






Government of the People's Republic of Bangladesh

Bangladesh Inland Water Transport Authority (BIWTA)

The World Bank

MONTHLY PROGRESS REPORT

JANUARY 2024

Consultancy Services for Supervision and Monitoring of Performance-Based Dredging Contracts with Maintenance Dredging and Installation and Maintenance of Navigational Aids along the Navigational Routes under the Contract

Bangladesh Regional Waterway Transport Project-1
BRWTP-S1A

Jurutera Perunding Zaaba SDN.BHD, Malaysia (JPZ)

Demas Dredging Consultants BV, the Netherlands (DEMAS)

JPZ Consulting Ltd., Bangladesh (JCL)

EXECUTIVE SUMMARY

Background

The Bangladesh Regional Waterway Transport Project 1 (Chittagong-Dhaka-Ashuganj Corridor) is the 'Project' of the Government of Bangladesh (GoB) to develop Inland Water Transport (IWT) sector and related infrastructure between Dhaka-Chittagong and Dhaka-Ashuganj River corridors and linked corridors. The Project has three major components. Component 1 includes dredging and maintenance of the river corridors and ferry routes within the Project area through a performance-based contract. JPZ-DEMAS-JCL, the consulting firm herein referred to as S1A has started the supervision and monitoring work under this component in December 2022. The project is financed by the World Bank (WB) and implemented by Bangladesh Inland Water Transport Authority (BIWTA), under the Ministry of Shipping (MoS).

The works package on dredging shall operate for 66 (Sixty-six) months on the river routes 3, 4, 5, 6, 7 & 8, 9, 10 and 11 by Contractor GULF-COBLA KARNAFULY JV herein referred to as Lot-2, and 12, 13 & 13a, 15 & 16, 17 and 21 by Contractor DHARTI-BANGA JV herein referred to as Lot-3; under Bangladesh Regional Waterway Transport Project -1 (BRWTP-1), Contract Number BRWTP W1A-02 and 03 respectively.

Progress of the Contractors during the Reporting Period

In January 2024, Lot-2 contractor dredged 596 m along Route 9 (Class III, length 80km, Titas River) and 633 m on Route 7 & 8 (Class III, Length 30 km, Upper Meghna River). From the beginning, they have cumulatively dredged 4.94 km on Route 9 from March 2023 to January 2024. Moreover, they have mobilized one dredger on Route 7 & 8 and dredged 938 m till 31 January, 2024. The main challenge is failing to provide continuous operation of dredgers due to frequent machinery breakdown and lower draft on the river. Besides, the Lot-2 contractor has done environmental quality control surveys on route 7 & 8 and 9.

The Lot-3 contractor carried out 525 m of emergency dredging on Route 21 and 494 m of dredging on Route 16 in this reporting period. Besides, they have done Hydrographic Baseline Survey on Route 13 and 16. Moreover, they did the maintenance surveys and environmental quality control surveys on Route 16, Route 17 and 21.

The Consultants activities during the Reporting Period

Throughout this month, the field team diligently visited both Lots sites on a daily basis. Thus far, they have selected a total of 65 dykes across the two lots. Consultations with Upazila representatives and landowners were conducted as necessary. At the central level, seven meetings took place this month involving representatives from the World Bank, PIU, BIWTA, and contractors. These meetings focused on reviewing the progress of dredging work and addressing environmental and social concerns.

Samples were collected to assess ambient air quality, surface water quality, ambient and underwater noise, riverbed sediment, and dredged material from the dredging sites along the various Routes and analyzed. The results indicate that the chemical concentrations/values of the parameters were within the ECR (2023) Rules. However, the presence of heavy metals in the riverbed sediment, and dredged material are worrisome as there are no sources in the vicinity. The sources of some of the contaminants, like the heavy metals need to be identified and mitigation measures adopted to keep the aquatic environment habitable for the biodiversity as well as for human health.

