report period complied all. Pre construction noise monitoring has been conducted

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	surrounding sensitive receptor; ▪ Maximum sound levels to be maintained which not exceeding 80 decibels (dBA) when measured at a distance of 10 m or more from the vehicle/s. ▪ Near school, Anganwadi, religious places and health center work need to be completed in shorter period. Noise generation should be restricted near the above sensitive receptors. Work should be carried out during day time only and non-school hours. ▪ Mitigate the sound from tube well drilling operation Modern mission needs to be used. ▪ Local communities will be consulted in advance of the work to identify and address key issues, and avoid working at sensitive times, such as religious and cultural festivals. ▪ Night time work will be avoided								

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Construction Activity Near Rudrasagar Lake at Melaghar town - Disturbance to Local and Migratory birds	▪ Prepare SEMP before starting any work ▪ No construction camps (workers accommodation, material / waste / soil storage) should be established within 1000 m (1 km) from the boundary of Rudrasagar lake; camps should not be located close to drainage lines/streams that flow into Rudrasagar lake ▪ Movement of workers and staff should be confined to work site, and not be allowed in wetland area which may disturb the sensitive area; ensure via strict supervision no poaching, fishing, cutting / damaging trees/vegetation or wildlife, birds etc., ▪ All project related site staff, construction workers and supervisors, shall be made aware of the sensitive sites, and prevent any harm or damage or disturbance to trees, vegetation, wildlife, birds etc., ▪ Proper accommodation and facilities shall be provided within the camps (at least 1 km away from the wetland), and workers shall not use	▪ Site specific EMP ▪ Construction camp location ▪ Work schedule ▪ Installation of silt trap ▪ Surface water monitoring data ▪ Public consultation documents	▪ Visual observation ▪ Document checking ▪ Monitoring report review	At Melaghar work area	Pre construction and throughout construction period	Environment Specialist and support of PMSC; PIU	Not applicable	Mitigation measures are being followed as per EMP. No work near Rudrasagar lake at Melaghar.	Not applicable

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	the lake or surroundings for open defecation, bathing, or fishing / hunting, collecting firewood etc. Contractor should put in place, a proper system to monitor the staff and workers to prevent damage/ disturbance. ▪ Schedule works during dry season to avoid contaminated runoff from the work sites entering lake; clear the sites of materials, debris, and consolidated the refilled trenches prior to onset of monsoon ▪ Implement sediment and erosion control measures to prevent soil erosion and sedimentation in the wetland. Prevent entry of silt-laden / contaminated runoff into wetland or drains leading to wetland from the construction sites or construction camps. Appropriate measures such as silt traps, sedimentation ponds, and filtration systems should be installed to prevent sediment and other pollutants from entering the water supply. Soil stabilization measures should also be taken to prevent soil erosion during construction, Construction								

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	near wetland to be planned in dry seasons only. ▪ Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies; ▪ Place storage areas for fuels and lubricants away from any drainage leading to water bodies; ▪ Store fuel, construction chemicals etc., on an impervious floor, also avoid spillage by careful handling ▪ Do not use equipment that generate heavy noise, ground vibration, dust etc., (such as pneumatic drills, dozers etc), within 500 m of Rudrasagar lake. Adapt manual excavation as far as possible ▪ Construction sites often generate significant amounts of dust that can impact nearby habitats. Dust suppression measures, such as watering down exposed soil, can help to reduce dust levels. ▪ Dispose any wastes generated by construction activities in designated sites; and								

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	▪ Monitor the project closely throughout construction to ensure that all mitigation measures are being implemented effectively and that any issues are identified and addressed promptly. ▪ Conduct surface quality inspection according to the environmental management plan (EMP). ▪ Conduct continuous consultations with the local people during the works								
Waste and debris management - Impacts due to excess excavated earth, excess construction materials, and solid waste such as removed concrete, wood, packaging materials, empty paint containers, spoils, oils, lubricants, and other similar items.	▪ Construction Waste Management Plan to be prepared and implemented ▪ As far as possible the debris and excess soil will be utilized in construction purpose, for example for raising the ground level or construction of access roads etc. ▪ Not to store any construction materials and spoil materials nearby the sensitive receptors; ▪ Construction waste will be not disposed near the sensitive receptors like school, Anganwadi and religious places ▪ Muck from construction activity of tube well will be disposed in	• Waste Management List of Stockpile Management • Complaints from Sensitive receptors • PMU/ PIU/ PMSC to report in writing that the necessary environmental restoration work has been done	• Checking of records • Visual inspection of sites	Project locations	Throughout construction phase	Environment Specialist and support of PMSC; PIU	Being Complied Spoil management plan is prepared. Waste is utilized locally in most of the cases. Muck from tube well construction sites has been disposed at approved location No material storage near sensitive	Being Complied Spoil management plan is prepared. Waste is utilized locally in most of the cases. Muck from tube well construction sites has been disposed at approved location No material storage near sensitive	Being Complied Spoil management plan under preparation. Muck from tube well construction sites has been disposed at approved location

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	designated area after receiving of NOC ▪ Stockpiles, lubricants, fuels, and other materials will be located away from steep slopes and water bodies; ▪ For disposal, the site selected will be preferably from barren, infertile lands; site would be located away from residential areas, forests, water bodies and any other sensitive land uses; ▪ Domestic solid wastes will be properly segregated into biodegradable and non-biodegradable for collection and disposal to designated solid waste disposal site; compost pit to be created at workers' camp sites for disposal of biodegradable waste; non-biodegradable / recyclable material will be collected separately and sold in the local recycling material market; ▪ Residual and hazardous wastes such as oils, fuels, and lubricants to be disposed of through approved vendors of Pollution Control Board; ▪ Burning of construction and/or						areas	areas	

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	domestic waste are prohibited; ▪ Wastes will be not haphazardly dumped/ thrown within and around the project site and adjacent areas; proper collection bins to be provided, and awareness to be created to use the dust bins. ▪ Site clearance and restoration will be done immediately after the completion of construction work to restore to the original condition; cluster-PIU ensures that site is properly restored prior to issuing of construction completion certificate.								
Disruption of service and damage to existing infrastructure at specified project location	(i) Prepare a list of affected utilities and operators if any; and (ii) Prepare a contingency plan to include actions to be done in case of unintentional interruption of service	▪ List of affected utilities if any and operators ▪ Contingency plan for utility ▪ Public grievance recorded	Site observation and document checking	Project locations	Pre-construction and throughout construction phase	Environment Specialist and support of PMSC; PIU	Complied as Per requirement. Consultation with utility dept. as and when required	Complied as Per requirement. Consultation with utility dept. as and when required	Complied as Per requirement. Consultation with utility dept. as and when required
Loss of vegetation and tree cover	(i) Minimize removal of vegetation and disallow cutting of trees; (ii) If tree-removal will be required, obtain tree-cutting permit and (iii) Plant 5 native trees for every one that is removed.	Tree felling requirement and afforestation plan	• Checking of records • Visual inspection of sites	Project locations	Pre-construction and throughout construction phase	Environment Specialist and support of PMSC; PIU	As of now, tree felling requirement is not envisaged	As of now, tree felling requirement is not envisaged	As of now, tree felling requirement is not envisaged
Accessibility-	**Hauling (material, waste/debris and**	• Traffic Management Plan	Site visit and document	Project locations	Pre-construction	Environment Specialist and	All measures are being	All measures are being	All measures are being

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
Traffic problems and conflicts near project locations and haul road Impact on access to house and road user particularly during laying of pipes	**equipment) activities** (i) Transportation routes to be planned so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites (ii) Transport and hauling activities will be scheduled during non-peak hours; (iii) Entry and exit points will be in areas where there is low potential for traffic congestion; (iv) Vehicles to be driven in a considerate manner (v) Affected public will be notified by public information notices, providing sign boards informing nature and duration of construction works and contact numbers for concerns/complaints. (vi) Separate demarcated access will be temporarily arranged for nearby sensitive receptors like school. Anganwadi, religious places & health center located adjacent to the proposed construction areas. **Pipeline works** (i) Confine work areas along the roads to the minimum possible extent; all the activities, including	• Public grievance • Number of signages placed at subproject location	review		and throughout construction phase	support of PMSC; PIU	applied Works schedule is posted at the project location.	applied Works schedule is posted at the project location.	applied Works schedule is posted at the project location.

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	material and waste/surplus soil stocking should be confined to this area. Proper barricading should be provided; avoid material/surplus soil stocking in congested areas – immediately removed from site/ or brought to the as and when required (ii) Leave spaces for access between mounds of soil to maintain access to the houses / properties (iii) Provide pedestrian access in all the locations; provide wooden/metal planks over the open trenches at each house to maintain the access. (iv) Inform the affected local population 1-week in advance about the work schedule (v) Avoid work during day time when community facilities such as educational institutes, healthcare centres, religious places, markets will be operating. Also provide alternative access. (vi) Plan and execute the work in such a way that the period of disturbance/ loss of access will be minimum.								

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	(vii) Keep the site free from all unnecessary obstructions; Coordinate with Traffic Police for temporary road diversions, where necessary, and for provision of traffic aids if transportation activities cannot be avoided during peak hours								
Socio economic – Impact on income--- Impede the access of residents and customers to nearby shops	(i) Prepare and implement spoils management plan. Contractor to Implement RP and to follow mitigation measures prescribed such as- (ii) Leave spaces for access between mounds of soil; (iii) Provide walkways and metal sheets where required for people; (iv) Increase workforce in front of critical areas such as institutions, place of worship, business establishment, hospitals, and schools; (v) Consult businesses and institutions regarding operating hours and factoring this in work schedules; and (vi) Provide sign boards for pedestrians to inform nature and duration of construction works and	• Spoil management plan • Availability of signage, barricade • Consultation with business persons/ shop owners	• Checking of records/ reports • \Visual inspection of sites	All project areas, particularly at congested commercial areas	Pre-construction and throughout construction phase	Environment Specialist and support of PMSC; PIU	All measures are being applied as per requirement and following EMP	All measures are being applied as per requirement and following EMP	All measures are being applied as per requirement and following EMP

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	contact numbers for concerns/complaints.								
Socio-Economic - Employment Generation of temporary employment and increase in local revenue	(i) Employ local labor force as far as possible; and (ii) Comply with labor laws	Employment record	Checking of records	Project locations	-	Environment Specialist and support of PMSC; PIU	Direct and indirect employment for local population - noted	Direct and indirect employment for local population - noted	Work just started. Direct and indirect employment for local population – to be done
Occupational hazards which can arise during work, safe from COVID 19	(i) All national, state and local core labor laws to be complied with (Appendix 5). Labour license and Workmen Compensation policy to be obtained by contractor before start of construction (ii) Develop and implement site-specific occupational health and Site-specific occupational health and safety (OHS) Plan and Supplementary H & S plan for COVID 19 to be developed and implemented (Appendix 11 shows COVID 19 SOP guideline) which included measures such as: (a) excluding public from the site; (b) maintaining social distancing for protection from COVID 19 infection; (c) ensuring all workers are provided with and use personal protective equipment like helmet,	• Site-specific Health and Safety (H&S) Plan • Equipped first-aid stations; • Medical insurance coverage for workers • Number of accidents • Supplies of potable drinking water; • Record of H&S orientation trainings • Personal protective equipment • Sign boards for hazardous areas such as energized electrical devices and lines, service rooms	• Checking of records • Visual inspection of sites	Project locations	Throughout the project period	Environment Specialist and support of PMSC; PIU	Site-specific Health and Safety (H&S) Plan prepared and under implementation. Copy of the approved Health and Safety plan available with PMSC. PIU H & S training done on regular basis. Sample attached in **Appendix 12.** Drinking water and first aid box	Site-specific Health and Safety (H&S) Plan prepared and under implementation. Copy of the approved Health and Safety plan available with PMSC. PIU H & S training done on regular basis. Sample attached in **Appendix 12.** Drinking water and first aid box	Site-specific Health and Safety (H&S) Plan prepared and under implementation. Copy of the approved Health and Safety plan available with PMSC. PIU H & S training needs to be done on regular basis. Drinking water and first aid box available at site.

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	gumboot, safety belt, gloves, nose mask, face mask and ear plugs; (d) OHS Training and COVID 19 awareness H & S training for all site personnel; (e) complete COVID 19 vaccinations for workers, (f) documented procedures to be followed for all site activities including follow of SOP for COVID 19 to be developed for the project and H & S plan; and (g) documentation of work-related accidents; (iii) Availability of First aid box/ facility throughout the project period; (iv) Medical insurance and tie-up with local hospitals to be provided for workers; (v) All installations will be secured from unauthorized intrusion and accident risks; (vi) Potable drinking water to be provided for the workers; (vii) Clean eating areas to be provided where workers are not exposed to hazardous or noxious substances; (viii) To provide health and safety orientation training including COVID 19 risk and mitigation to all new workers to ensure that they are apprised of the basic site rules of work at the site,						available at site. Use of PPEs by workers noted. Use of shoes / gumboot is necessary Tie up letter with nearby health center in case of emergency - obtained (**Appendix 8).** Health check-up was conducted for workers (**Appendix 9)** Medical Insurance arranged for the labourer (attached in **Appendix 4.** Accident/ First aid register is maintained at each site. There is no first aid	available at site. Use of PPEs by workers noted. Use of shoes / gumboot is necessary Tie up letter with nearby health center in case of emergency - obtained (**Appendix 8)**. Health check-up was conducted for workers (**Appendix 9)** Medical Insurance arranged for the labourer (attached in **Appendix 4.** Accident/ First aid register is maintained at each site. There is no first aid	Use of PPEs by workers noted partially. Use of shoes / gumboot is necessary Tie up letter with nearby health center in case of emergency - and Health check-up for workers need to be conducted. Medical Insurance arranged for the labourer (attached in **Appendix 4.** Accident/ First aid register is maintained at each site. There is no first aid cases reported during report period. IEE's

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	personal protective protection, and preventing injuring to fellow workers; (ix) Visibility of workers to be ensured using high visibility vests when working in or walking through heavy equipment operating areas; (x) Moving equipment will be outfitted with audible back-up alarms; (xi) Sign boards will be provided for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal. Signage is in accordance with international standards and are well known to, and easily understood by workers, visitors, and the general public as appropriate; (xii) Workers will be disallowed exposure to noise level greater than 85 dB (A) for a duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively. (xiii) Standard Operating Procedure (SOP) for the project and Supplementary H & S plan for COVID 19 will be prepared which cover,						cases reported during report period. IEE's Executive Summary in local language to be placed at major work sites - OHSRs	cases reported during report period. IEE's Executive Summary in local language to be placed at major work sites - WTP, OHSRs	Executive Summary in local language to be placed at major work sites - WTP, OHSRs

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	(xiv) General instruction to follow to prevent the spread of COVID-19 in construction workplace (xv) Worksite prevention practice at work site, office, during meeting, travelling, etc. (xvi) Precaution to be taken at workmen habitat/ camp (xvii) Use of PPEs: face mask – hand gloves, maintaining social distancing, disinfection, requirement of awareness covered under the H & S plan.								
Community heath & safety - Traffic accidents and vehicle collision with pedestrians during material and waste transportation and pipe laying work	• Movements of construction vehicles are restricted to defined access roads and demarcated working areas (unless in the event of an emergency) • Strict speed limit (20-30 kmph) is enforced for plying on unpaved roads, construction tracks • Night-time haulage is by exception only, as approved by the cluster-PIU to minimize driving risk and disturbance to communities • Safe practices are adopted for micro tunnelling-(in case of major road crossing) • Temporary traffic control (e.g. flagmen) and	Public grievance	Review of documents	Project Locations	Throughout the construction period	Environment Specialist and support of PMSC; PIU	Being Complied No pedestrian accident has been recorded till date. Pipe line laying work just started. Barricades and caution tapes in work areas, in particular along the pipelines are arranged. Safety	Being Complied No pedestrian accident has been recorded till date. Pipe line laying work just started. Barricades and caution tapes in work areas, in particular along the pipelines are arranged. Safety	To be Complied No pedestrian accident has been recorded till date. Pipe line laying work not yet started. Barricades and caution tapes in work areas, in particular along the pipelines needs to be

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	signs will be provided where necessary to improve safety and provide directions • Restrict speed of the vehicle and equipment near sensitive receptors • Separate barricading needs to be provided near adjacent sensitive receptors like school, Anganwadi, health center and religious places; • All drivers should pass through safety and training sessions • Public access will be restricted through the use of barricading and security personnel at pipe laying work locations • Warning signs, blinkers will be attached to the barricading to caution the public about the hazards associated with the works, • The period of time when the pipeline trench is left open will be minimized through careful planning • Control dust pollution – dust control measures will be implemented as suggested under air quality section • Vehicles will be regularly maintained and manufacturer- approved parts will be used to minimize potentially serious accidents						signage board placed near construction sites. No trench is kept open after pipe laying. Trenches are restored to the previous condition immediately after the laying of pipes. Caution tape is placed as per requirement	signage board placed near construction sites. No trench is kept open after pipe laying. Trenches are restored to the previous condition immediately after the laying of pipes.. Caution tape is placed as per requirement	arranged. Safety signage board needs to be placed at all construction sites No trench will be kept open after pipe laying. Trenches are restored to the previous condition immediately after the laying of pipes. Caution tape will be placed as per requirement

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	caused by equipment malfunction or premature failure. • Road signs and flag persons will be there to warn of on-going trenching activities. • Road signs and flag persons will be provided to warn of on-going trenching activities.								
Safety of sensitive groups (children, elders etc.) and others pedestrians in narrow streets- Trench excavation in narrow streets will pose high risk to children and elders in the locality	• Provide prior information to the local people about the nature and duration of work • Conduct awareness program on safety during the construction work • Undertake the construction work stretch-wise; excavation, pipe laying and trench refilling should be completed on the same day • Provide barricades, and deploy security personnel to ensure safe movement of people and to prevent unnecessary entry and to avoid accidental fall into open trenches, • Implement additional safety features for working near the schools; isolate work site from the school access road; provide proper barricading to prevent entry of children / public into work site; create awareness	• Awareness program document • Work plan • Implementation of safety measures	• Visual inspection • Review of documents	Work locations	Throughout the construction period	Environment Specialist and support of PMSC; PIU	Pipe laying work just started. Is being complied as per work activity	Pipe laying work just started. Is being complied as per work activity	Till report period pipe laying work not started. Will be complied as per work activity

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	among school children and staff on construction safety								
Work Camps and worksites – Temporary air and noise pollution from machine operation, water pollution from storage and use of fuels, oils, solvents, and lubricants. Unsanitary and poor living conditions for workers	(i) Camp site will be established near major construction i.e WTP, DTW, OHSRs site (ii) No worker's camp is allowed near (within 1 km) Wetland area (Rudrasagar lake) at Melaghar (iii) No Tree will be cut for settling of camp. (iv) Camp site will not be located near (100 m) water bodies, flood plains flood prone/low lying areas, or any ecologically, socially, archeologically sensitive areas (v) The workers living areas and material storage areas will be separated clearly (vi) Proper temporary accommodation with proper materials, adequate lighting and ventilation to be provided, appropriate facilities will be provided for winters and summers; conditions of livability at work camps should be ensured and maintained at the highest	• Public grievance • Accommodation • Water and sanitation facilities for employees • Housekeeping – regular disposal of solid waste	Site inspection and review of documents	Construction camps	Preconstruction and construction phases	Environment Specialist and support of PMSC; PIU	Complied at work sites. Tent had been arranged for short period for 10 days tube well sinking works, but at OHSR sites proper labour camp have been arranged with bed, LPG, drinking water, toilet facility and separate kitchen area facility.	Complied at work sites. Tent had been arranged for short period for 10 days tube well sinking works, but at OHSR sites proper labour camp have been arranged with bed, LPG, drinking water, toilet facility and separate kitchen area facility. No work camp will be constructed nearby the sensitive/ protected area	Complied at work sites. Tent had been arranged for short period for 10 days tube well sinking works LPG, drinking water, toilet and separate kitchen area provided. For bigger work site like OHSR, WTP proper camp needs to be arranged with all facility.

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	standards possible at all times; (vii) Cluster-PIU should be consulted before locating project offices, sheds, and construction plants; (viii) Removal of vegetation is minimized and cutting of trees disallowed without permission from concerned authorities (ix) Camp should be protected from COVID 19 health risk. All Health and safety procedure to be followed for operation of camp (H & S plan for COVID 19 will be used as ref. document) during stay, cooking, eating, use of toilet- common space etc. (x) Self- hygiene, regular disinfection of entire camp and toilet, maintaining of social distancing to be continued for protection from COVID 19 infection (xi) Unknown person will be not allowed within the camp (xii) Camps will be provided with proper drainage, without any water accumulation								

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	(xiii) Maintenance of hygienic environment at staying area, cooking area and toilet (xiv) Drinking water, water for other uses, and sanitation facilities for employees to be provided (xv) Employees will be prohibited from cutting of trees for firewood; contractor provided proper facilities including cooking fuel (oil or gas; fire wood not allowed) (xvi) Employees will be trained in the storage and handling of materials which can potentially cause soil contamination (xvii) Used oil and lubricants will be recovered and removed from the site (xviii) Solid waste to be managed according to the following preference hierarchy: reuse, recycling, and disposal to designated areas; provide a compost pit is provided for biodegradable waste, and non-biodegradable / recyclable waste are collected and sold in local market								

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	(xix) All wreckage, rubbish, or temporary structures which no longer required should be removed (xx) At the completion of work, camp area will be cleaned and restored to pre-project conditions, and report will be submitted to Cluster-PIU; they will review and approve camp clearance and closure of work site								
Occupational hazards which can arise during work at night in extreme and unavoidable cases	(i) Contractors should have hand held noise level meter for measurement of noise during night hours (ii) Contractors should have hand held lux meter for the measurement of illumination during night hours (iii) Preferably electrical connections are available for running equipment's otherwise sound proof/super silent Diesel Generator set should be available (iv) Sound level should not increase as per EMP (v) Illumination should be adequate as required according to nature of works (vi) As far as possible ready-mix concrete from batching plant to be used, otherwise the concrete	• Work plan and facility during night work if any • Measurement of pollution level • Experience of workers during night work	Site inspection and review of documents	At specific project site	During execution of night work as per work plan	Environment Specialist and support of PMSC; PIU	No night work at site. To be comply as per requirement	No night work at site. To be comply as per requirement	No night work at site. To be comply as per requirement

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	should be prepared away from residential areas and brought to the site (vii) All the noise activity like hammering, cutting, crushing, running of heavy equipment's should be done in day time and avoided in night time (viii) Workers engaged in night works should have adequate rest/sleep in day time before start of night works (ix) Worker engaged for night works should have previous experience of night works and should be physically fit for such works including clear vision in night (x) All the necessary provisions of traffic aids such as traffic signals, road signage, barricades, cautions boards, traffic diversion boards etc. should be available with fluorescent /retro-reflective arrangements (xi) Workers should be trained before start of night works about risks and hazards of night works and their mitigation measures and should be provided all the protective aids (PPEs) including fluorescent/retro-reflective vests								

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	(xii) Horns should not be permitted by equipment and vehicles (xiii) Workers should not shout and create noise (xiv) First aid and emergency vehicles should be available at site (xv) Emergency preparedness plan should be operative during night works (xvi) Old persons and pregnant women and women having small kids should not work in night time (xvii) All the vehicles and equipment being used at night works should have adequate type of silencers/enclosures/mufflers to reduce noise (xviii)All the vehicles should be checked for working head lamps, tail lamps, inner lights etc. before start of night work.								
Social and Cultural Resources --- Risk of archaeological chance finds Works near local religious / cultural places may inconvenience	Chance finds (i) Create awareness among the workers, supervisors and engineers about the chance finds during excavation work; (ii) Stop work immediately to allow further investigation if any finds are suspected;	• Awareness documents • Discussion with Archaeological dept. • Consultation documents with sensitive receptors • Safety arrangement	• Visual observation • Document checking	At specific project site	During execution of the project	Environment Specialist and support of PMSC; PIU	No chance finds recorded till report period	No chance finds recorded till report period Work not yet started near ASI protected area of Udaipur	No chance finds recorded till report period

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
local community	(iii) Inform local Archaeological Department if a find is suspected and take any action, they require to ensure its removal or protection in situ; and prepare a chance find protocol **Works near religious / cultural places** (iv) During the detailed design, PIU to consult ASI (in Udaipur / Agartala) with exact distance and depth of waterlines works within 300 m of the monuments, and include any feedback or measures as suggested by ASI in into design/construction; obtain prior ASI permission for construction if required (v) Consult with concerned religious authorities, nearby people and devotees in pre-construction phase and explain the work method and duration of proposed works, take their suggestions and comments, and incorporate in design the mitigation measures required (vi) Adjacent to religious/ social sites, undertake excavation and construction work in such a way that no structural								

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	damage is caused to the religious building. (vii) Observe the local rituals and important dates of festivals, weekly/monthly/annual religious occasions in the religious places and do not make any disturbance/hindrance/obstacles during such time to the religious places, (viii) Provide proper signage, barricades etc. to protect public and devotees from dangers of construction works. (ix) Ensure proper traffic management planning to minimize the disruption to the normal traffic flow in the area and ensure the safety of the people. (x) Clear the work site of unnecessary material, equipment and debris / surplus soil; do not stock material / soil at the sites (xi) Conduct continuous consultations with the local people during the works (xii) Implement additional safety features for working near the schools; isolate work site from the school access road; provide proper barricading to prevent entry of children / public into								

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	work site; create awareness among school children and staff on construction safety								
Disruption of utilities and water logging in trenches	(i) As for a possible avoid trench works and excavation works (pipe laying) during monsoon season to avoid any water logging and accident due to it (ii) if open trenches are not avoidable during monsoon, keep ready all the mitigations measure to avoid water logging such as dewatering pumps and sufficient pipes, traffic assistance, barricades etc. .	• Work plan – trenching work • Arrangement of mitigation measures at site	• Visual observation Document checking	At specific project site	During execution of the project	Environment Specialist and support of PMSC; PIU	Is being complied Pipe laying work just started	Is being complied Pipe laying work just started	To be complied Pipe laying work not yet started
Chance finds- There are no protected properties in the subproject sites. However, in case of chance finds, contractors will be required to follow a protocol as defined in the mitigation measures.	(i) Consult local Archaeological **or** museum Department to obtain an expert assessment of the archaeological potential of the site (ii) In case of chance finds, works must be stopped immediately until such time chance finds are cleared by experts	• Awareness documents • Discussion with Archaeological dept. and expert assessment report • Training for the workers for maintaining chance find protocol	• Discussion document checking • Site assessment	At specific project site	During pre-construction and implementation of the project	Environment Specialist and support of PMSC; PIU	To be comply, such issue does not arise, protocol to be followed	To be comply, such issue does not arise, protocol to be followed	To be comply, such issue does not arise, protocol to be followed
Unsatisfactory compliance to EMP	(i) Appointment of Environment, Health, and Safety (EHS) Supervisor to ensure EMP implementation	• Appointment letter Monitoring records	Review of records	-	-	Environment Specialist and support of PMSC; PIU	Safety person appointed from	Safety person appointed from	Safety person appointed from

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Package TUDA/ WS-01/P-01	Package TUDA/ WS-02/P-02	Package TUDA/ WS-03/P-03
	Timely submission of monitoring reports including pictures						contractor end. Monitoring continued.	contractor end. Monitoring continued.	contractor end. Monitoring just started
Post construction - Damage due to debris, spoils, excess construction materials	(i) Remove all spoils wreckage, rubbish, or temporary structures (such as buildings, shelters, and latrines) after completion of work; (ii) All excavated roads shall be reinstated to original condition. (iii) All disrupted utilities will be restored (iv) All affected structures will be rehabilitated/ compensated (v) 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. (vi) The contractor must arrange the cancellation of all temporary services. (vii) Request Cluster-PIU to report in writing that worksites and camps have been vacated and restored to pre-project conditions before acceptance of work.	• Stockpile Management • Spoil Management • Restoration of sites	Review of documents and site inspections	Project Locations	Construction phase and also after construction	Environment Specialist and support of PMSC; PIU	To be complied as per EMP Work for OHSR continued. Pipeline work just started.	To be complied as per EMP Work for OHSR continued. Pipeline work just started.	To be complied as per EMP Work just started

Table 10: Summary of Environmental Monitoring Activities for the Package Tourism Destination Development at Chabimura and Upgradation/ Beautification of Visitor Amenities/ Facilities at Fatik Sagar and Amar Sagar (TTDCL/CHB/W 01)

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
Location & Design Stage							
Location impacts of proposed components--- Nearby community may be affected due to increased pollution during construction Increased carrying capacity of site Increased water requiremnt and disposal for waste Impact due to proximity to River Gomati	▪ Site location for Chabimura is away from nearby habitation ▪ Amarpur would benefit from access to improved space from the waterfront development of Amarsagar and Fatiksagar ▪ Follow relevant national planning and design guidelines for. technical design of the visitor facilities, parking, amenities, picnic areas, log huts, shops, restaurants, landscaping etc., ▪ Follow relevant standards and guidelines such as Central Public Health and Environmental Engineering Organisation (CPHEEO) for designing of physical infrastructure facilities such as water supply, sewerage, storm drainage, solid waste management, power requirements etc. ▪ focus on providing a robust system which is easy to operate, sustainable, efficient, and economically viable. ▪ Design measures for treatment of waste water, storm water drainage, solid waste management and construction waste management are incorporated in design	• Checking of selected sites and design ▪ Checking of mitigation measures of EMP	• Site observation • Desk review of documents	All project locations	During design	Environment Specialist and support of PMSC; PIU	Considered during detailed design. CPHEEO guideline is followed

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
Change of landuse impacts the potential pollution	▪ Locate all sub-projects already exisitng footpritnt areas and maintain same landuse to the maximum extent	• Design parameters	• Document checking	Project sites	During design	Environment Specialist and support of PMSC; PIU	Complied completely
Extraction of construction material -- Extraction of borrow material and boulders impact the geology and topography	▪ Material procurement will be from sources approved by the GoT or from approved third party	• List of approved quarry, borrow pit sites and sources of materials • Construction Contractor documentation	• Checking of records • Visual Inspection of sites	Quarries and material source areas	During design and implementation	Environment Specialist and support of PMSC; PIU	Material purchased from license source. Royalty receipt sample copy attached as **Appendix 6**
Discharge of silt and storm water into river Gomati / lakes in Amarsagar and Fatiksagar - Impact on water quality due to silt laden runoff entering the water bodies	Incorporates in Design ▪ Silt fencing to be used for prevention of silt laden runoff entering water bodies prevented during construction ▪ Storm water drains to avoid contaminated runoff directly entering water bodies	▪ Design document ▪ Site facility	• Site observation • Desk review of document	All project locations	During design	Environment Specialist and support of PMSC; PIU	Silt fencing in use for protection of river water contamination Work not started for Amarsagar and Fatiksagar
Socio-Economic Aspects --- Impacts that arise due to the inappropriate existing facilities and infrastructure	Following Measures are provided in design to facilitate increased tourist/visitors number ▪ Site protection measures - gabion mattress at Chabimura; ▪ Provision of site accessibility such as roads and paved footpaths; ▪ Introduction of hard and soft landscape elements; ▪ Provision of tourist amenities;	▪ Design facility ▪ Site protection measures	▪ Site observation ▪ Document checking	Project locations	During design	Environment Specialist and support of PMSC; PIU	Provisions duly considered in the design

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
	▪ Provision of utilities such as lighting, water supply, waste water and solid waste management, etc.						
Chlorine handling and application risk – health and safety risk to workers and general public	▪ Necessary safety measures will be provided if chlorine gas is used; these may include: chlorine neutralization pit; proper ventilation, lighting, entry and exit facilities,personal protection and safety equipment and training to the staff	• Project emergency management plan • Project safety and PPE use plan • Training plan	Document review	Chabimura work site - WTP	During detail design, before commencement of work	Environment Specialist and support of PMSC; PIU	Considered in the design as per treatment requirement
Implementation of EMP and Health and Safety requirements into Contractor Bid Document	▪ The EMP and Health and safety requirements should be incorporated as part of the contract bid document	• Contract document ▪ Health and safety plan	Document checking	Project locations	During final design, before commencement of work	Environment Specialist and support of PMSC; PIU	Considered in the design and contract agreement
Procurement of battery-operated boats and golf carts	▪ All equipment shall be confirmed to applicable standards, including pollution control, safety ▪ Manufacture shall provide safety equipment, training, and emergency response plans should be in place to ensure the safety of the crew and passengers ▪ Manufacture shall provide assistance in disposal/ recycling of all used components including batteries at the end of their useful life as per latest E waste management rules, Hazardous waste management rules and battery waste management rules of government of India	• Design components	Document checking	Project locations-considered under separate package	During final design	Environment Specialist and support of PMSC; PIU and PMU	To be considered under different packages
Pre-construction stage							

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
Permits, Consents, Clearances and NOCs- Environmental legal non-compliance may attract legal actions Failure to obtain necessary consents, permits, NOCs etc. can result to design revisions and/or stoppage of works	▪ Obtain all necessary groundwater withdrawal permission, TSPCB consents, permits, clearance, NOCs, etc. prior to start of civil works. ▪ Provide report on compliances of all obtained consents, permits, clearances etc. ▪ Update IEE and EMP prior to starting of works to reflect any changes in project design during design verification and detailed field survey, and submit to ADB for clearance and disclosure ▪ Prepare SEMP based on the updated EMP, and approved by PIU prior to commencement of works ▪ Include in detailed design drawings and documents, all the conditions and provisions stipulated in permits, consents issued by regulatory agencies. ▪ Contractor to conduct pre-construction (baseline) environmental monitoring as indicated in EMP budget tables. The monitoring results shall be referred as baseline quality for key environmental parameters of air, water and noise) ▪ Select and Get NOC for construction camp location from ULB.	List of applicable legislation and present status	Checking of documents	All project locations	Before commencement of construction	Environment Specialist and support of PMSC; PIU	Being Complied and to be continued as per requirement All NOCs applicable – collected Site specific EMP developed. Base line and during construction monitoring has been conducted as per monitoring plan
Construction work camps, stockpile areas, storage areas, and	▪ Layout plans, areas for construction zone (camp sites, stockpiling, storage and surroundings).	• Selected location layout plan nearby the work site	• Site observation	Specific project location	Before commencement	Environment Specialist and support of	Being Complied No disruption noted. Area selected nearby vacant place with all

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
disposal areas. Conflicts with local community; disruption to traffic flow and sensitive receptors	▪ The construction camp and stockpile, storage of fuel and lubricants will be avoided nearby any environmentally sensitive areas, forest area and residential areas. These areas will be finalized in consultation with PIU/supervision consultant. ▪ Establish construction camp away from habitation with proper ventilation system, water facility, provision of beds, septic tank or mobile toilets fitted with anaerobic treatment facility. ▪ Measures shall be taken to prevent mosquito breeding at site. Ensure spraying of bleaching powder or phenyl at regular intervals. ▪ Provision of LPG at construction camp for cooking. Usage of firewood to be prohibited strictly. ▪ Domestic solid waste at construction camp shall be segregated into biodegradable and non-biodegradable waste. ▪ Ensure hygiene of the construction camp as well as the kitchen. ▪ Ensure provision of permeable drains and gutters around the construction camp site. ▪ Guidelines for setting up of construction camps and facilities to be provided are reviewed .	• Checking of camp set up guideline	• Review of documents • Grievance Register		of final design and commencement of construction	PMSC; PIU	facilities No excess spoil generated. All excess earth is used locally.