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Abbreviation

AILA	Association of International Lighthouse Authorities
ASCII	American Standard Code for Information Interchange
BIWTA	Bangladesh Inland Water Transportation Authority
BM	Bench Mark
BRWTP	Bangladesh Regional Waterway Transport Project I
BWDB	Bangladesh Water Development Board
CD	Chart Datum
CEAP	Contractor's Environmental Action Plan
CSD	Cutter Suction Dredger
EIA	Environmental Impact Assessment
EMP	Environment Management Plan
ESHS	Environment, Social, Health and Safety
ESMP	Environment and Social Management Plan
GBV	Gender-Based Violence
GIS	Geographic Information System
GPS	Global Positioning System
GRC	Grievance Redress Committee
GRM	Grievance Redressal Mechanism
HSE	Health and Safety Expert
IALA	International Association of Marine Aids and Lighthouse Authorities
IBC	Idle Berthing Centre
ID	Identity
IHO	International Hydrographic Organisation
IWT	Inland Water Transport
JPZ	Jurutera Perunding Zaaba
JV	Joint Venture
LAD	Least Available Depth
LLW	Lowest Low Water
MOEF	Ministry of Environment, Forest and Climate Change.
MSL	Mean Sea Level
NID	National Identity
OPBC	Output and Performance-Based Contract
PC Poles	Pre-Stressed Concrete Poles
PIU	Project Implementation Unit
RAP	Resettlement Action Plan
RCC	Reinforced Cement Concrete
RTK-GPS	Real-Time Kinematic- Global Positioning System
SOB	Survey of Bangladesh
TBM	Temporary Bench Mark
UTM	Universal Transverse Mercator
VSS	Vessel Storm Shelter
WB	World Bank
WGS	World Geodetic System

CHAPTER 01:
PROJECT DESCRIPTION IN A BRIEF

Project Name	:	Consultancy Services for Supervision and Monitoring of Performance-Based Dredging Contracts with Maintenance Dredging and Installation and Maintenance of Navigational Aids along the Navigational Routes under the Contract
Source of Funding	:	The World Bank
Contract No.	:	BRWTP-S1A
Employer	:	Bangladesh Inland Water Transport Authority (BIWTA)
Consultant	:	JPZ-DEMAS-JCL JV
Date of signing the contract	:	21st December, 2022; Duration of 66 months
Date of Commencement	:	6th December, 2022; Duration of 66 months
Phases		Phase I: 18 Months, Phase II: 12 Months, Phase III: 36 Months
Total Routes	:	12
Route Nos. under dredging activities	:	Lot-2: 3 & 4, 5, 6, 7 & 8, 9, 10, 11 Lot-3: 12, 13 & 13a, 15 & 16, 17, 21

CHAPTER 02:
SALIENT FEATURES & MONTHLY PROGRESS

2.1 PROGRESS OF BRWTP-S1A:

2.1.1: Development and Maintenance Dredging Works:

Lot-2:

In January 2024, Lot-2 contractor dredged 480 m on Route 9 (Class III, length 80km, Titas River) and 633 m on Route 7 & 8 (Class III, Length 30 km, Upper Meghna River). From the month of March 2023 till January 2024, they have cumulatively dredged 4.95 km on Route 9. Moreover, they have mobilized one dredger on Route 7 & 8 and dredged 938 m since 13th December till January 2024. The progress on Route 9 is moving ahead. The main challenge is failing to provide continuous operation of dredgers due to frequent machinery breakdown and lower draft on the river. Besides, in this reporting month Lot-2 contractor has done environmental quality control surveys on route 7 & 8 and 9 at several sample points. On the month of January 2024, the S1A consultant and PIU have visited Route 9 and route 7 & 8 in order to expedite the dredging work, to speed up the dyke selection and dyke preparation process and to observe the environmental quality assessment method as well as to communicate with local people for monitoring social activities of the project area.

Lot-3:

During the month of January, 2024, the Lot-3 contractor carried out 494.63 m of emergency dredging on Route 21 and 525.65 m of dredging on Route 16. Besides, they have done Hydrographic Baseline Survey on Route 13 and 12. Moreover, they did the maintenance surveys and environmental quality control surveys on Route 16 and 21.

Update information on Navigational Aids in January 2023:

All weekly coordination meetings (every Monday) attended with BRWTP-S1A Chaired by Engr. Mohammad Ali Shams, Project Coordinator to discuss on the progress of various issues including Aids to Navigation with remedial measures to be taken.

Visited Pre-stressed Concrete Poles (PC poles) manufacturing yard for BRWTP-W1A-02 (Golf Kobla Karnafuly JV) with experienced/senior Civil Engineer from BRWTP-S1A consultant team. Checked the various components to be used for manufacturing of pre-stressed PC poles including material, equipment, measurements, process & the issues of environmental hazard if any. The contractor W1A Lot 02 was instructed to submit all required authentic certifications including sample cylinder test report prior to final casting. Cube test reports are to be submitted as well before commencement of casting of 5 ton sinker for buoys. In many occasions, discoursed with the end users of Navigational Aids (BIWTA-Conservancy & Pilotage Department) to share the know how in order to expedite the installation progress of Aids to Navigation along the navigable Inland Water way routes of both Lot 02 & Lot 03. Cooperation from the experts of end user found to be much appreciated.

Furthermore, several meetings attended between concern teams on installation of Aids to Navigation issue and to accelerate the progress/development of the project BRWPT- 1.