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
Labour Requirements Conflict with local labour	▪ The contractor preferably will use unskilled labours from local communities to give maximum benefit to the local community.	• Labour engagement – category and origin	• Checking of appointment letters	Covering all work sites	Before commencement of work and during construction	Environment Specialist and support of PMSC; PIU	Local labours are engaged
Borrow area / Material procurement Extraction of materials can disrupt natural land contours and vegetation resulting in accelerated erosion, disturbance in natural drainage patterns, ponding and water logging, and water pollution	▪ Use material sources permitted by government ▪ Verify suitability of all material sources and obtain approval of PIU; ▪ Ensure that the loading and unloading of the materials and the transportation of the materials from source to construction site does not cause impact on health and safety of the workers and the community; and ▪ Submit to PIU on a monthly basis documentation of sources of materials. If contractor is purchasing ready mix concrete, asphalt/macadam and aggregates from third party, contractor will assure that all the parties/ suppliers are having CTE/CTO from TSPCB and will collect the copy of these certificates and submit to PIU/consultants	• List of approved Quarry and borrow pit sites and sources of materials • Construction contractor documentation	• Checking of records • Visual Inspection of sites	Quarries and material source areas	Before commencement of work and during construction	Environment Specialist and support of PMSC; PIU	All materials have been sourced from licensed vendor No disruption on natural land.
Construction water Water extraction for construction activities and labour camps can disrupt usage by local community	▪ The Contractor will use ground / surface water as a source of water for the construction with prior permission from CGWB/ Department of water resource . ▪ To avoid disturbance to other water users, the Contractor will use only permissible quanity of water .	• Design document • Permission and conditions of NOC	• Document checking	Project area, camp	Before commencement of work and during construction	Environment Specialist and support of PMSC, PIU	Provisional NOC obtained from Dept. of water resource for extraction of river water for construction purpose (**Appendix 5)**

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
	▪ The Contractor will provide a list of locations & type of sources from where water for construction will be obtained. ▪ The Contractor will need to comply with the requirements of the State Ground Water Department for the extraction & seek their approval for doing so & submit copies of the permission to the PIU/PMU.						
Monitoring of Environmental baseline parameters prior to start of construction activities Establish base line environmental conditions	▪ Photograph and videograph all pre construction site conditions ▪ Conduct environmental monitoring as per approved monitoring plan ▪ Include photos and GPS coordinates.	• Environment monitoring report • Photos and GPS coordinate checking	Document checking	For entire project areas	Pre-construction stage	Environment Specialist and support of PMSC; PIU	Base line – air, water and noise monitoring has been done
Public disclosure leads to smooth progress of work and timely redressal of any grievances quickly	▪ Continue information dissemination, consultations and involvement/participation of stakeholders during project implementation. ▪ Capacity building training on environmental and social issues related to the project	• Awareness and public disclosure documents • Training documents • Grievance redressal	Document checking	Project area	Before commencement of work and during construction	Environment Specialist and support of PMSC; PIU	At present work continued at fixed location. To be done as per type of work and project location
Impact on utilities Electric poles and wires, water lines within proposed project area	▪ Identify and include locations and operators of these utilities in the detailed design documents to prevent unnecessary disruption of services during construction phase; ▪ Conduct detailed site surveys with the construction drawings and discuss with the	▪ List of affected utilities if any and operators ▪ Contingency plan	Observation and document checking	Specific project location	Before commencement of construction	Environment Specialist and support of PMSC; PIU	Being complied as per site condition and requirement

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
	respective agencies during the construction phase, before ground clearance; ▪ Require construction contractors to prepare a contingency plan to include actions to be done in case of unintentional interruption of services. In case of disruption of water supply, alternative supply, through tankers, shall be provided.						
Preparation of H&S Plan for Pandemic like COVID-19 With the existing EHS guidelines contracture has to prepare a site specific EHS plan including COVID -19	▪ The Contractor to prepare and shall abide by the most stringent procedure available for EHS plan including COVID-19 guidelines . ▪ Consistently practice social distancing. ▪ Cover coughs and sneezes. ▪ Maintain hand hygiene. ▪ Clean surfaces frequently.	• Prepared health and safety plan	• Checking of documents	Covering all work sites	Before commencement of construction	Environment Specialist and support of PMSC; PIU	EHS plan prepared and approved Implementation is continued.
Construction stage							
Environmental Management Plan (EMP) Implementation Training along with COVID 19 safety Irreversible impact to the environment, workers, and community, Impact due to	Project manager and all key workers will have undergone training on EMP implementation including spoils/waste management, Standard operating procedures (SOP) for construction works; occupational health and safety (OHS) including COVID-19(SOP), core labor laws, applicable environmental laws, etc.	▪ Induction & Awareness Trainings ▪ Toolbox Talks Safeguard Trainings	▪ Review of Training records ▪ Site Inspections	Project Locations	-	Environment Specialist and support of PMSC; PIU	Being Complied; Site Environmental Safety training and awareness arranged. However, number of trainings depends on arrival of new workers Sample training document is attached as **Appendix12**

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
effect of COVID 19							
Construction works close to River Gomati, Amarsagar and Fatiksagar Water Quality impact due to contamination from debris, open defecation, oil & grease	▪ The campsites and storage areas should be established at a minimum distance of 75 m from the river in the areas that would not be affected by flooding and clear of any natural or storm water courses. ▪ No debris should be thrown or collected within 75 m from the edge of the river. ▪ Vehicle parking areas, warehouses and workshop locations must have impervious flooring to prevent seepage of any solvents, paints, leaked oil & grease into the ground. The area should be covered with a roof to prevent the entry of rainwater. ▪ Strictly prohibit open defecation by workers.	• Camp site, storage area, debris disposal area checking	Checking of documents	Covering all work sites	Before commencement of construction	Environment Specialist and support of PMSC; PIU	All precautionary measures taken up for protection of water bodies Camp site has been selected more than 75 m from the river; no debris is disposed near the river. Vehicle parking away from the river
Siltation of water bodies & degradation of water quality	▪ Schedule construction activities during non-monsoon season to the maximum extent possible. ▪ Ensure not to excavate beds of any waterbody for borrowing of earth. ▪ Ensure drainages within the construction zones are kept free of obstructions. ▪ If required silt fencing needs to be provided adjacent to waterbodies and around the stockpiles at the construction site close to water bodies. ▪ Ensure construction materials containing fine particles	▪ Areas for stockpiles, storage of fuels and lubricants and waste materials ▪ Number of silt traps installed along drainages (in slope) leading to water bodies ▪ Entry routes of pollutant in nearby Waterbodies	▪ Site inspection ▪ Public grievance register	All project locations	Visit of PMSC – support and Expert and PIU's safeguard in-charge throughout construction period	Environment Specialist and support of PMSC; PIU	Through application of mitigation measures entry of silt in the water body stopped. No riverbeds will be excavated. Open defecation near site is not allowed

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
	are stored in a suitable enclosure to avoid their drainage to the nearby water body. ▪ Dispose any residuals at identified disposal site (approved/identified by local governing bodies). ▪ Inspect all vehicles daily for fluid leaks, before leaving the vehicle staging area, and repair any leaks before the vehicle resume operations. ▪ Strictly prohibit open defecation by workers in nearby areas. ▪ Ensure mobile toilets at the construction work / camp sites to avoid open defecation.						
Erosion of River banks due to meandering path, from construction activity and from runoff	▪ Considering the highest flood level of approximately 31 m at Chabimura, some safeguard measures in terms of river edge protection have been taken up, such as laying of 470 m long Gabion Mattress along the river Gomati ▪ Further some additional measures, such as addition of 4 new bridges to connect the roads and pathways to retain the site features and terrain, addition of multiple ramps to provide universally accessible spaces, addition of toe walls and retaining walls have been also proposed for river edge protection as well as Amarsagar and Fatiksagar near water outlets.	▪ Additional measures in design documents ▪ Erosion protection plan	▪ Site inspection	At project site- specifically near river	Throughout the project period	Environment Specialist and support of PMSC; PIU	Protection works are being applied as per additional protection measures which have been considered in the design
Site preparation for construction	▪ The contractor will be mandated to complete the pre-	▪ Slope stabilization design	▪ Site inspection	At project site-	Throughout the project	Environment Specialist	Work continued. Protection works not

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
of gabion walls at Chabimura causes soil erosion.	construction works and subsequent construction of slope protection works in the dry season ▪ All precautionary measures such as silt fencing and temporary erosion control works such as sandbags for erosion protection will be mandated ▪ By stabilising the slope of the river, for which gabions that allows growth of natural vegetation within the other voids is considered in the design. ▪ There would be minor impacts from the installation activity, like temporary siltation from the trimmed slopes for installation. Increase in worker's activity along the river edge is also likely to induce generic construction impacts. The impacts, though not anticipated to be severe, measures shall be devised to address them and reduce severity and magnitude throughout the construction period. The slopes once stabilised are not anticipated to generate any impacts on the river and its ecology in the operation of the project.	▪ List of precautionary measures		specifically near river	period – pre construction and construction stage	and support of PMSC; PIU	yet started. All provisions have been taken care in the design.
Flood protection Inundation from high floods, erosion due to high velocity of water and safety of residents / tourists during floods	▪ Ensure provision of permeable drains and gutters around the construction site to divert rainwater to the nearby waterbody. ▪ Maintenance of green areas along river bank, unless required to be uprooted for any construction activity	▪ Design mechanism ▪ Green area maintainance	▪ Site inspection ▪ Checking of design parameters	Project area	Throughout the project period – pre construction and construction stage	Environment Specialist and support of PMSC; PIU	Flood management system is considered in the design. Ensured provision of permeable drains and gutters around the construction site Green area will be developed along the

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
	▪ Provision of a ready civil defence mechanism in case of any emergency.						Gomati river.
Storage of materials at campsites / stockpile areas- Air Pollution	▪ Conduct regular water spraying on stockpiles. ▪ Avoid stockpiling of excavated and construction material unless covered by tarpaulins or plastic sheets to avoid dispersion of loose dry construction materials. ▪ Conduct regular site inspections in the construction zones to ensure adequate measures have been taken to suppress emission of excessive dust during construction period.	▪ Location of stockpiles ▪ Monitoring data- PM10, PM2.5 NO2, SO2, CO ▪ Heavy equipment and machinery with air pollution control ▪ Water sprinkling arrangement ▪ Cover materials ▪ Arrangement of safety measures	▪ Site inspection ▪ Document checking	Covering different project locations. Air – monitoring: At selected sites	Continuous process Base line and during construction Base line air quality monitoring has been done	Environment Specialist and support of PMSC; PIU	Complied as per SEMP. Water spraying continued for arresting dust. Record is being maintained on use of sprinkling water at site
Indoor air pollution and safety of workers	▪ Comply with safety measures during painting works at the interpretation centre. ▪ Mixing and cleaning operation emits VOCs, hence should be carried out in an enclosed area. ▪ Use of non-hazardous biocide containing paints rather mercury or lead containing paints should be encouraged.	▪ Safety measures applicable for the project	▪ Site inspection	Camp and office sites	Continuous throughout project period	Environment Specialist and support of PMSC; PIU	Being Complied as per SEMP
Air pollution from construction machinery, equipment and vehicles – Emissions from construction	▪ Construction materials should be transferred through tarpaulin covered vehicles during transportation and delivery. ▪ All vehicles used by the contractor should have copies of valid Pollution under Control (PUC)	▪ Location of stockpiles ▪ Complaints from sensitive receptors	▪ Visual Inspection at sites	Project locations	Throughout construction phase	Environment Specialist and support of PMSC; PIU	Being complied as per requirement Equipment and vehicle have PUC certificate (sample attached in **Appendix 2)** PPEs are used

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
related vehicles, equipment, machinery, resulting to dusts and increase in concentration of vehicle related pollutants such as carbon monoxide, sulfur oxides, particulate matter, nitrous oxides, and hydrocarbons	certificates as on date as per the requirement of the State Transport Department for the entire duration of the contract. ▪ Sprinkling water and unloading inside the barricaded area will be made to Control dust generation while unloading the loose material (particularly aggregate, soil) at the site ▪ Water is used to maintain soils in a visible damp or crusted condition for temporary stabilization ▪ Water to be used prior to leveling or any other earth moving activity to keep the soil moist throughout the process	▪ Monitoring data- PM10, PM2.5 NO2, SO2, CO ▪ Heavy equipment and machinery with air pollution control ▪ Water sprinkling arrangement ▪ Cover materials					completely Dust arresting system is developed. Air quality monitoring has been done
Fugitive emissions from stockpiles	▪ Covered stockpiling and storage areas (chemicals, paints, electric equipment etc.,) should be ensured. ▪ Construction of temporary enclosures to entrap dust. ▪ Water sprinkling, removal of excess materials, cleaning of sites upon completion of activities.	▪ Location and covering of stockpiles ▪ Water sprinkling arrangement	▪ Visual Inspection at sites	Project locations	Throughout construction phase	Environment Specialist and support of PMSC; PIU	No fugitive emission noted at site All mitigation measures applied
Impact on air quality – Emissions from construction related vehicles, equipment, machinery, resulting to dusts and increase in concentration of vehicle related pollutants such as	▪ Seasonal ambient air quality monitoring at the active construction site shall be carried out by contractor with the help of NABL / MoEF&CC approved laboratory, downwind of the project site. ▪ All the vehicles used for transportation of construction materials and construction activities should have valid PUC certificate, proper maintenance and servicing as per the requirement.	▪ Location of stockpiles ▪ Complaints from sensitive receptors ▪ Monitoring data- PM10, PM2.5 NO2, SO2, CO ▪ Heavy equipment and machinery with air pollution control	▪ Visual Inspection at sites	Project locations	Throughout construction phase	Environment Specialist and support of PMSC; PIU	Being complied as per requirement Equipment and vehicle have PUC certificate (sample attached in **Appendix 2)** No emission from installed green DG PPEs are used completely Air quality monitoring has been done as per

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
carbon monoxide, sulfur oxides, particulate matter, nitrous oxides, and hydrocarbons	▪ While digging for construction, dust prevention measures like water sprinkling, enclosing the area by shade cloth to attenuate dust will have to be taken. ▪ All the diesel generator sets should have appropriate stack height (at least 3 m minimum) for proper dispersion of the gases, complying with the CPCB norms. The stack height should be determined using the formula; H = h + 0.2 x SQRT (kVA); where H is the total height of stack in m, h = height of the building where the DG set is to be installed (or the nearest building where there are residents) ▪ Use of lead free and low sulphur diesel have to be encouraged. ▪ The vehicles carrying construction materials should be properly covered to prevent dust falling from vehicles during plying. ▪ All opened construction areas should be sprayed with water and frequently wetted during dry season to reduce impacts from dust emissions. ▪ At the stock yard, loading and unloading area temporary fence should be provided. All the workers should be provided with Personal Protection Equipment (PPE).	▪ Water sprinkling arrangement ▪ Cover materials					monitoring plan. Material transportation vehicle is covered.
Disturbance to Geology, Soil and Topography	▪ The excavated soil should be removed from construction area at the earliest for beneficial reuse	▪ Removal of excess earth, debris	▪ Visual Inspection of sites	Project locations	Throughout construction phase	Environment Specialist and support of PMSC;	Being complied Cleaning, grabbing done Proper storage of earth

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
Impacts due to due to clearing and grubbing, material extraction, soil erosion, contamination and change of contours	such as land raising / filling of excavated areas. ▪ Completed earthworks to be sealed and/or re-vegetated at the earliest with the help of landscape expert. ▪ Garland drains or earthen bunds shall be constructed around stockpile and storage area to arrest silt and sediment in case of sudden downpour; ▪ Piling area for topsoil shall be separate and carefully selected to avoid contamination of the topsoil with other construction materials and debris as that has to be reused for reclamation and rehabilitation of excavated area and for green belt development.					PIU	and utilization at site for land development is noted Garland drain will be constructed as per design
Dismantling existing facilities for refurbishment and repair, domestic uses by workers. Unhygienic conditions in project site, campsite, solid waste decomposing and generating foul odours	▪ Construction materials should be disposed at the specified dumping site, according to the local municipal authority's norms and procedure. ▪ Preparing and implementing a waste management plan for the construction site. ▪ Segregating solid and liquid waste before disposal. ▪ Manage solid waste according to the following hierarchy: reduce, reuse, recycle and dispose. ▪ Prohibit disposal of any material or waste into drainage system, river and water bodies. ▪ 1 set of 2 dustbins at 12 places in project area including entry and exit locations at Chabimura	▪ Storage and disposal of construction materials and waste, respectively ▪ Waste management plan ▪ Complaints from sensitive receptors ▪ PMU/ PIU/ PMSC to report in writing that the necessary environmental restoration work has been done	▪ Checking of records ▪ Visual Inspection at sites	Project locations	Throughout construction phase	Environment Specialist and support of PMSC; PIU	Being Complied-material stored at site and scrap materials are stored separately. Some improvement is required. No dismantling materials are generated