2.1.2: Environmental Quality Assessment:

The S1A team reviewed the environmental data of Route 9, 7 & 8 under Lot-2 and Route 15 & 16 and 21 under Lot-3, for the month of January, 2024 consisting of air, water, noise pollution levels, riverbed materials report, etc. In the month of January 2024, monthly monitoring was conducted at Bancharampur-Salimganj area of Route-9 as well as Khodadila of Narshingdi (Route-7&8). In this reporting period, dredging has been started in route 21 and 16. During this month, environmental quality assessments were conducted at four locations of route 16, 17 and 21. The map (Annex-V) shows the location of the dredger and the sampling points in this month for environmental quality assessments of Lot-2 and Lot-3.

State of environment along the various routes in January 2024

Air quality assessment for this project covers the prediction of resultant air quality levels based on the samples collected and analyzed. It does not include human health or ecological impact assessments, which themselves take input from the results of the sample values for each parameter. Dredging operations do not run on a consistent basis, but their operations change on an

hourly, daily, or monthly basis. Identifying the sources is important as there are generally numerous actual and potential sources of air contaminant emissions.

In the following graph (Fig.01), air quality parameters for the month of January 2024 are compared with the baseline data analyzed in December 2022. The total amount of dust in the air is known as Suspended Particulate Matter (SPM). The size fractions of dust particles can vary from very fine particles, less than 2.5 micrometres (µm) in aerodynamic diameter through to larger particles. Dust particles smaller than 10 µm in aerodynamic diameter are known as "PM10." The finer dusts (especially those smaller than 2.5 µm in aerodynamic diameter, termed "PM2.5") are associated with human health effects. All the parameter values for Route 16 and Route 21 under Lot 3 were assessed and found to be less than the baseline values and complied with the approved levels stated in the ECR (2023). Most importantly, the sampling sites for these two routes were not distantly apart and showed similar characteristics.

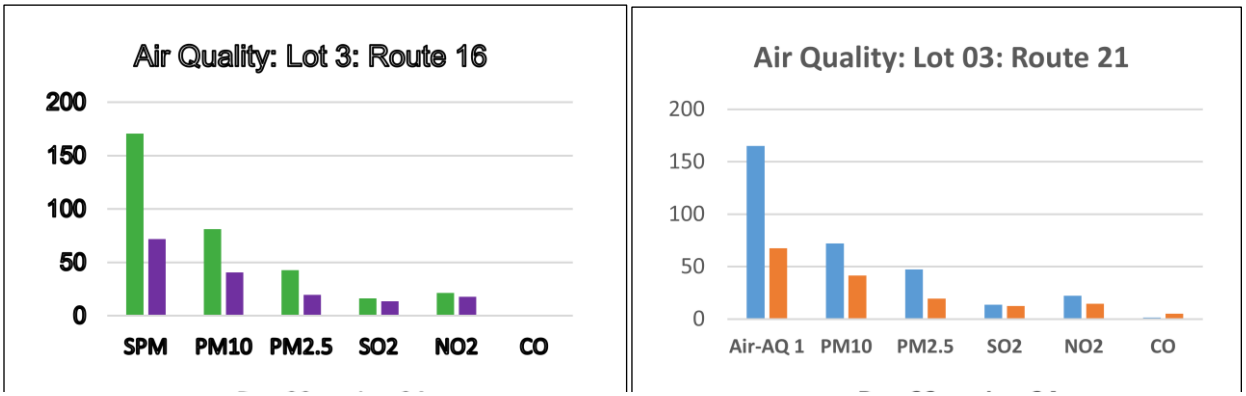


Figure 01: Air quality sample values compared with baseline (December 2022) and (January 2024) values for Route 16 and Route 21 under Lot 3.

Human activities have markedly changed the water quality of rivers in the past few decades. Concentrations of some water-quality constituents have increased while others have decreased. The concentrations of the nutrients, nitrogen and phosphorus in the river is significantly less in the samples collected from Routes 16 and 21, which is good as these nutrients contribute to algal blooms and impair drinking-water quality.

Sediment is one of the leading pollutants in rivers, degrading aquatic habitats and affecting water use for aquatic organisms and people. Many contaminants adhere, or sorb, to sediment, so that standard water-quality sampling and analysis is often unable to detect changes in their concentrations over time.