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
	have been proposed along with dustbins at entry-exit locations of Maharani Barrage, Amarsagar and Fatiksagar. ▪ Additionally, bio-mechanical composter of 400 kg/ day capacity has been proposed						
Domestic usage of water Sewage generation from kitchen and toilets	▪ A septic tank for and soak pit arrangement shall be provided from waste water from toilets and kitchen separately to be maintained ▪ The septic tank should be cleared of the sludge waste periodically and send to nearest treatment plant	▪ Arrangement of septic tank ▪ Discharge of kitchen washing water	Visual inspection at sites	Project locations	Pre-construction and throughout construction phase	Environment Specialist and support of PMSC; PIU	In labour camp. Septic tank provided with toilet From kitchen, water drained to *nallaha* Sludge is collected from the tank and disposed.
Noise level impact – Increase in noise level due to earth-moving and excavation equipment, and the transportation of equipment, materials, and people	▪ DG sets enclosed within acoustic chambers have to be provided and will need to keep noise levels below 75 dB(A) at 1 m from the DG Set as per the standards. ▪ Construction activities should be allowed strictly to daylight hours. Further, no two high noise generating equipment should be operated simultaneously. For example, use of dozer and cutting machine together will push the noise levels at the boundary of the site to above 85 dB(A), which is detrimental to the workers in the vicinity over long periods of exposure. ▪ All the instruments used should have lower sound power level. ▪ Installation of mufflers on engine exhausts and compressor components.	▪ Day time noise levels. ▪ Type of equipment used ▪ Noise reducing arrangement ▪ Health check up	▪ Checking of records ▪ Visual inspection of sites	Covering different work locations.	Monitoring continuous basis- pre construction and during construction	Environment Specialist and support of PMSC; PIU	Till report period complied all. Pre construction and construction phase noise monitoring has been conducted Green silent DG installed at site As per EMP mitigation measures are applied

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
	▪ Limiting the operation hours for hammer, Jackhammer (if used). ▪ Care should be taken that no employee be exposed to a noise level greater than 85 dB(A) for duration more than 8 hours per day without ear protection. ▪ Periodic medical hearing check-up should be performed on workers exposed to high noise level. ▪ The contractor should comply with EHS Guidelines for Occupational Health and Safety						
Ecological resource- Loss of vegetation and tree cover	▪ Excavation or any construction activities shall be done during stipulated and permitted time. ▪ Rehabilitate the excavated area immediately after excavation or construction is over to avoid loss of further soil and biodiversity. ▪ All air, noise, soil and water quality measures have to be abiding by for protecting biodiversity of the area. ▪ Enclosing construction sites with safety sheets.	Tree felling requirement and afforestation plan Environment protection plan	▪ Checking of records ▪ Visual inspection at sites	Project locations	Pre-construction and throughout construction phase	Environment Specialist and support of PMSC; PIU	As of now, tree felling requirement is not envisaged Work and camp areas are demarcated
Ground water quality- Contamination of ground water quality due to spillage of oil and lubricants	▪ Prepare and implement a spills management plan; ▪ Provide impermeable liner on the ground and place layer of mortar or concrete over it in the oil and lubricants storage areas, provide spillage trap in oil and lubricant store, use dip tray and pump to pour oil from oil and lubricant drums;	▪ Construction methodology ▪ Spillage/ spoil management plan ▪ Work schedule ▪ Ground water monitoring	▪ Document check ▪ Site inspection	All project locations	Visit of PMSC – support and Expert and PIU's safeguard in-charge throughout construction period	Environment Specialist and support of PMSC; PIU	▪ No contamination of soil and water ▪ Fuel is stored in designated areas away from public access, ignition sources (like sparks or flames), and potential hazards.

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	▪ Dispose any oil contaminated wastes generated by construction activities in scientific manner; and ▪ Conduct ground water quality monitoring according to the EMP	report as per requirement					Fuel is stored in proper fuel tanks which are placed inside spill trays of 110% volume capacity of the tankGround water monitoring conducted as per monitoring plan.
Construction activities using construction machinery, equipment and transport of material through construction vehicles Noise Pollution - Increase in noise level due to earth-moving and excavation equipment, and the transportation of equipment, materials, and people	▪ All construction vehicles and machineries will strictly conform to the CPCB noise standards. ▪ Using equipment and machineries with sound insulation system. ▪ Using padding for big windows to fill the gaps in order to avoid noise and vibration. ▪ Comply with the time and noise limits specified in the Noise Standard (CPCB). ▪ Limit construction activities to the daytime only. ▪ Avoid loud random noise from sirens, air compression etc.	▪ Type of equipment / vehicle used and confirm CPCB standard ▪ Day time and night time noise levels.	• Checking of records • Visual inspection of sites	Covering different work locations.	Monitoring continuous basis- pre construction and during construction	Environment Specialist and support of PMSC; PIU	Till report period complied all. Pre construction and construction phase noise monitoring has been conducted Checking of vehicles and equipment has been done. All construction vehicles and machineries strictly conform to the CPCB noise standards.
Repair of construction equipment, machinery onsite and transport of	▪ Provision of impervious platform and oil & grease trap for collection of spillages from construction equipment vehicle maintenance platform.	▪ Availability of access pathway.	Site inspection	Work sites and camps	Construction and post construction period	Environment Specialist and support of PMSC; PIU	Impervious platform provided at fuel storage area. Contamination not expected Access provided for

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material from sources Land pollution	▪ There will be well defined 700 m length of vehicle driveway and parking places inside the premises with paver block arrangement ▪ In addition, 1500 m length of access pathway has also been proposed that will reduce the pressure on green area destruction and prevent the land from being getting destroyed	▪ Storage of fuels as per standard norms					movement of vehicle and equipment
Waste spreading in the construction and tourism premises create unhygienic conditions	▪ Collecting biodegradable waste at separate bins and disposing of in a pit at designated areas 75 m away from the river. ▪ Collecting non-biodgeable wastes in separate bins and storing them in a secured area within the camp location, and disposal of the same in the nearest municipal solid waste site.	▪ Waste management practices ▪ Collection and storage of wastes at site	▪ Site inspection	Work sites and area development site	Construction and post construction period	Environment Specialist and support of PMSC; PIU	Complied Waste collection system arranged at camp and work area. Waste handed over to ULB
Fire safety plan and fire fighting	▪ Contractor should have fire prevention plan and designated location plan for provision of fire extinguishers and related tools and equipment. ▪ The contractor should give training to the workers on using fire extinguisher and conduct mock drills for emergency preparedness. ▪ The contractor should ensure that an access for emergency exit is provided. ▪ Design alarm system, fire protection system and emergency exits shall be provided if not available.	▪ Fire prevention plan ▪ Fire alarm system ▪ Safety arrangement ▪ Training documents	• Checking of records Visual inspection of sites	Project locations	Throughout the project period	Environment Specialist and support of PMSC; PIU	Complied Fire extinguisher available near fuel storage sites Training has been arranged for workers Fire prevention plan displayed.

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
Occupational Health and Safety Occupational hazards which can arise during work, safe from COVID 19	The construction contractor will be required to: ▪ Comply with all national, state and local labour laws ▪ Develop and implement site-specific occupational health and safety (OHS) Plan along with COVID-19 SOP which will include measures such as: (a) excluding public from the site; (b) ensuring all workers are provided with and use personal protective equipment; (c) OHS Training13 including COVID 19 for all site personnel; (d) documented procedures to be followed for all site activities; and (e) documentation of work-related accidents; ▪ Ensure availability of first aid box at work site; ▪ Make sure vaccination against COVID-19 is done for the labourers ▪ Ensure the workers follow COVID 19 SOP and implement accordingly (COVID 19 SOP guideline attached in Appendix 26);	• Site-specific Health and Safety (H&S) Plan • Application of labour laws • Equipped first-aid stations; • Medical insurance coverage for workers • Number of accidents • Supplies of potable drinking water; • Record of H&S orientation trainings • Personal protective equipment • Sign boards for hazardous areas	• Checking of records • Visual inspection of sites	Project locations	Throughout the project period	Environment Specialist and support of PMSC; PIU	Site-specific Health and Safety (H&S) plan prepared and under implementation. Copy of the approved Health and Safety plan available with PMSC. PIU H & S training including done on regular basis. Sample attached in **Appendix 12** Drinking water and first aid box available at site. Use of PPEs by workers noted. Use of shoes / gumboot is necessary Tie up letter with nearby health center in case of emergency - obtained **(Appendix**

[13] Some of the key areas that may be covered during training as they relate to the primary causes of accidents include (i) slips, trips and falls; (ii) personal protective equipment; (iii) ergonomics, repetitive motion, and manual handling; workplace transport; and (v) legislation and responsibilities. Training can provide the foundations of competence but it does not necessarily result in a competent worker. Therefore, it is essential to assess staff competence to ensure that the training provided is relevant and effective. Supervision and monitoring arrangements shall be in place to ensure that training has been effective and the worker is competent at their job. The level of supervision and monitoring required is a management decision that shall be based on the risks associated with the job, the level of competence required, the experience of the individual and whether the worker works as part of a team or is a lone worker.

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
	▪ Maintain Safe distance at work and use of Mask should be encouraged for safeguard from COVID-19 ▪ Provide medical insurance coverage for workers ▪ Secure all installations from unauthorized intrusion and accident risks; ▪ Provide health and safety 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; ▪ Ensured the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas; ▪ Ensured 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	such as energized electrical devices and lines, service rooms					**8).** Health check-up was conducted (**Appendix 9)** Medical Insurance arranged for the labourer (attached in **Appendix 4.**) Accident/ First aid register is maintained at each site. There is no as such first aid case recorded. Poster on GRM- GRC placed at site which need to be displayed in local language. IEE's Executive Summary in local to be placed at work site

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
	for duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively. ▪ Provide supplies of potable drinking water; ▪ Provide clean eating areas where workers are not exposed to hazardous or noxious substances						
Waste disposal	▪ The Contractor would take an active role with regards to the reprocessing and recycling of waste generated by the proposed subproject. An evaluation of the potential for recycling would occur before the project commences. ▪ Waste segregation would be done and non-recyclable wastes will be disposed at an approved solid waste facility. ▪ An area for segregation of waste at the construction site and type of wastes to be recycled, disposed and hazardous / heavy metal laden wastes for safe disposal to be identified.	• Waste – spoil management plan	• Site inspection and review of documents	Work and camp sites	Construction phases	Environment Specialist and support of PMSC; PIU	Segregation and Waste disposal is continued Provision of “dry waste” and “wet waste” dustbins are there at site. The site personnel are directed to dispose off the wastes accordingly, segregated at source. The segregated wastes are then collected by the local municipal body.
Construction camps- Temporary air and noise pollution from machine operation, water pollution from storage and use of fuels, oils, solvents, and	▪ The construction contractor is required to: ▪ As far as possible locate the camp site within the work sites; if any camp to be established outside these, then select a camp site away from residential areas (at least 50 m buffer shall be maintained) ▪ Avoid tree cutting for setting up camp facilities	• Public grievance • Accommodation • Water and sanitation facilities for employees • Housekeeping – regular	• Site inspection and review of documents	Construction camps	Preconstruction and construction phases	Environment Specialist and support of PMSC; PIU	Complied at work site LPG, drinking water, toilet and separate kitchen area provided. Camp is located away from the river and within demarcated area. No tree cutting done Drainage, proper safety arranged

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
lubricants. Unsanitary and poor living conditions for workers	▪ Ensure that a proper compound wall is provided, and erect a wind/dust screen around ▪ Camp site shall not be located near (100 m) water bodies, flood plains flood prone/low lying areas, or any ecologically, socially, archeologically sensitive areas ▪ Construction camp must be safeguarded from COVID -19 including safe eating area, maintaining Hygiene inside camp, ensure physical distancing measures ▪ Separate the workers living areas and material storage areas clearly with a fencing and separate entry and exit ▪ Provide proper temporary accommodation with proper materials, adequate lighting and ventilation, appropriate facilities for winters and summers; ensure conditions of liveability at work camps are maintained at the highest standards possible at all times; ▪ Consult cluster-PIU before locating project offices, sheds; ▪ Minimize removal of vegetation and disallow cutting of trees ▪ Ensure conditions of liveability at work camps are always maintained at the highest standards possible; living quarters and construction camps shall be	disposal of solid waste					maintained at labour camp. Collection of waste has been arranged as per norms.

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
	provided with standard materials (as far as possible to use portable ready to fit-in reusable cabins with proper ventilation); thatched huts, and facilities constructed with materials like GI sheets, tarpaulins, etc., shall not be allowed as accommodation for workers ▪ Camp shall be provided with proper drainage, there shall not be any water accumulation ▪ Ensure COVID vaccination is done for all the labours involved in the work ▪ Provide drinking water, water for other uses, and sanitation facilities for employees ▪ Prohibit employees from cutting of trees for firewood; contractor should be provided proper facilities including cooking fuel (oil or gas; fire wood not allowed) ▪ Train employees in the storage and handling of materials which can potentially cause soil contamination ▪ Recover used oil and lubricants and reuse or remove from the site ▪ Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas; provide a compost pit for biodegradable waste, and non-biodegradable /						

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/CHB/W 01
	recyclable waste shall be collected and sold in local market ▪ Remove all wreckage, rubbish, or temporary structures which are no longer required						
Accidents and safety	▪ Provision as well as maintaining the traffic management system comprising of diversion; warning, guiding and regulatory signage, provision of dust control system etc. as specified in the contract.	▪ Traffic Management plan ▪ Arrangement of signage	▪ Site inspection	Project Locations	Throughout the construction stage	Environment Specialist and support of PMSC; PIU	Work continued at specific location; traffic diversion is not required
Impact on socio economic condition	▪ Provide sign boards for pedestrians and local commercial establishments to inform nature and duration of construction works and contact numbers for concerns/complaints. ▪ Employ at least 50% of the labour force, or the maximum extent, local persons from the vicinity of the project area, if possible.	▪ Availability of sign board ▪ Employment record of workers	▪ Site inspection ▪ Document checking	Project Locations	Throughout the construction stage	Environment Specialist and support of PMSC; PIU	Being complied as per contract provision. Project-related signage has been provided.
Environmental Management Plan (EMP) Implementation Training along with COVID 19 safety Irreversible impact to the environment, workers, and community, Impact due to	▪ Project manager and all key workers will have undergone training on EMP implementation including spoils/waste management, Standard operating procedures (SOP) for construction works; occupational health and safety (OHS) including COVID-19(SOP), core labor laws, applicable environmental laws, etc.	▪ Training documents ▪ SOP for maintaining safety - OHS	Review of documents and site inspections	Project Locations	Throughout the construction stage	Environment Specialist and support of PMSC; PIU	Safety training conducted at site and recorded.

Impacts (List from IEE)	**Mitigation Measures (List from IEE)**	**Parameters Monitored (As a minimum those identified in the IEE should be monitored)**	**Method of Monitoring**	**Location of Monitoring**	**Date of Monitoring Conducted**	**Name of Person Who Conducted the Monitoring**	**Compliance Status/ Explanation for the package TTDCL/CHB/W 01**
effect of COVID 19							
Post-construction activities Unsightly and unhygienic conditions due to debris, septic tank and other hazardous chemicals as well as C&D wastes	▪ Site clean-up activities to be carried out which are necessary after construction activities. ▪ Restore temporary work areas, remove all tools and equipment, barricades, surplus material, debris and waste material used for the construction. ▪ If not utilized for reuse purpose, dispose in designated sites. ▪ Proper documentation is to be maintained for the restoration of work site.	• Stockpile Management • Spoil Management • Restoration of sites	Review of documents and site inspections	Project Locations	Construction and after construction	Environment Specialist and support of PMSC; PIU	To be complied as per EMP

Table 11: Summary of Environmental Monitoring Activities for the Package Development of Sonamukhi Eco Accommodation & Adventure Park and Rehabilitation of Unakoti Tourist Lodge at Kailashahar (TTDCL/UKT/W04)

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/UKT/W04
Location & Design Stage							
Integration of EMP in bidding documents and contracts Lack of awareness by contractors on ADB SPS requirements may result in insufficient budget and non-implementation of EMP	▪ Once the Contractor is selected, the PIU with support from PMSC will inform contractors on their responsibilities in EMP implementation, in compliance with ADB SPS and government requirements, self -monitoring and reporting procedures. ▪ The PMU will incorporate the costs of implementing OHS and the EMP as well as specific provisions requiring contractors to comply with all other conditions required into the bidding and contract document.	• Contract / BID document • Health and safety plan	• Document checking	Project locations	During final design, before commencement of work	Environment Specialist and support of PMSC; PIU	Considered in the design and contract agreement. Tentative EMP application cost provided in attached IEE as a part of contract agreement
Procurement of battery-operated boats and golf carts	▪ All equipment shall be confirmed to applicable standards, including pollution control, safety ▪ Manufacture shall provide safety equipment, training, and emergency response plans should be in place to ensure the safety of the crew and passengers ▪ Manufacture shall provide assistance in disposal/ recycling of all used components including batteries at the end of their useful life as per latest E waste management rules, Hazardous waste management rules and battery waste management rules of government of India	• Design components	• Document checking	Project locations-considered under separate package	During final design	Environment Specialist and support of PMSC; PIU and PMU	Included under different packages

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/UKT/W04
Location impacts of proposed components--- Nearby community may be affected due to increased pollution during construction Increased carrying capacity of site Increased water requiremnt and disposal for waste Impact due to proximity to River Manu	▪ Site location of Sonamukhi is adjacent to nearby habitation in Kaulikura GP and about 6 km from Kailashahar, the District HQ of Unakoti District, which positively benefit the region ▪ Kailashahar would benefit from renovated Unakoti lodge attracting more tourists to the town. ▪ Follow relevant national planning and design guidelines for. technical design of the visitor facilities, parking, amenities, eco adventure areas, cotteges, indoor games, gymnasium, conference room, restaurants, landscaping etc., ▪ Follow relevant standards and guidelines such as CPHEEO for designing of physical infrastructure facilities such as water supply, sewerage, storm drainage, solid waste management, power requirements etc. ▪ Focus on providing a robust system which is easy to operate, sustainable, efficient, and economically viable. ▪ Design measures for treatment of waste water, storm water drainage, solid waste management and construction waste management are incorporated in design	• Checking of selected sites and design ▪ Checking of mitigation measures of EMP	• Site observation • Desk review of documents	All project locations	During design	Environment Specialist and support of PMSC; PIU	Considered during detailed design. CPHEEO guideline is followed Site is free from any impact. Solid waste management process included in the design.
Change of landuse impacts the potential pollution	▪ Locate all sub-projects already exisitng footpritnt areas and maintain same landuse to the maximum extent	• Design parameters	• Document checking	Project sites	During design	Environment Specialist and support of PMSC; PIU	Complied completely

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/UKT/W04
Extraction of construction material -- Extraction of borrow material and boulders impact the geology and topography	▪ Material procurement will be from sources approved by the GoT or from approved third party	• List of approved quarry , borrow pit sites and sources of materials • Construction Contractor • documentation	• Checking of records • Visual Inspection of sites	Quarries and material source areas	During design and implementation	Environment Specialist and support of PMSC; PIU	Material purchased from license source. Royalty receipt sample copy attached as **Appendix 6.**
Pre-construction stage							
Permits, Consents, Clearances and NOCs- Environmental legal non-compliance may attract legal actions Failure to obtain necessary consents, permits, NOCs etc. can result to design revisions and/or stoppage of works	▪ Obtain all necessary groundwater withdrawl permission, TSPCB consents, permits, clearance, NOCs, etc. prior to start of civil works. ▪ Provide report on compliances of all obtained consents, permits, clearances etc. ▪ Update IEE and EMP prior to starting of works to reflect any changes in project design during design verification and detailed field survey, and submit to ADB for clearance and disclosure ▪ Prepare SEMP based on the updated EMP, and approved by PIU prior to commencement of works ▪ Include in detailed design drawings and documents, all the conditions and provisions stipulated in permits, consents issued by regulatory agencies. ▪ Contractor to conduct pre-construction (baseline) environmental monitoring as indicated in EMP budget tables. The	List of applicable legislation and present status	Checking of documents	All project locations	Before commencement of construction	Environment Specialist and support of PMSC; PIU	Being Complied and to be continued as per requirement All NOCs applicable – collected Site specific EMP developed. Base line and during construction phase monitoring has been conducted SEMP prepared and approved before commencement of construction. Worker's camp constructed adjacent to the work site within the project area.

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/UKT/W04
	monitoring results shall be referred as baseline quality for key environmental parameters of air, water and noise) ▪ Select and Get NOC for construction camp location from ULB.						
Construction work camps, stockpile areas, storage areas, and disposal areas. Conflicts with local community; disruption to traffic flow and sensitive receptors	▪ Layout plans, areas for construction zone (camp sites, stockpiling, storage and surroundings). ▪ The construction camp and stockpile, storage of fuel and lubricants will be avoided nearby any environmentally sensitive areas, forest area and residential areas. These areas will be finalized in consultation with PIU/supervision consultant. ▪ Establish construction camp away from habitation with proper ventilation system, water facility, provision of beds, septic tank or mobile toilets fitted with anaerobic treatment facility. ▪ Measures shall be taken to prevent mosquito breeding at site. Ensure spraying of bleaching powder or phenyl at regular intervals. ▪ Provision of LPG at construction camp for cooking. Usage of firewood to be prohibited strictly. ▪ Domestic solid waste at construction camp shall be segregated into biodegradable and non-biodegradable waste.	• Selected location layout plan nearby the work site • Checking of camp set up guideline	• Site observation • Review of documents • Grievance Register	Specific project location	Before commencement of final design and commencement of construction	Environment Specialist and support of PMSC; PIU	Being Complied No disruption noted. Area selected nearby vacant place with all facilities No excess spoil generated. Waste collection system arranged

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/UKT/W04
	▪ Ensure hygiene of the construction camp as well as the kitchen. ▪ Ensure provision of permeable drains and gutters around the construction camp site. ▪ Guidelines for setting up of construction camps and facilities to be provided are reviewed .						
Labour Requirements Conflict with local labour	▪ The contractor preferably will use unskilled labours from local communities to give maximum benefit to the local community.	• Labour engagement – category and origin	• Checking of appointment letters	Covering all work sites	Before commencement of work and during construction	Environment Specialist and support of PMSC; PIU	Local labours are engaged
Borrow area / Material procurement Extraction of materials can disrupt natural land contours and vegetation resulting in accelerated erosion, disturbance in natural drainage patterns, ponding and water logging, and water pollution	▪ Use material sources permitted by government ▪ Verify suitability of all material sources and obtain approval of PIU; ▪ Ensure that the loading and unloading of the materials and the transportation of the materials from source to construction site does not cause impact on health and safety of the workers and the community; and ▪ Submit to PIU on a monthly basis documentation of sources of materials. If contractor is purchasing ready mix concrete, asphalt/macadam and aggregates from third party, contractor will assure that all the parties/ suppliers are having CTE/CTO from TSPCB and will collect the copy of these certificates and submit to PIU/consultants	• List of approved Quarry and borrow pit sites and sources of materials • Construction contractor documentation	• Checking of records • Visual Inspection of sites	Quarries and material source areas	Before commencement of work and during construction	Environment Specialist and support of PMSC; PIU	All materials are sourced from licensed vendor having legal permission Construction materials checked by concerned Engineer. Loading and unloading of materials does not impact health & safety.

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/UKT/W04
Construction water Water extraction for construction activities and labour camps can disrupt usage by local community	▪ The Contractor will use ground / surface water as a source of water for the construction with prior permission from CGWB/ Department of water resource . ▪ To avoid disturbance to other water users, the Contractor will use onle permissible quanity of water . ▪ The Contractor will provide a list of locations & type of sources from where water for construction will be obtained. ▪ The Contractor will need to comply with the requirements of the State Ground Water Department for the extraction & seek their approval for doing so & submit copies of the permission to the PIU/PMU.	• Design document • Permission and conditions of NOC	• Document checking	Project area, camp	Before commencement of work and during construction	Environment Specialist and support of PMSC; PIU	NOC has been received from CGWA for extraction of ground water for construction purpose (**Appendix 5)**
Monitoring of Environmental baseline parameters prior to start of construction activities Establish base line environmental conditions	▪ Photograph and videograph all pre construction site conditions ▪ Conduct environmental monitoring as per approved monitoring plan ▪ Include photos and GPS coordinates.	• Environment monitoring report • Photos and GPS coordinate checking	Document checking	For entire project areas	Pre-construction stage	Environment Specialist and support of PMSC; PIU	Base line – air, water and noise monitoring has been done
Public disclosure leads to smooth progress of work and timely redressal of any grievances quickly	▪ Continue information dissemination, consultations and involvement/participation of stakeholders during project implementation. ▪ Capacity building training on environmental and social issues related to the project	• Awareness and public disclosure documents • Training documents • Grievance redressal	Document checking	Project area	Before commencement of work and during construction	Environment Specialist and support of PMSC; PIU	Work continued at fixed location. To be done as per type of work and project location Capacity building program – continued. Details are shown in Appendix 11 of this

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/UKT/W04
							report.
Preparation of H&S Plan for Pandemic like COVID-19 With the existing EHS guidelines contracture has to prepare a site specific EHS plan including COVID -19	▪ The Contractor to prepare and shall abide by the most stringent procedure available for EHS plan including COVID-19 guidelines . ▪ Consistently practice social distancing. ▪ Cover coughs and sneezes. ▪ Maintain hand hygiene. ▪ Clean surfaces frequently.	• Prepared health and safety plan	• Checking of documents	Covering all work sites	Before commencement of construction	Environment Specialist and support of PMSC; PIU	HS plan prepared and approved. Implementation continued.
Construction stage							
Environmental Management Plan (EMP) Implementation Training along with COVID 19 safety Irreversible impact to the environment, workers, and community, Impact due to effect of COVID 19	Project manager and all key workers will have undergone training on EMP implementation including spoils/waste management, Standard operating procedures (SOP) for construction works; occupational health and safety (OHS) including COVID-19(SOP), core labor laws, applicable environmental laws, etc.	▪ Induction & Awareness Trainings ▪ Toolbox Talks Safeguard Trainings	▪ Review of Training records ▪ Site Inspections	Project Locations	-	Environment Specialist and support of PMSC; PIU	Being Complied; Site Environmental Safety training and awareness arranged. However, number of trainings depends on arrival of new workers Sample training document is attached as **Appendix 12.**
Construction works close to water bodies Water Quality impact due to contamination from debris, open	▪ The campsites and storage areas should be established at a minimum distance of 75 m from the river in the areas that would not be affected by flooding and clear of any natural or storm water courses.	• Camp site, storage area, debris disposal area checking	Checking of documents	Covering all work sites	Before commencement of construction	Environment Specialist and support of PMSC; PIU	Construction work-ongoing. All precautionary measures taken up for protection of water bodies Camp site is situated nearby the work

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/UKT/W04
defecation, oil & grease	▪ No debris should be thrown or collected within 75 m from the edge of the river. ▪ Vehicle parking areas, warehouses and workshop locations must have impervious flooring to prevent seepage of any solvents, paints, leaked oil & grease into the ground. The area should be covered with a roof to prevent the entry of rainwater. ▪ Strictly prohibit open defecation by workers.						location. No waterbody located nearby. Hence, no chance for disposal of waste on the waterbody. Vehicle parking selected near site office, away from any waterbody.
Siltation of water bodies & degradation of water quality	▪ Schedule construction activities during non-monsoon season to the maximum extent possible. ▪ Ensure not to excavate beds of any waterbody for borrowing of earth. ▪ Ensure drainages within the construction zones are kept free of obstructions. ▪ If required silt fencing needs to be provided adjacent to waterbodies and around the stockpiles at the construction site close to water bodies. ▪ Ensure construction materials containing fine particles are stored in a suitable enclosure to avoid their drainage to the nearby water body. ▪ Dispose any residuals at identified disposal site (approved/identified by local governing bodies).	▪ Areas for stockpiles, storage of fuels and lubricants and waste materials ▪ Number of silt traps installed along drainages (in slope) leading to water bodies ▪ Entry routes of pollutant in nearby Waterbodies	▪ Site inspection ▪ Public grievance register	All project locations	Visit of PMSC – support and Expert and PIU's safeguard in-charge throughout construction period	Environment Specialist and support of PMSC; PIU	Through application of mitigation measures entry of silt in the water body will be stopped Open defecation is not allowed near work site. Toilet facility is provided at camp and site office. Excess earth after cutting are utilized mostly for development of land.

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	▪ Inspect all vehicles daily for fluid leaks, before leaving the vehicle staging area, and repair any leaks before the vehicle resume operations. ▪ Strictly prohibit open defecation by workers in nearby areas. ▪ Ensure mobile toilets at the construction work / camp sites to avoid open defecation.						
Flood prevention Inundation from high floods, erosion due to high velocity of water and safety of residents / tourists during floods	▪ Ensure provision of permeable drains and gutters around the construction site to divert rainwater to the nearby waterbody. ▪ Maintenance of green areas boundaries	▪ Design mechanism ▪ Green area maintainance	▪ Site inspection ▪ Checking of design parameters	Project area	Throughout the project period – pre construction and construction stage	Environment Specialist and support of PMSC; PIU	Drainage provision and green area maintenance considered in the design
Storage of materials at campsites / stockpile areas- Air Pollution	▪ Conduct regular water spraying on stockpiles. ▪ Avoid stockpiling of excavated and construction material unless covered by tarpaulins or plastic sheets to avoid dispersion of loose dry construction materials. ▪ Conduct regular site inspections in the construction zones to ensure adequate measures have been taken to suppress emission of excessive dust during construction period.	▪ Location of stockpiles ▪ Monitoring data- PM10, PM2.5 NO2, SO2, CO ▪ Heavy equipment and machinery with air pollution control ▪ Water sprinkling arrangement ▪ Cover materials ▪ Arrangement of safety measures	▪ Site inspection ▪ Document checking	Covering different project locations. Air – monitoring: At selected sites	Continuous process Base line and during construction Base line air quality monitoring has been done on April 2024	Environment Specialist and support of PMSC; PIU	Complied as per SEMP - Covering of construction materials - Water sprinkling for arresting dust. Record is being maintained.

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Indoor air pollution and safety of workers	▪ Comply with safety measures during painting works in enclosed spaces such as Unakoti Lodge and buildings proposed in the Sonamukhi project sub-components ▪ Mixing and cleaning operation emits VOCs, hence should be carried out in an enclosed area. ▪ Use of non-hazardous biocide containing paints rather mercury or lead containing paints should be encouraged.	▪ Safety measures applicable for the project	▪ Site inspection	Camp and office sites	Continuous throughout project period	Environment Specialist and support of PMSC; PIU	Being Complied as per SEMP All safety measures will be followed during painting work.
Air pollution from construction machinery, equipment and vehicles – Emissions from construction related vehicles, equipment, machinery, resulting to dusts and increase in concentration of vehicle related pollutants such as carbon monoxide, sulfur oxides, particulate matter, nitrous oxides, and hydrocarbons	▪ Construction materials should be transferred through tarpaulin covered vehicles during transportation and delivery. ▪ All vehicles used by the contractor should have copies of valid Pollution under Control (PUC) certificates as on date as per the requirement of the State Transport Department for the entire duration of the contract. ▪ Sprinkling water and unloading inside the barricaded area will be made to Control dust generation while unloading the loose material (particularly aggregate, soil) at the site ▪ Water is used to maintain soils in a visible damp or crusted condition for temporary stabilization ▪ Water to be used prior to leveling or any other earth moving activity to keep the soil moist throughout the process	▪ Location of stockpiles ▪ Complaints from sensitive receptors ▪ Monitoring data- PM10, PM2.5 NO2, SO2, CO ▪ Heavy equipment and machinery with air pollution control ▪ Water sprinkling arrangement ▪ Cover materials	▪ Visual Inspection at sites	Project locations	Throughout construction phase	Environment Specialist and support of PMSC; PIU	Being complied as per requirement Equipment and vehicle have PUC certificate (sample attached in **Appendix 2)** Transportation of materials done after covering of wind blown materials like sand. PPEs are used completely as per requirement Air quality monitoring has been done

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/UKT/W04
Fugitive emissions from stockpiles	▪ Covered stockpiling and storage areas (chemicals, paints, electric equipment etc.,) should be ensured. ▪ Construction of temporary enclosures to entrap dust. ▪ Water sprinkling, removal of excess materials, cleaning of sites upon completion of activities.	▪ Location and covering of stockpiles ▪ Water sprinkling arrangement	▪ Visual Inspection at sites	Project locations	Throughout construction phase	Environment Specialist and support of PMSC; PIU	No fugitive emission noted at site All mitigation measures applied
Impact on air quality – Emissions from construction related vehicles, equipment, machinery, resulting to dusts and increase in concentration of vehicle related pollutants such as carbon monoxide, sulfur oxides, particulate matter, nitrous oxides, and hydrocarbons	▪ Seasonal ambient air quality monitoring at the active construction site shall be carried out by contractor with the help of NABL / MoEF&CC approved laboratory, downwind of the project site. ▪ All the vehicles used for transportation of construction materials and construction activities should have valid PUC certificate, proper maintenance and servicing as per the requirement. ▪ While digging for construction, dust prevention measures like water sprinkling, enclosing the area by shade cloth to attenuate dust will have to be taken. ▪ All the diesel generator sets should have appropriate stack height (at least 3 m minimum) for proper dispersion of the gases, complying with the CPCB norms. The stack height should be determined using the formula; H = h + 0.2 x SQRT (kVA); where H is the total height of stack in m, h = height of the building where the DG set is to be installed (or the nearest building where there are residents)	▪ Location of stockpiles ▪ Complaints from sensitive receptors ▪ Monitoring data- PM10, PM2.5 NO2, SO2, CO ▪ Heavy equipment and machinery with air pollution control ▪ Water sprinkling arrangement ▪ Cover materials	▪ Visual Inspection at sites	Project locations	Throughout construction phase	Environment Specialist and support of PMSC; PIU	Being complied as per requirement Water sprinkling arranged at site. Equipment and vehicle have PUC certificate (sample attached in **Appendix 2)** No emission from installed green DG PPEs are used completely Air quality monitoring has been done

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/UKT/W04
	▪ Use of lead free and low sulphur diesel have to be encouraged. ▪ The vehicles carrying construction materials should be properly covered to prevent dust falling from vehicles during plying. ▪ All opened construction areas should be sprayed with water and frequently wetted during dry season to reduce impacts from dust emissions. ▪ At the stock yard, loading and unloading area temporary fence should be provided. All the workers should be provided with Personal Protection Equipment (PPE).						
Disturbance to Geology, Soil and Topography Impacts due to clearing and grubbing, material extraction, soil erosion, contamination and change of contours	▪ The excavated soil should be removed from construction area at the earliest for beneficial reuse such as land raising / filling of excavated areas. ▪ Completed earthworks to be sealed and/or re-vegetated at the earliest with the help of landscape expert. ▪ Garland drains or earthen bunds shall be constructed around stockpile and storage area to arrest silt and sediment in case of sudden downpour; ▪ Piling area for topsoil shall be separate and carefully selected to avoid contamination of the topsoil with other construction materials and debris as that has to be reused for reclamation and rehabilitation of	▪ Removal of excess earth, debris	▪ Visual Inspection of sites	Project locations	Throughout construction phase	Environment Specialist and support of PMSC; PIU	Being complied Cleaning, grabbing, vegetation cleaning continued as per requirement. Proper storage of earth and utilization at site for land development is noted Drain will be developed