The dissolved solids concentration in water is the sum of all the substances, organic and inorganic, dissolved in water, usually referred to as "total dissolved solids", or TDS. Calcium, magnesium, sodium, potassium, bicarbonate, sulfate, chloride, nitrate, and silica typically make up most of the dissolved solids in water. Combinations of these ions—sodium and chloride, for example—form salts, and salinity is another term commonly used to describe the dissolved solids content of water. Total dissolved solids can be monitored by measuring electrical conductance. Specific conductance measures the ability of water to transmit an electrical current. That ability increases with the number of dissolved ions in the water. Elevated concentrations of dissolved solids in water distribution systems can contribute to corrosion and reduce crop yield because the dissolved salts make it more difficult for plants to extract water from the soil. Direct wastewater disposal, land use, erosion affect the concentrations of TDS in surface water. The values of the parameters analyzed for January 2024 samples for Routes 16 and 21 are below the baseline (Fig. 02) and comply with the ECR (2023) approved levels.

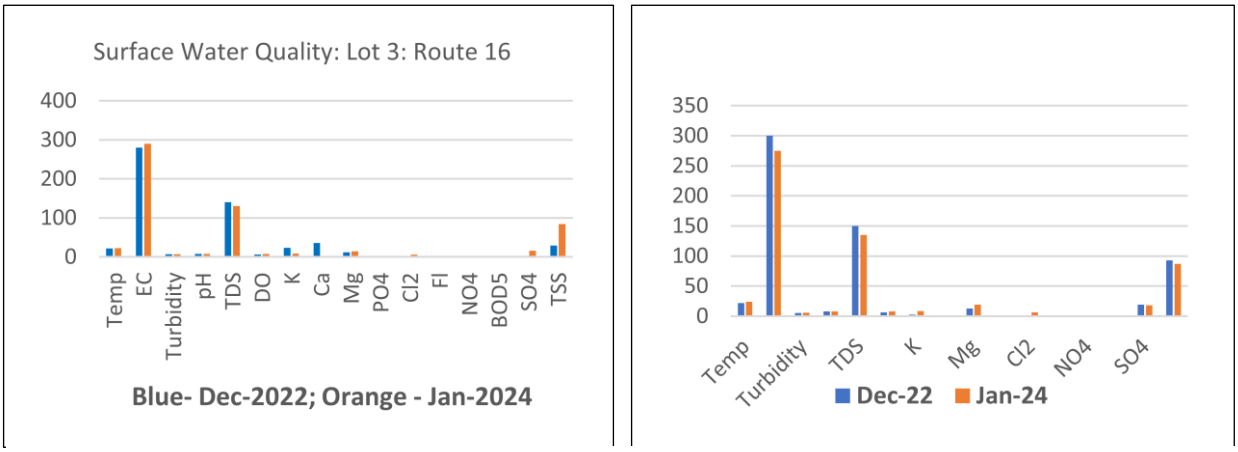


Figure 2: January 2024 surface water samples for Routes 16 and 21 are below the baseline and comply with the ECR (2023) approved levels.

Dredging has been used in many freshwater river basins and has achieved certain desired effects. Dredging disturbs water bodies and substrates and cause secondary pollution. It negatively affects the water environment system mainly from the following aspects. Dredging suddenly changes the hydrological conditions and many physical indicators of the water body, which cause variations in water physicochemical properties.

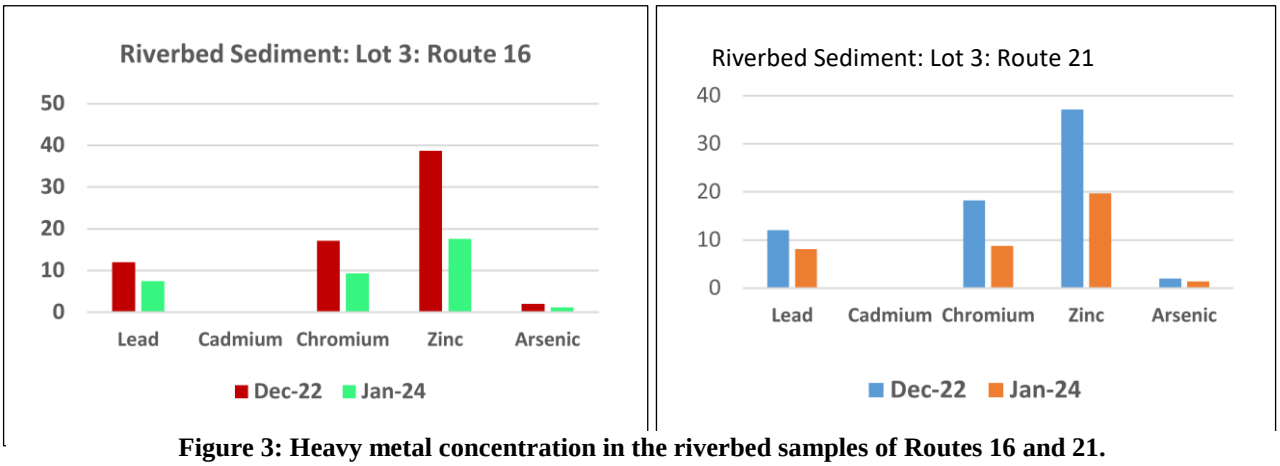


Figure 3: Heavy metal concentration in the riverbed samples of Routes 16 and 21.