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	excavated area and for green belt development.						
Dismantling existing facilities for refurbishment and repair, domestic uses by workers- Unhygienic conditions in project site, campsite, solid waste decomposing and generating foul odours	▪ Construction materials should be disposed at the specified dumping site, according to the local municipal authority's norms and procedure. ▪ Preparing and implementing a waste management plan for the construction site. ▪ Follow ADB Good Practice Guidance for the Management and Control of Asbestos - Protecting Workplaces and Communities from Asbestos Exposure Risks (March 2022)14 if ACM are detected ▪ Segregating solid and liquid waste before disposal. ▪ Manage solid waste according to the following hierarchy: reduce, reuse, recycle and dispose. ▪ Prohibit disposal of any material or waste into drainage system, river and water bodies. ▪ 1 set of 2 dustbins at 12 places in project area including entry and exit locations of eco-accomodation and eco-adventure zones have been proposed along with dustbins at Unakoti lodge ▪ Additionally bio-mechanical composter of 400 kg/ day capacity has been proposed	▪ Storage and disposal of construction materails and waste, respectively ▪ Waste management plan ▪ Complaints from sensitive receptors ▪ PMU/ PIU/ PMSC to report in writing that the necessary environmental restoration work has been done	▪ Checking mof records ▪ Visual Inspection at sites	Project locations	Throughout construction phase	Environment Specialist and support of PMSC; PIU	Construction work ongoing. Being Complied-material stored at site and scrap materials stored separately Permission has been received from Kalishahar ULB for disposal of dismantling materials, garbage of Unakoti tourist lodge (**Appendix 7)**

[14] https://www.adb.org/sites/default/files/publication/783636/good-practice-management-control-asbestos.pdf

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/UKT/W04
Surface water quality Mobilization of settled silt materials, and chemical contamination from fuels and lubricants during construction can contaminate nearby surface water quality. Ponding of water in the pits/foundation excavations	▪ All the digging and construction related activities should be avoided during monsoon months. The construction works shall be scheduled during dry season so that local flooding and silting can be avoided. ▪ Plastic sheet fencing should be placed around all excavations and earthwork areas. ▪ Disturb only the area required for the project, while keeping intact the rest of the vegetated area so that minimum harm is caused to the topsoil layer and the existing vegetation. ▪ Sediment control traps, silt fencing or sediment basins shall be made to control silt laden runoff entering the water body and clogging drainage channels in the area. ▪ Ensure drainage located within the construction area to be clear and free of obstructions ▪ Mulching to stabilize exposed area and lining steep channel and slopes. ▪ The stockpiles, construction materials have to be kept at least 50 m away from Nageshwari Chhara and Kathal tank. ▪ The construction camp location should be identified in consultation with ULB and to be established away from Manu River	▪ Areas for stock piles, storage of fuels and lubricants and waste materials. ▪ Entry routes of pollutant in nearby water bodies.	▪ Site inspection	All project locations	Throughout construction phase	Environment Specialist and support of PMSC; PIU	Being complied. • All excess spoil, utilized for backfilling and for filling up of low laying sites. • No waste has been deposited nearby waterbody • Surface and ground water quality has been monitored as per SEMP • Stockpile placed at isolated areas, away from any waterbody. • Generation of construction waste is very less. • Fuel and lubricant stored separately

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/UKT/W04
	floodable area or any other waterbody. ▪ Provide appropriate wastewaster treatment facilities and no untreated wastewater shall be discharged into the water bodies ▪ Maintain a stockpile of topsoil for immediate site restoration following backfilling. ▪ Protect exposed or cut slopes with planted vegetation, and have a slope stabilization protocol ready. ▪ Surface soil is reserved for restoration after excavation; ▪ All construction fluids such as oils, and fuels should be stored and handled well away from all surface waters ▪ Contact Forest department for advice on how to minimize damage to trees and vegetation. ▪ All areas to be re-vegetated and landscaped after construction completed. Consult Forest department to determine the most successful restoration strategy and techniques in area. Replant five trees for each tree removed.						
Domestic usage of water Sewage generation from kitchen and toilets	▪ A septic tank for and soak pit arrangement shall be provided from waste water from toilets and kitchen separately to be maintained ▪ The septic tank should be cleared of the sludge waste periodically and send to nearest treatment plant	▪ Arrangement of septic tank ▪ Discharge of kitchen washing water	Visual inspection at sites	Project locations	Pre-construction and throughout construction phase	Environment Specialist and support of PMSC; PIU	In labour camp. Septic tank provided with toilet From kitchen water drained to *nallaha* Sludge is collected from the tank.

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Noise level impact – Increase in noise level due to earth-moving and excavation equipment, and the transportation of equipment, materials, and people	▪ DG sets enclosed within acoustic chambers have to be provided and will need to keep noise levels below 75 dB(A) at 1 m from the DG Set as per the standards. ▪ Construction activities should be allowed strictly to daylight hours. Further, no two high noise generating equipment should be operated simultaneously. For example, use of dozer and cutting machine together will push the noise levels at the boundary of the site to above 85 dB(A), which is detrimental to the workers in the vicinity over long periods of exposure. ▪ All the instruments used should have lower sound power level. ▪ Installation of mufflers on engine exhausts and compressor components. ▪ Limiting the operation hours for hammer, Jackhammer (if used). ▪ Care should be taken that no employee be exposed to a noise level greater than 85 dB(A) for duration more than 8 hours per day without ear protection. ▪ Periodic medical hearing check-up should be performed on workers exposed to high noise level. ▪ The contractor should comply with EHS Guidelines for Occupational Health and Safety	▪ Day time noise levels. ▪ Type of equipment used ▪ Noise reducing arrangement ▪ Health check up	▪ Checking of records ▪ Visual inspection of sites	Covering different work locations.	Monitoring continuous basis- pre construction and during construction	Environment Specialist and support of PMSC; PIU	Till report period complied all. Pre construction and during construction noise monitoring has been conducted. Green silent DG installed at site. Work continued during day time only. Mitigation measures are applied as per SEMP.

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Ecological resource- Loss of vegetation and tree cover	▪ Excavation or any construction activities shall be done during stipulated and permitted time. ▪ Rehabilitate the excavated area immediately after excavation or construction is over to avoid loss of further soil and biodiversity. ▪ All air, noise, soil and water quality measures have to be abiding by for protecting biodiversity of the area. ▪ Enclosing construction sites with safety sheets.	Tree felling requirement and afforestation plan Environment protection plan	• Checking of records • Visual inspection at sites	Project locations	Pre-construction and throughout construction phase	Environment Specialist and support of PMSC; PI U	As of now, tree felling requirement is not envisaged Work and camp areas are demarcated
Ground water quality- Contamination of ground water quality due to spillage of oil and lubricants	▪ Prepare and implement a spills management plan; ▪ Provide impermeable liner on the ground and place layer of mortar or concrete over it in the oil and lubricants storage areas, provide spillage trap in oil and lubricant store, use dip tray and pump to pour oil from oil and lubricant drums; ▪ Dispose any oil contaminated wastes generated by construction activities in scientific manner; and ▪ Conduct ground water quality monitoring according to the EMP	▪ Construction methodology ▪ Spillage/ spoil management plan ▪ Work schedule ▪ Ground water monitoring report as per requirement	▪ Document check ▪ Site inspection	All project locations	Visit of PMSC – support and Expert and PIU's safeguard in-charge throughout construction period	Environment Specialist and support of PMSC; PIU	▪ Work ongoing- no contamination of soil and water ▪ Fuel stored separately ▪ Pre and during construction ground water monitoring has been done.
Construction activities using construction machinery, equipment and transport of material through construction	▪ All construction vehicles and machineries will strictly conform to the CPCB noise standards. ▪ Using equipment and machineries with sound insulation system.	▪ Type of equipment / vehicle used and confirm CPCB standard ▪ Day time and night time noise levels.	• Checking of records • Visual inspection of sites	Covering different work locations.	Monitoring continuous basis- pre construction and during construction	Environment Specialist and support of PMSC; PIU	Till report period complied all. Pre and during construction noise monitoring has been conducted Checking of vehicles done

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vehicles Noise Pollution - Increase in noise level due to earth-moving and excavation equipment, and the transportation of equipment, materials, and people	▪ Using padding for big windows to fill the gaps in order to avoid noise and vibration. ▪ Comply with the time and noise limits specified in the Noise Standard (CPCB). ▪ Limit construction activities to the daytime only. ▪ Avoid loud random noise from sirens, air compression etc.						Work continued only during day time.
Repair of construction equipment, machinery onsite and transport of material from sources Land pollution	▪ Provision of impervious platform and oil & grease trap for collection of spillages from construction equipment vehicle maintenance platform. ▪ There will be well defined 700 m length of vehicle driveway and parking places inside the premises with paver block arrangement ▪ In addition, 1500 m length of access pathway has also been proposed that will reduce the pressure on green area destruction and prevent the land from being getting destroyed	▪ Availability of access pathway. ▪ Storage of fuels as per standard norms	Site inspection	Work sites and camps	Construction and post construction period	Environment Specialist and support of PMSC; PIU	Impervious platform provided at fuel storage area. Contamination not expected Access provided for movement of vehicle and equipment
Waste spreading in the construction and tourism premises create unhygienic conditions	▪ Collecting biodegradable waste at separate bins and disposing of in a pit at designated areas 75 m away from the river. ▪ Collecting non-bridgeable wastes in separate bins and storing them in a secured area within the camp location, and	▪ Waste management practices ▪ Collection and storage of wastes at site	▪ Site inspection	Work sites and area development site	Construction and post construction period	Environment Specialist and support of PMSC; PIU	Complied Waste collection system arranged

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	disposal of the same in the nearest municipal solid waste site.						
Fire safety plan and fire fighting	▪ Contractor should have fire prevention plan and designated location plan for provision of fire extinguishers and related tools and equipment. ▪ The contractor should give training to the workers on using fire extinguisher and conduct mock drills for emergency preparedness. ▪ The contractor should ensure that an access for emergency exit is provided. ▪ Design alarm system, fire protection system and emergency exits shall be provided if not available.	▪ Fire prevention plan ▪ Fire alarm system ▪ Training documents	• Checking of records Visual inspection of sites	Project locations	Through out the project period	Environment Specialist and support of PMSC; PIU	Complied Fire extinguisher available near fuel storage site and office. Training has been arranged for workers. Fire prevention signage should be placed at different construction area
Occupational Health and Safety Occupational hazards which can arise during work, safe from COVID 19	The construction contractor will be required to: ▪ Comply with all national, state and local labour laws ▪ Develop and implement site-specific occupational health and safety (OHS) Plan along with COVID-19 SOP which will include measures such as: (a) excluding public from the site; (b) ensuring all workers are provided with and use personal protective equipment; (c) OHS Training15 including COVID	• Site-specific Health and Safety (H&S) Plan • Application of labour laws • Equipped first-aid stations; • Medical insurance	• Checking of records • Visual inspection of sites	Project locations	Throughout the project period	Environment Specialist and support of PMSC; PIU	Site-specific Health and Safety (H&S) Plan prepared and under implementation. Copy of the approved Health and Safety plan available with PMSC. PIU H & S training / awareness done on regular basis. Sample

[15] Some of the key areas that may be covered during training as they relate to the primary causes of accidents include (i) slips, trips and falls; (ii) personal protective equipment; (iii) ergonomics, repetitive motion, and manual handling; workplace transport; and (v) legislation and responsibilities. Training can provide the foundations of competence but it does not necessarily result in a competent worker. Therefore, it is essential to assess staff competence to ensure that the training provided is

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	19 for all site personnel; (d) documented procedures to be followed for all site activities; and (e) documentation of work-related accidents; ▪ Ensure availability of first aid box at work site; ▪ Make sure vaccination against COVID-19 is done for the labourers ▪ Ensure the workers follow COVID 19 SOP and implement accordingly (COVID 19 SOP guideline attached in Appendix 26); ▪ Maintain Safe distance at work and use of Mask should be encouraged for safeguard from COVID-19 ▪ Provide medical insurance coverage for workers ▪ Secure all installations from unauthorized intrusion and accident risks; ▪ Provide health and safety 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	coverage for workers • Number of accidents • Supplies of potable drinking water; • Record of H&S orientation trainings • Personal protective equipment • Sign boards for hazardous areas such as energized electrical devices and lines, service rooms					attached in **Appendix 12.** Drinking water and first aid box available at site. Use of PPEs by workers noted satisfactory Tie up letter with nearby health center in case of emergency - obtained (**Appendix 12)**. Health check-up conducted (Appendix - 9) Medical Insurance arranged for the labourer (attached in **Appendix 4)** Accident/ First aid register is maintained at each site. IEE's Executive Summary in local language to be placed at work site

relevant and effective. Supervision and monitoring arrangements shall be in place to ensure that training has been effective and the worker is competent at their job. The level of supervision and monitoring required is a management decision that shall be based on the risks associated with the job, the level of competence required, the experience of the individual and whether the worker works as part of a team or is a lone worker.

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	preventing injuring to fellow workers; ▪ Ensured the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas; ▪ Ensured 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 duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively. ▪ Provide supplies of potable drinking water; ▪ Provide clean eating areas where workers are not exposed to hazardous or noxious substances						
Waste disposal	▪ The Contractor would take an active role with regards to the reprocessing and recycling of waste generated by the proposed subproject. An evaluation of the	• Waste – spoil management plan	• Site inspection and review of documents	Work and camp sites	Construction phases	Environment Specialist and support of PMSC; PIU	Segregation and Waste disposal is being done Recycling of waste done.

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	potential for recycling would occur before the project commences. ▪ Waste segregation would be done and non-recyclable wastes will be disposed at an approved solid waste facility. ▪ An area for segregation of waste at the construction site and type of wastes to be recycled, disposed and hazardous / heavy metal laden wastes for safe disposal to be identified.						
Quality and safety of construction materials Construction material not meeting the quality standards and affecting the durability	▪ The contractor should procure construction materials from certified suppliers.	• Checking of quality certificate of material supplier	• Document checking	Construction sites/ Office	Preconstruction and construction phases	Environment Specialist and support of PMSC; PIU	Being complied
Construction camps- Temporary air and noise pollution from machine operation, water pollution from storage and use of fuels, oils, solvents, and lubricants. Unsanitary and poor living	▪ The construction contractor is required to: ▪ As far as possible locate the camp site within the work sites; if any camp to be established outside these, then select a camp site away from residential areas (at least 50 m buffer shall be maintained) ▪ Avoid tree cutting for setting up camp facilities ▪ Ensure that a proper compound wall is provided, and erect a wind/dust screen around	• Public grievance • Accommodation arrangement • Water and sanitation facilities for employees • Housekeeping – regular disposal of solid waste	• Site inspection and review of documents/ facility	Construction camps	Preconstruction and construction phases	Environment Specialist and support of PMSC; PIU	Complied at work site, bed, LPG, drinking water, toilet and separate kitchen area provided. Camp is located away from the waterbody No tree cutting done Drainage, proper safety arranged maintained at labour camp Access available. Provided training to

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conditions for workers	▪ Camp site shall not be located near (100 m) water bodies, flood plains flood prone/low lying areas, or any ecologically, socially, archeologically sensitive areas ▪ Construction camp must be safeguarded from COVID -19 including safe eating area, maintaining Hygiene inside camp, ensure physical distancing measures ▪ Separate the workers living areas and material storage areas clearly with a fencing and separate entry and exit ▪ Provide proper temporary accommodation with proper materials, adequate lighting and ventilation, appropriate facilities for winters and summers; ensure conditions of liveability at work camps are maintained at the highest standards possible at all times; ▪ Consult PIU before locating project offices, sheds; ▪ Minimize removal of vegetation and disallow cutting of trees ▪ Ensure conditions of liveability at work camps are always maintained at the highest standards possible; living quarters and construction camps shall be provided with standard materials (as far as possible to use portable ready to fit-in reusable cabins with proper ventilation); thatched huts,						the workers for proper handling of materials.

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	and facilities constructed with materials like GI sheets, tarpaulins, etc., shall not be allowed as accommodation for workers ▪ Camp shall be provided with proper drainage, there shall not be any water accumulation ▪ Ensure COVID vaccination is done for all the labours involved in the work ▪ Provide drinking water, water for other uses, and sanitation facilities for employees ▪ Prohibit employees from cutting of trees for firewood; contractor should be provided proper facilities including cooking fuel (oil or gas; fire wood not allowed) ▪ Train employees in the storage and handling of materials which can potentially cause soil contamination ▪ Recover used oil and lubricants and reuse or remove from the site ▪ Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas; provide a compost pit for biodegradable waste, and non-biodegradable / recyclable waste shall be collected and sold in local market						

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/UKT/W04
	▪ Remove all wreckage, rubbish, or temporary structures which are no longer required						
Impact on socio economic condition	▪ Provide sign boards for pedestrians and local commercial establishments to inform nature and duration of construction works and contact numbers for concerns/complaints. ▪ Employ at least 50% of the labour force, or the maximum extent, local persons from the vicinity of the project area, if possible.	▪ Availability of sign board ▪ Employment record of workers	▪ Site inspection ▪ Document checking	Project Locations	Throughout the construction stage	Environment Specialist and support of PMSC; PIU	Being complied as per contract provision. Local labours are engaged The projects are site specific and contained within a specific area, hence the signboards for pedestrians and local commercial establishments to inform nature and duration of construction works and contact numbers for concerns/ complaints are set up at the project site.
Environmental Management Plan (EMP) Implementation Training along with COVID 19 safety Irreversible impact to the environment, workers, and community, Impact due to effect of COVID 19	▪ Project manager and all key workers will have undergone training on EMP implementation including spoils/waste management, standard operating procedures (SOP) for construction works; occupational health and safety (OHS) including COVID-19(SOP), core labor laws, applicable environmental laws, etc.	▪ Training documents ▪ SOP for maintaining safety - OHS	Review of documents and site inspections	Project Locations	Throughout the construction stage	Environment Specialist and support of PMSC; PIU	Being complied. Safety training conducted at site on regular basis. EMP implementation continued by contractor with weekly, monthly record compliance checklist. After desk and site review, PMSC's Environment Expert and support suggested necessary improvement and identification of gaps.