For example, changes in pH, dissolved oxygen, redox potential, transparency, and temperature can lead to a series of aquatic biological responses. On the other hand, sediment re-suspension and deep-layer sediment exposure can affect the cycling of nutrients (e.g., nitrogen, phosphorus), the release and valence conversion of heavy metals, and the desorption and degradation of organic pollutants in the water (Fig. 03 above). This can further affect the community structure of aquatic organisms. The sources of this heavy metal deposition may be far away from the sampling site and the heavy metal contaminants may have adhered to the sediments and carried to settle at the sampling site.

There is a similarity between the heavy metal concentrations of Route 16 and Route 21, probably due to the proximity, and that Route 21 is downstream of Route 16 (Fig. 4). Sediments laden with heavy metals got carried downstream as well and got deposited along Route 21.

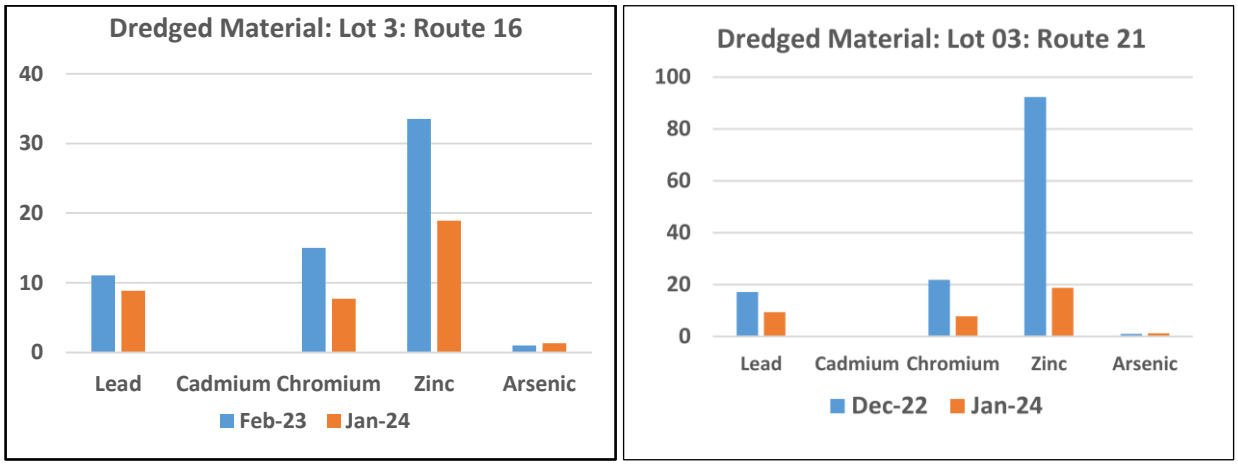


Fig 4. Heavy metal concentration in the dredged material of Routes 16 and 21.

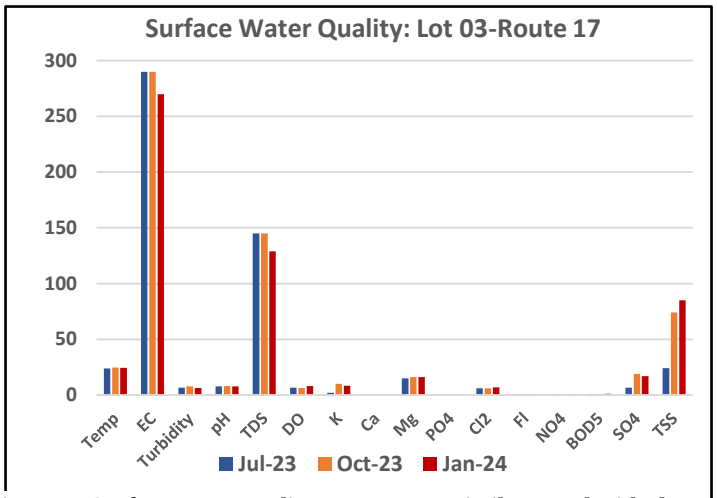
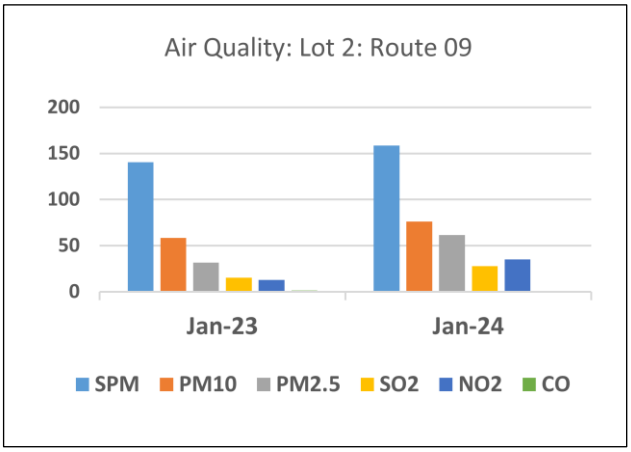


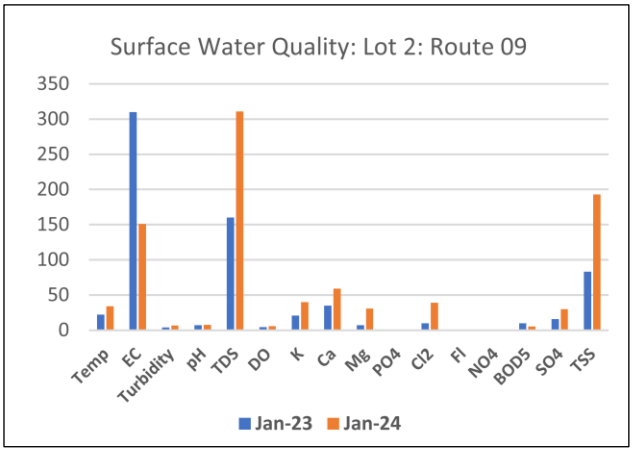
Figure 4: Surface water quality represents a similar trend with that of Routes 21 and 16

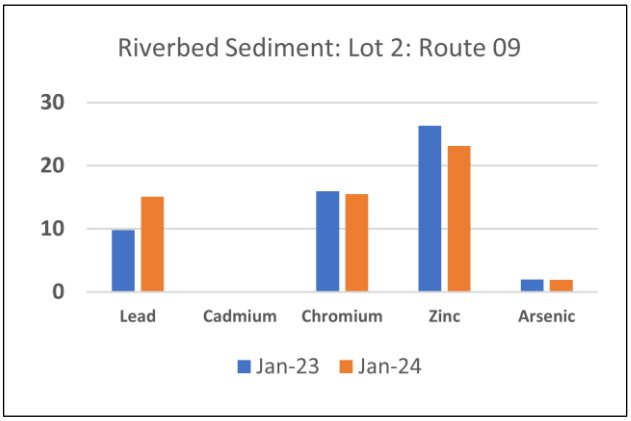
As observed from the Fig. 3 and Fig. 4 above the concentration of zinc is quite high but within the maximum 170 µg/litre approved level (USEPA). ECR (2023) does not mention any approved level for the heavy metals. At acutely toxic concentrations zinc probably kills fish by destroying gill tissues. At chronically toxic levels it may induce stress resulting in death. The action of zinc undoubtedly differs at different concentrations, it varies with life history, and it is non-specific. It impacts decline in biomass as well as growth of plants.

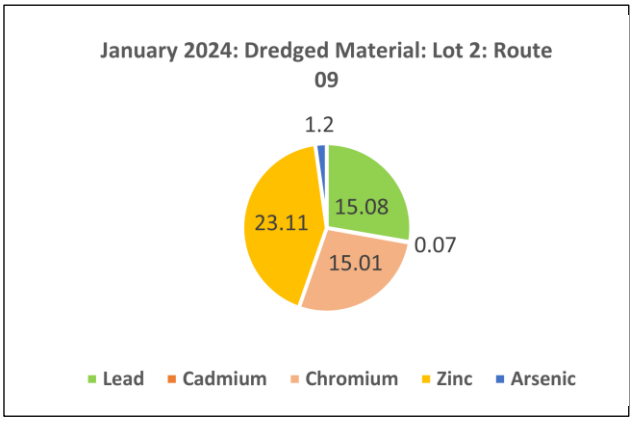
Route 17 (Lot 3) shares similar habitat types with that of Route 21. Surface water quality represents a similar trend with that of Routes 21 and 16 (Fig. 4).