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation for the package TTDCL/UKT/W04
							Accordingly, training is being arranged for contractor's concerned engineer & Environment, health and safety person.
Post-construction activities Unsightly and unhygienic conditions due to debris, septic tank and other hazardous chemicals as well as C&D wastes	▪ Site clean-up activities to be carried out which are necessary after construction activities. ▪ Restore temporary work areas, remove all tools and equipment, barricades, surplus material, debris and waste material used for the construction. ▪ If not utilized for reuse purpose, dispose in designated sites. ▪ Proper documentation is to be maintained for the restoration of work site.	• Stockpile Management • Spoil Management • Restoration of work sites	Review of documents and site inspections	Project Locations	Construction and after construction	Environment Specialist and support of PMSC; PIU	To be complied as per EMP

D. Site Specific Issues and Present Compliance Status

35. Upto March 2025 work is ongoing for 5 nos. of packages, overall progress around 16%. Site specific EMP have been prepared and monitoring ongoing. Worker's camp developed for both the tourism sector packages with all facilities. For urban sector packages construction worker's camp has been set up at OHSR and WTP locations. Present site-specific issues & compliance status discussed in Tables above. Summary of Key issues and compliance requirement mentioned in **Table 29.**

36. **Appendix 1** shows some site photographs, showing the activities.

37. Based on preliminary activities, findings and environmental monitoring carried out from October 2024 to March 2025, it may be concluded that the subprojects have been implemented in compliance of the required environmental safeguards. Overall compliance level for sub-projects is shown in **Table 12** below. Compliance level is more or less satisfactory.

Table 12: Overall Compliance with Environmental Management Plan

No.	Sub-project Name	EMP Part of Contract Documents (Y/N)	EMP Being Implemented (Y/N)	Status of Implementation (Excellent/Satisfactory / Partially Satisfactory, Below Satisfactory)	Action Proposed and Additional Measures Required
Urban Sector					
1	Design, Build, and Operate Contract for Comprehensive Water Supply Improvement Works for Cluster IA Towns (Khowai, Mohanpur and Ranirbazar) of Tripura **(TUDA/WS-01/P-01)**	Y	Y	Satisfactory	• Periodic checking of bamboo scaffolding at OHSR sites as per the international/national standards. • Executive Summary of IEE in local language to be displayed at site • Placement of local language – GRC GRM board
2	Design, Build, and Operate Contract for Comprehensive Water Supply Improvement Works in Cluster IIA Towns Towns (Udaipur, Amarpur, Bishramganj, Melaghar, and Belonia) of Tripura **(TUDA/WS-02/P-02)**	Y	Y	Satisfactory	• Periodic checking of bamboo scaffolding at OHSR sites as per the international/national standards. • Executive Summary of IEE in local language to be displayed at site • Placement of local language – GRC GRM board
3	Design, Build, and Operate Contract for Comprehensive Water Supply	Y	Y	Partially satisfactory	• Preliminary activity continued but document submission is not satisfactory.

No.	Sub-project Name	EMP Part of Contract Documents (Y/N)	EMP Being Implemented (Y/N)	Status of Implementation (Excellent/Satisfactory / Partially Satisfactory, Below Satisfactory)	Action Proposed and Additional Measures Required
	Improvement Works in Cluster IIIA Towns (Dharmanagar, Kailashahar, Kumarghat and Ambassa) of Tripura **(TUDA/WS-03/P-03)**				Lacking in labour license, CGWA ground water withdrawal permission, PUC certificate, health institute tie up, Health check up and EHS training and record.
Tourism sector					
4	Tourism Destination Development at Chabimura and Upgradation/ Beautification of Visitor Amenities/ Facilities at Fatik Sagar and Amar Sagar **(TTDCL/CHB/W 01)**	Y	Y	Satisfactory	• Storage of construction materials within demarcated • Executive Summary of IEE in local language to be displayed at site • Placement of local language – GRC GRM board
5	Development of Sonamukhi Eco Accommodation & Adventure Park and Rehabilitation of Unakoti Tourist Lodge at Kailashahar**(TTDCL/UKT/W04)**	Y	Y	Satisfactory	• Placing of emergency contact numbers and emergency evacuation plan at all work sites. • Executive Summary of IEE in local language to be displayed at site • Placement of local language – GRC GRM board

E. Grievance Redressal Mechanism

38. A common grievance redress mechanism (GRM) in placed to receive, evaluate, and facilitate the resolution of social, environmental or any other project related grievances. The GRM will aim to provide a time-bound and transparent mechanism to voice and resolve social and environmental concerns linked to the project. The public awareness campaign will generate awareness of the project and its grievance redress procedures. The campaign will ensure that the poor, vulnerable, and others know about the GRM.

39. The GRM provides an accessible, inclusive, gender-sensitive and culturally appropriate platform for receiving and facilitating resolution of affected persons' grievances related to the project. The multi-tier GRM for the project is outlined below, each tier having time-bound schedules and with responsible persons identified to facilitate and address grievances at each stage. ULB-wide public awareness campaigns will ensure that awareness of grievance redress procedures is generated through the campaign. The project coordinator (urban and tourism),

supported by independent consultants (social and environment), is responsible for timely grievance redress on environmental and social safeguards issues.

40. Besides the project's grievance redress mechanism, the state also has a centralized public grievance redress monitoring system (CPGRMS) where the general public can file grievances through a dedicated web portal (grievance.tripura.gov.in). The general administrative (administrative reforms) department is the nodal agency, and an officer of the rank of joint secretary is responsible for its functioning. Each department of the state has nominated officers to receive the grievances. TUDA and DOT have nominated officers of the rank of Deputy Director as nodal officers, whose names and contact details are provided on its website. The affected persons can also lodge their complaints through this online portal.

41. **Information to the stakeholders about the GRM:** The stakeholders, including affected persons, will be informed about the GRM under the project and of the state through public consultations, disclosures, and distribution of public information booklets (PIB). In the case of illiterate DPs, the information will be provided verbally during meetings with them.

42. **Who can complain:** A complaint can be registered by stakeholders directly or indirectly affected by the project. A representative can register a complaint on behalf of the affected person or group, provided that the affected person or group identifies the representative and submits evidence of the authority to act on their behalf.

43. **What the Grievance/Complain should contain:** Any comments, complaints, queries and suggestions pertaining to safeguard compliance - environment, involuntary resettlement, and indigenous people, design-related issues, compensation, service delivery or any other issues or concerns related to the project. The complaint must contain the complainant's name, date, address/contact details, location of the problem area, and the problem. A sample grievance registration form is provided in **Appendix 13.**

44. **Where and How to file a Complaint:** The complaint can be filed both online and offline. The people can submit their complaints at the contractor's site office or at PIU/PMU office. In addition, they can also have grievances/suggestions/queries submitted through phone or e-mails or the state grievance portal.

45. **Grievance/Problem Redress through Participatory Process:** The PMU and PIUs must make efforts to resolve the problems and conflicts amicably through a participatory process with the community and the ULBs. In case of immediate and urgent grievances in the complainant's perception, the contractor and supervision personnel from the PIU will provide the most easily accessible or first level of contact to resolve grievances quickly. Contact phone numbers and names of the concerned staff and contractors will be posted and displayed at all construction sites.

46. **Grievance Redressal Committee:** The GOT establish the grievance redressal committees at the site, PIU and PMU levels to provide a mechanism to mediate conflict and disputes concerning compensation payments and cut down on lengthy litigation. The following will be the composition of the GRCs.

- **Site Level GRC (1st level):** The site-level GRC comprise a Junior Engineer. PIU, Assistant safeguard officer (in-charge) in PIU, a field engineer/ construction supervisor of PMSC, site Engineer of the contractor and a representative from the affected community

(as and when required). The effort will be made to resolve issues on-site, in consultation with each other and within five days of receipt of a complaint/grievance.

- **PIU Level GRC (2nd level):** All grievances that cannot be redressed within five days at the field level will be brought to the notice of the PIU-level GRC established in each PIU. The PIU-level within two days of receipt of the complaint to determine the merit of each grievance brought to the committee. GRC at the PIU level be headed by Project Manager (executive/ assistant engineer)- focal for safeguards, Junior engineer of PIU, and also include the construction management expert of PMSC, the Project Manager of the concerned contractor as members. The PIU-level GRC will also co-opt the representative of line departments (PWD, ULB) and a representative from the affected community, as and when required, including indigenous peoples' communities or CSO working with indigenous peoples, as and when required.[16]
- **PMU / State Level GRC (3rd level):** In case the grievances are not addressed at the PIU level within 10 days of receipt, the same shall be brought to the notice of the PMU-level GRC. The PMU-level GRC comprise of Project Director as chairman, a Co-Project Director as co-chairman, Additional project Director (Urban & Tourism) as a member, Project Coordinator (Urban and Tourism) as member secretary, environment safeguard officer of PMU and social, gender officer of PMU, women representatives from the line departments (ULB, PWD, Environment and Forests) and representative of affected community (including indigenous people community).[17] The committee can co-opt any other member required for the resolution of the grievances. The GRC at the PMU level will resolve the grievance within 15 days of receiving the complaint.

47. The complainant will be informed in writing about the resolution of their complaint or the decision of the grievance redress committees. The complainants are free to approach the court of law at any time of their own will at any stage, and accessing the country's legal system can run parallel to accessing the GRM and is not dependent on the negative outcome of the GRM.

48. **Figure 11** below shows Grievance Redressal Mechanism for the project**.**

[16] In case of any components with impact on indigenous people, GRC will have representative from affected indigenous people community or NGO working with indigenous people groups.
[17] In case of any components with impact on indigenous people GRC will have representative from affected indigenous people community, including at least one female indigenous person or NGO working with indigenous people groups.

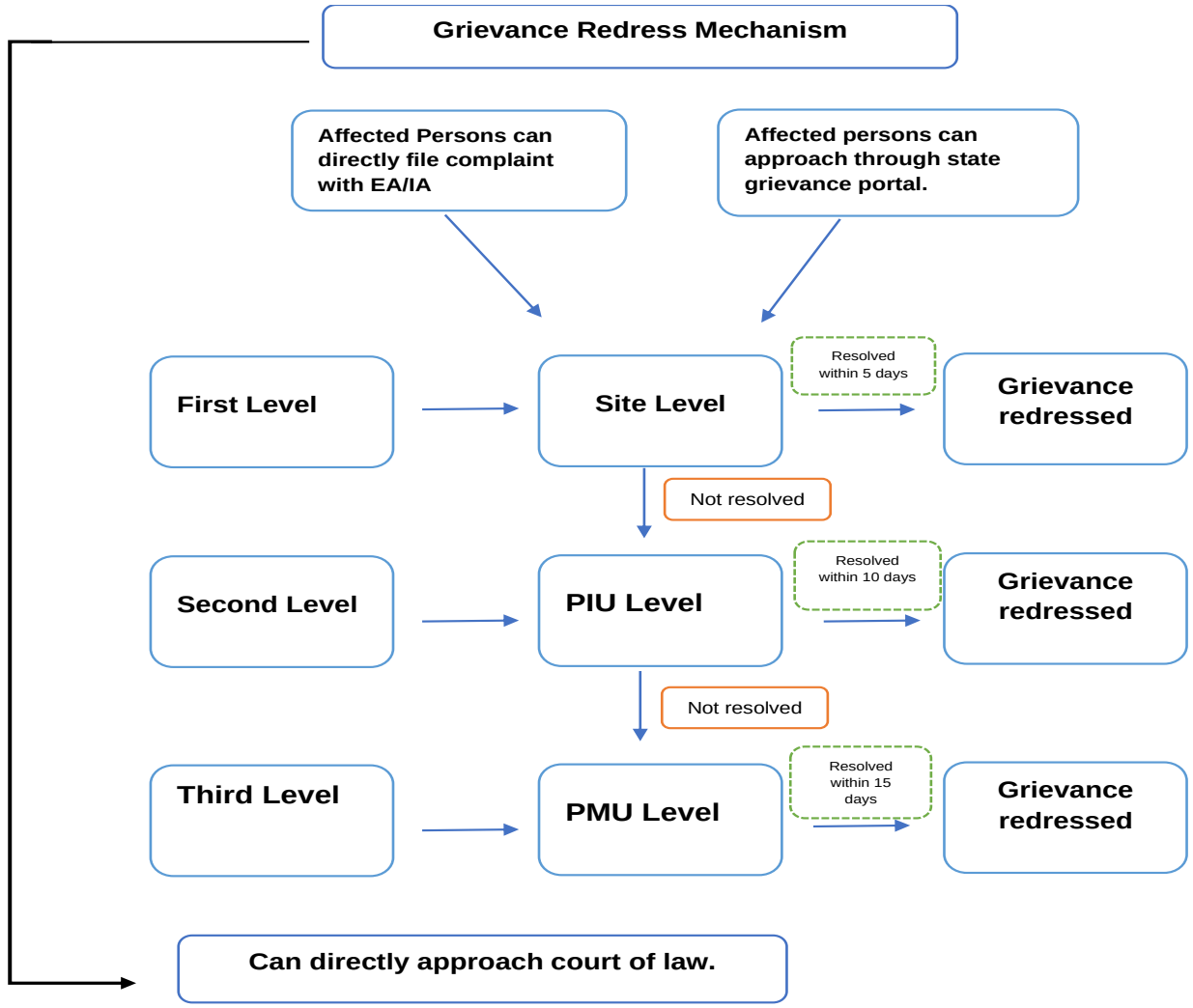

Figure 11: Grievance Redressal Mechanism (GRM)

49. **Documentation.** PMU, with the support of PIUs, is responsible for the timely registration of grievances, related disclosure, and communication with the aggrieved party. PMU will also ensure that all the details from submission to resolution are well recorded and documented.

50. **Record-keeping.** PIUs will keep records of grievances received, including contact details of the complainant, the date the complaint was received, the nature of the grievance, agreed corrective actions and the date these were affected and the final outcome. The number of grievances recorded and resolved and the outcomes will be displayed/disclosed in the PMU and PIUs and reported in monitoring reports submitted to ADB on a semi-annual basis.

51. **Periodic review and documentation of lessons learned.** The Project Coordinator, PMU, will periodically review the functioning of the GRM in each town and record information on the effectiveness of the mechanism, especially on the project's ability to prevent and address grievances.

52. **Costs.** All costs related to the resolution of grievances (meetings, consultations, communication, and reporting/ information dissemination as well as costs incurred by affected persons to attend GRC meetings, if any) will be borne by PMU.

53. GRM- GRC notification, showing the responsibility is attached in **Appendix 13.** GRC committee members name have been selected for all the PIU GRM – GRC board has been placed at fixed work site. Registers open at site and grievance/ suggestion box arrange at fixed location of tourism package. Sample photo enclosed in **Appendix 1.**

54. There is no as such environment related grievances for the packages under implementation for the current monitoring period (October, 2024 to March, 2025).

F. Training, Workshop, Public consultation, and Focus group discussion

55. As per approved IEEs, consultations and disclosure are the continuous process throughout project implementation involving public consultations and focus group discussions. Informal and organized consultations were carried out with local people, pedestrian at construction site (**Appendix 14**.) Field level public consultation is carried out by the contractor on regular basis.

56. The indicative schedule for consultations and disclosure is presented in **Table 13.**

Table 13: Indicative Schedule for Consultations

Type of Consultation/ Disclosure	Target Date	Location	Target Participants	Responsible Person and Source of Funds
Local level consultation	Weekly – ongoing	At all construction locations	General public, shopkeepers, pedestrian population	Construction supervisor, Environment & safety officer of contractor Project budget – continuous process
Consultation – safety issues, implementation of EMP	During April to September 2025 and continued	At project office and site office	Supervisor Engineer, PIU Engineer, all safety and environment staff of contractors	Construction Manager, Environment specialist of PMSC

57. There are series of informal discussions by the engineers, safeguard staff of PMSC with PIU mainly on understanding current situation and optimum design to be adopted in order to attain the safeguard objectives.

58. Environment safeguard orientation for contractor has been arranged from PMU- PMSC. **Appendix 11** shows such training document/ MOM. Review of safeguard application has been conducted on monthly basis for understanding gaps and further requirement for compliance as per loan condition.

59. Training has been conducted by contractor on Environment, Health and Safety issues, including awareness programme for HIV/ AIDS, First Aid for All training documents and records are available with contractors and sample is attached in **Appendix 12.**

V. APPROACH AND METHODOLOGY FOR ENVIRONMENTAL MONITORING OF THE PROJECT

60. For effective monitoring, selected environmental parameters have been identified as indicators which will be qualitatively and quantitatively measured and compared over a period of time in order to assess/ensure the compliance of Environment Management Plan (EMP). The environmental performance indicators are physical, biological and social characteristics identified as most important in affecting the environment at critical locations all along the subproject locations. The parameters identified as performance indicators are:

- Air, noise and water quality
- Compliance to EMP
- Compliance to local/state/national environmental regulations

61. Field level monitoring comprises monitoring of environmental parameters like air quality, noise level and water quality. These are monitored for understanding base line conditions at project locations and during construction monitoring for understanding level of impact on environment (in respect to those parameters) from project activity during implementation of the project. Monitoring is conducted as per monitoring plan of approved IEE.