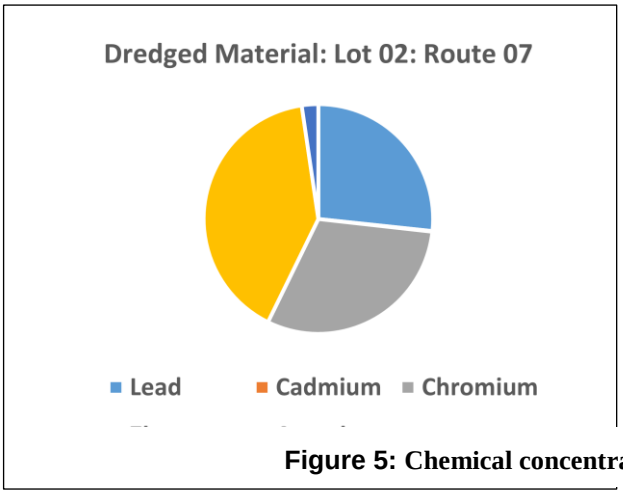
Route 09 under Lot 2 is a Meghna distributary - Bancharampur/ Homna loop – mainly used for seasonal navigation during monsoon season when the water level is high. During the remaining part of the year, it remains choked with water hyacinth and small country boats ply. On both banks of the distributary are human settlements, small business enterprises which are the major sources of pollution. Chemical concentrations for all the parameters of Routes 09, 07were within the ECR (2023) approved limits.











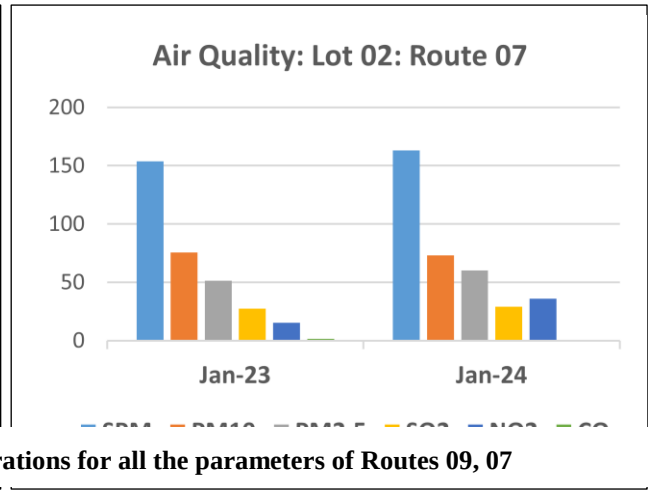


Figure 5: Chemical concentrations for all the parameters of Routes 09, 07

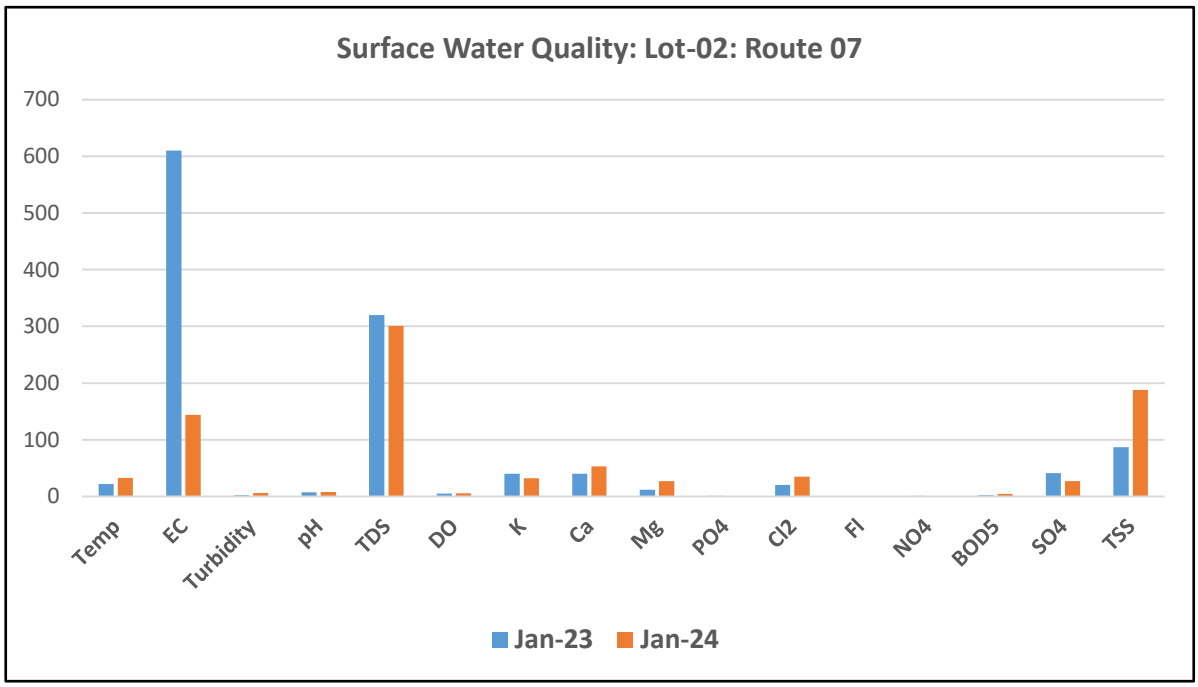


Figure 6: Surface water quality of Route 07

2.1.3: Social and Resettlement Aspects:

In this reporting period 65 disposal areas selected in Lot-2 and Lot-3 sites. The dyke selection process is underway, facilitated by local government representatives and communities. The project authority has supplied an application to the LG representative to inform them and seek support for smooth implementation (Attached as Annex: V).