62. Field level checking of EMP application also carried out during pre-construction, construction phases for understanding degree of impacts and mitigation measures. Corrective action plan and target date for effective implementation of mitigation measures planned accordingly. Site Environment Management Plan is the base document for implementation of EMP and application of corrective measures. Field level monitoring is ongoing, which is continuous process and reported through monthly checklist.

63. Monitoring of applicability of local/state/national environmental regulations in respect to project activity and locations is also required for smooth progress of the project. For that site verification and desk review is essential. Starting from pre-construction to construction – operation phases screening of work areas, work components under the national, state and local statutory rules and regulations is necessary.

VI. MONITORING OF ENVIRONMENTAL IMPACTS ON PROJECT SURROUNDINGS

A. Brief discussion on the basis for monitoring

64. In addition to desk reviews and site inspections, monitoring of selected environmental parameters has been conducted during the reporting period. The frequencies of the environmental monitoring activities are commensurate to the type and significance of the impacts. Monitoring of ambient air quality, noise level, and water quality has been conducted to establish baseline of environmental qualities in the project area

I. Urban sector packages

65. In accordance with the IEE & SEMP, the contractors are required to undertake environmental monitoring as per below table.

Table 14A: Environmental Monitoring Requirement – Cluster IA, IIA and IIIA water supply packages

Monitoring Field	Monitoring Location	Monitoring Parameters	Frequency
Package- TUDA/WS-01/P-01Cluster IA water supply			
Ambient air quality	**Khowai** 3 locations, (OHSR and pipe line) critical areas **Mohanpur** 3 locations, (OHSR and pipe line) critical areas **Ranirbazar** 3 locations, (OHSR and pipe line) critical areas	PM_{10}, $PM_{2.5}$ NO_2, SO_2, CO	(i) Once before start of construction. (ii) Yearly 3 times (for seasons: pre-monsoon, post-monsoon and winter) during construction (2-years period considered)
Ambient noise level	**Khowai** 3 locations, (OHSR and pipe line) critical areas **Mohanpur** 3 locations, (OHSR and pipe line) critical areas **Ranirbazar** 3 locations, (OHSR and pipe line) critical areas	Day time and nighttime noise levels	(i) Once before start of construction. (ii) Yearly 3 times (for seasons: pre-monsoon, post-monsoon and winter) during construction (2-years period considered)
Surface water quality	One no. for each town if required (suspected water body contamination)	pH, TDS, Oil and grease, Cl, F, NO_3, TC, FC, Hardness, Turbidity BOD, COD, DO, Total Alkalinity	(i) Once before start of construction (ii) Yearly 3 times (for seasons: pre-monsoon, post-monsoon and winter) during construction (2-years period considered)
Package- TUDA/WS-02/P-02Cluster IIA water supply			
Ambient air quality	**Udaipur** 3 locations, (WTP, OHSR and pipe line) critical areas (ASI monuments) **Amarpur** 2 locations along pipeline (covering sensitive area) **Bishramganj**	PM_{10}, $PM_{2.5}$ NO_2, SO_2, CO	(i) Once before start of construction. (ii) Yearly 3 times (for seasons: pre-monsoon, post-monsoon and winter) during construction (2.5-years period considered)

Monitoring Field	Monitoring Location	Monitoring Parameters	Frequency
	3 locations, (OHSR and pipe line) **Melaghar** 3 locations, (OHSR- and pipe line), one point close to Rudrasagar lake / Raj Ghat **Belonia** 3 locations, (OHSR, DTW and pipe line)		
Ambient noise level	**Udaipur** 3 locations, (WTP, OHSR and pipe line) critical areas) (ASI monuments) **Amarpur** 2 locations along pipeline (covering sensitive area) **Bishramganj** 3 locations, (OHSR and pipe line) **Melaghar** 3 locations, (OHSR- and pipe line) one point close to Rudrasagar lake / Raj Ghat **Belonia** 3 locations, (OHSR, DTW and pipe line)	Day time and nighttime noise levels	(i) Once before start of construction. (ii) Yearly 3 times (for seasons: pre-monsoon, post-monsoon, and winter) during construction (2.5-years period considered)
Surface water quality	**Udaipur** One location (River intake point) 1 – if required (suspected river contamination) Melaghar, Amarpur, Bishramganj and Belonia 1 – if required (suspected surface water river contamination)	pH, TDS, Oil and grease, Cl, F, NO_3, TC, FC, Hardness, Turbidity BOD, COD, DO, Total Alkalinity	(i) Once before start of construction (ii) Yearly 3 times (for seasons: pre-monsoon, post-monsoon and winter) during construction (2.5-years period considered)
Package- TUDA/WS-03/P-03- Cluster IIIA water supply			
Ambient air quality	**Kailashahar** 4 locations, (WTP- 1, OHSRs- 2, pipe line-1) **Kumarghat** 4 locations, (WTP- 1, OHSR- 1, pipe line-2) **Dharamanagar** 4 locations, (WTP- 1, OHSRs- 2, pipeline-1) **Ambassa** 4 locations, (OHSR-1 and DTW – 1, pipe line-2)	PM_{10}, $PM_{2.5}$ NO_2, SO_2, CO	(i) Once before start of construction. (ii) Yearly 3 times (for seasons: pre-monsoon, post-monsoon and winter) during construction (2.5-years period considered)
Ambient noise level	**Kailashahar** 4 locations, (WTP- 1, OHSRs- 2, pipe line-1) **Kumarghat** 4 locations, (WTP- 1, OHSR- 1, pipe line-2) **Dharamanagar**	Day time and nighttime noise levels	(i) Once before start of construction. (ii) Yearly 3 times (for seasons: pre-monsoon, post-monsoon and winter) during construction (2.5-years period considered)

Monitoring Field	Monitoring Location	Monitoring Parameters	Frequency
	4 locations, (WTP- 1, OHSRs- 2, pipeline-1) **Ambassa** 4 locations, (OHSR-1 and DTW – 1, pipe line-2)		
Surface water quality	Kailashahar, Kumarghat, and Dharamanagar One location (River intake point) 1 – if required (suspected river contamination) Ambassa 1 – if required (suspected river contamination)	pH, TDS, Oil and grease, Cl, F, NO_3, TC, FC, Hardness, Turbidity BOD, COD, DO, Total Alkalinity	(i) Once before start of construction (ii) Yearly 3 times (for seasons: pre-monsoon, post-monsoon and winter) during construction (2.5-years period considered)

II. Tourism sector packages

66. In accordance with the IEE & SEMP, the contractors are required to undertake environmental monitoring as per below table.

Table 14B: Environmental Monitoring Requirement – Chabimura tourism package

Monitoring Field	Monitoring Location	Monitoring Parameters	Frequency
Ambient air quality	Near project locations (Chabimura, Fatik Sagar and Amarsagar)	PM_{10}, $PM_{2.5}$ NO_2, SO_2, CO	Thrice in a year (except monsoon) One pre construction and two years of Construction phase
Ambient noise level	Near project locations (Chabimura, Fatik Sagar and Amarsagar)	Leq dB (A) (Day and Night) Average and Peak values	Thrice in a year (except monsoon) One pre construction and two years of Construction phase
Surface water quality	Ground Water near Chabimura, Fatiksagar and Amarsagar project locations Surface water sample-nearby project location Surface water samples from Gomati River and both the lakes Fatiksagar and Amarsagar	Ground water (GW) parameter as per IS: 10500 (2012) and surface water (SW) parameters as per CPCB guidelines	GW - Thrice in a year (except monsoon) One pre construction and two years of Construction phase SW-Thrice in a year (except monsoon) One pre construction and two years of Construction phase

Table 14C: Environmental Monitoring Requirement – Sonamukhi tourism package

Monitoring Field	Monitoring Location	Monitoring Parameters	Frequency
Ambient air quality	Near project locations (Sonamukhi eco-accommodation area, eco-adventure area and Unakoti lodge)	PM_{10}, $PM_{2.5}$ NO_2, SO_2, CO	Thrice in a year (except monsoon) One pre construction and two years of Construction phase
Ambient noise level	Near project locations (Sonamukhi eco-accommodation area,	Leq dB (A) (Day and Night) Average and Peak values	Thrice in a year (except monsoon) One pre construction and two years of Construction phase

Monitoring Field	Monitoring Location	Monitoring Parameters	Frequency
	eco-adventure area and Unakoti lodge)		
Water Quality (Surface and Ground water)	Ground Water at Sonamukhi and Kailashahar Surface water sample-nearby project location Surface water samples from Nageshwari Chhara and the Kathal Tank	Ground water parameter as per IS: 10500 (2012) and surface water parameters as per CPCB guidelines	GW - Thrice in a year (except monsoon) One pre construction and two years of Construction phase SW-Thrice in a year (except monsoon) One pre construction and two years of Construction phase

B. Type and location of Environmental Parameters Monitored

67. As detailed in above tables, for all the projects, air and noise monitoring conducted for yearly 3 times except monsoon while surface and ground water quality monitoring also to be conducted, yearly 3 times (except monsoon).

68. **Monitoring Locations of Urban sector Packages**. Monitoring locations are shown with Co-ordinate in Table below and in Figures followed.

Table 15: Ambient Air quality, Noise level and surface water quality Monitoring Locations: Cluster IIIA Water Supply – Baseline/ Pre-construction March 2025

Town	Monitoring Location	Co-ordinates
Package - TUDA/WS-03/P-03 Cluster IIIA water supply		
Monitoring Phase: Pre-construction (Baseline)-March-25		
Kumarghat	250 KL OHSR, 2.3 MLD WTP & 4 MLD intake well at AWC Moti Colony, Kumarghat	24°9'36.95"N 92°1'41.87"E
	Pipeline-1 at Sukanta Pally, Kumarghat	23°36'27.2"N 91°20'45.3"E
	Pipeline-2 at Townhall, Kumarghat	24°9’52.76”N, 92°2’37.52”E
	Manu River Kumarghat (surface water)	24°9’33.37”N, 92°1’41.79”E
Kailashahar	2.45 MLD WTP, Kailashahar	24°18’34.78”N, 92°0’12.44”E
	250 KL OHSR Kailashahar	24°19’46.69”N, 92°0’21.65”E
	Kailasahar Municipal Council Pipeline	24°19’9.08”N, 91°59’54.81”E
	300 KL OHSR, Near Kalipur JB School	24°19’17.47”N, 92°0’32.40”E
	Manu River Kailashahar (surface water)	24°14’40.57”N, 91°59’59.02”E
Dharmanagar	250KL OHSR, Dharmanagar circuit house	24°22’29.29”N, 92°9’22.24”E
	10.8 MLD WTP, 14MLD Intake well Near college Road Dharmanagar	24°22’50.88”N, 92°10’42.91”E
	350 KL OHSR, Dharmanagar ISBT	24°22’25.95”N, 92°10’11.59”E
	Pipeline, Dharmanagar Municipal council	24°22’37.29”N, 92°9’57.25”E
	Kakri River Dharmanagar (surface water)	24°22’48.01”N, 92°10’41.92”E
Ambassa	600 KL OHSR, Magazine Para, Ambassa Town	23°55’26.31”N, 91°52’29.65”E
	10000 GPH Capacity DTW Dolubari	23°55’16.82”N, 91°50’0.73”E
	Pipeline-1, Dolubari, Ambassa	23°55’3.61”N, 91°50’20.48”E
	Pipeline-2, Ambassa Municipal Council	23°55’23.30”N, 91°51’19.87”E

All monitoring locations – for both air quality and noise level monitoring. Surface water monitoring site mentioned in the bracket.

Figure 12A: Air, Noise and surface water monitoring sites at Kumarghat (Cluster IIIA town)

Figure 12B: Air, Noise and surface water monitoring sites at Kailashahar (Cluster IIIA town)

Figure 12C: Air, Noise and surface water monitoring sites at Dharmanagar(Cluster IIIA town)

Figure 12D: Air, Noise and surface water monitoring sites at Ambassa (Cluster IIIA town)

Table 16: Ambient Air quality, Noise level and surface water quality Monitoring Locations: Urban sector packages (Cluster IA and Cluster IIA Water Supply) – During construction and base line (for pipeline) March 2025

Town	Monitoring Location	Co-ordinates
Package- TUDA/WS-01/P-01Cluster IA water supply		
Monitoring Phase: Construction & Base line-March 2025		
Ranirbazar	350 KL OHSR and pipeline laying* near Nalgaria	23°49'28.58"N, 91°22'51.744"E
	800 KL OHSR at Krishna talli, ward no. 11	23°49'55.656"N, 91°22'36.684"E
Mohanpur	850 KL OHSR at old MMC ward no.15	23°58'9.792"N, 91°22'4.05"E

Town	Monitoring Location	Co-ordinates
	750 KL OHSR and pipeline laying* at Tulabagan	23°56'38.826"N, 91°22'2.814"E
Khowai	400 KL OHSR near WTP Campus ward no. 12	24°4'1.458"N, 91°36'59.52"E
Package - TUDA/WS-02/P-02 Cluster IIA water supply		
Monitoring Phase: Construction-March 2025		
Belonia	400 KL Overhead Reservoir, OHSR near Abul Kalam Community Hall**	23°15'15.534"N, 91°27'38.022"E
	300 KL OHSR near Satmura SB School**	23°14'50.598"N, 91°28'37.8"E
Udaipur	Over Head reservoir (900 KL) at Netaji Nagar **	23°32'30.623"N, 91°29'10.37"E
	Over Head reservoir (750 KL) near Rajasri Town Hall**	23°31'39.672"N, 91°29'43.698"E
Bishramganj	Over Head reservoir (250 KL) at Chesrimai (RSV Anganwadi)	23°37'23.352"N, 91°19'8.73"E
	Over Head reservoir (300 KL) at Moter Stand old DM Office	23°36'27.672"N, 91°20'45.132"E
Melaghar	Over Head reservoir (450 KL) at Radhamadhabpur JB School	23°30'36.516"N, 91°19'58.638"E
Amarpur	Shankar Pally ward no. 11 - Pipeline laying area	23°30'27.96"N, 91°39'13.452"E

All monitoring locations – for both air quality and noise level monitoring. Surface water monitoring site mentioned in the bracket.

*Pipeline laying just started nearby the locations, hence environmental monitoring was conducted at the same location for both OHSR and pipeline (baseline monitoring only for pipeline).

** Monitoring at changed locations

Figure 12E: Air and Noise monitoring sites at Ranirbazar (Cluster IA town)

Figure 12F: Air and Noise monitoring sites at Mohanpur (Cluster IA town)

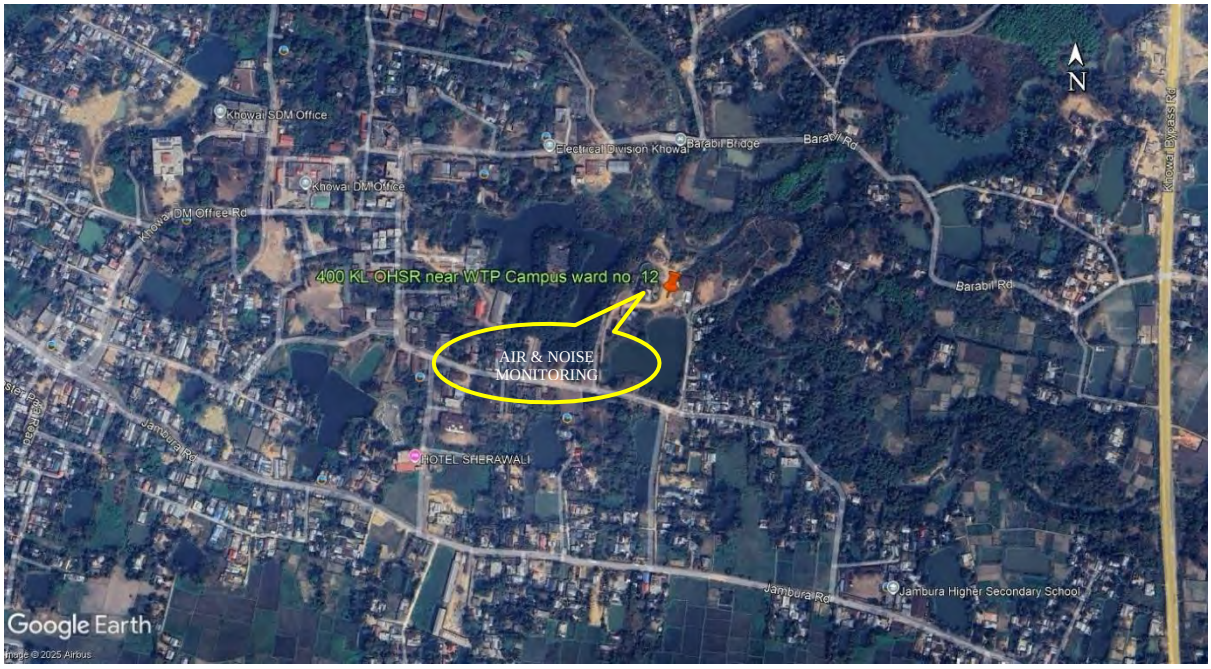

Figure 12G: Air and Noise monitoring sites at Khowai (Cluster IA town)