2.1.3.1 Land Acquisition/Requisition/Good Faith Agreement/Charity:

Currently, 65 agreements are in progress. In most locations across both Lots, people have willingly consented to the use of their lands. Priority is being given to selecting *khas* lands as disposal areas. Information regarding river dredging, dredged material dumping, and agreements made in good faith is disseminated to the general population through various consultation meetings held in local bazaars, Union Councils, villages, and local schools. The progress of Dykes and Good Faith Agreements for Lot-2 and Lot-3 during this reporting period is detailed in Table 2 and Table 3 respectively.

2.1.3.2 Communication and Public Consultation:

The social and safeguard team have communicated with local people, local administration, local elites and conducted consultation meeting on a regular basis. The local administration is requested to assist in obtaining land for replacing the dredged soil.

2.1.3.3 Field Activities and Local Level Consutation of S1A Consultant in January 2024:

Table 1: Field Activity of BRWTP-S1A and local level consultation at Lot-2 Site

Serial No	Date	Activity	Route name & Route number	Remarks
1	01.1.2024	Inspection of dyke 33 and dredging alignment.	Tejkhali Union, Baherchor under Bancharampur Upozilla in Brahmanbaria district BRWTP-S1A Lot_2	
2	04.1.2024	Meeting for new disposal area.	Route 7 & 8 and Route 09 BRWTP-S1A Lot_2	
9	10.1.2024	Fixed the starting point of dredging area and check the centreline area.	Narshindi northern and southern approaches, route 7 and 8, Lot-02	
10	14.1.2024	Meeting for new disposal area.	Tejkhali Union, Baherchor under Bancharampur Upozilla in Brahmanbaria district BRWTP-S1A Lot_2	
11	19.1.2024	Fixed the starting point of dredging area and check the centreline area.	Titas River. BRWTP-S1A, Route-09 Lot_2	
12	23.1.2024	Sampling the Environmental data like as: 1. Inspection of air noise monitoring. 2. Observation of air noise level. 3. Under water noise monitoring. 4. Inspection of Dissolved oxygen, Water Ph, temperature etc 5. Sampling collection of water upstream and downstream of the dredger for dissolved oxygen inspection. 6. Soil sample collection from the disposal area and the river bed for lab test.	BRWTP-S1A, Route-7 & 8 Lot_2	
13	24.1.2024 and 25.1.2024	Sampling the Environmental data like as: 1. Inspection of air noise monitoring. 2. Observation of air noise level. 3. Under water noise monitoring. 4. Inspection of Dissolved oxygen, Water Ph, temperature etc 5. Sampling collection of water upstream and downstream of the dredger for dissolved oxygen inspection. 6. Soil sample collection from the disposal area and the river bed for lab test.	Titas River. BRWTP-S1A, Route-09 Lot_2	
14	26.1.2024	Meeting with local Chairman and other political persons to manage the conflicts.	BRWTP-S1A, Route-09 Lot_2	
15	27.1.2024	Meeting with local Chairman and other political	BRWTP-S1A, Route-09 Lot_2	

Serial No	Date	Activity	Route name & Route number	Remarks
		persons to manage the conflicts.		
16	28.1.2024	Inspection of dyke 28 and dredging alignment.	BRWTP-S1A, Route-09 Lot_2	
17	30.1.2024	Inspection of dyke 1 and dredging alignment.	BRWTP-S1A, Route-7&8 Lot_2	

Table 2: Field Visit and Field level consultation at Lot-3 Site in January 2024

Serial No.	Date	Activity	Route name & Route number	Remarks
1	05.01.2024	Dredging work supervision and water gauge check with water level scale data collection at Patarhat ghat.	Route 16 (Patarhat- Bheduria)	Survey work
2	10.01.2024	1. Engineering Survey at Patarhat launch ghat area. Barishal. 2. Dyke Construction supervision work. 3. Land papers collection and FGD with local people	Route 16 (Patarhat- Bheduria)	Site visit, survey work andsocial activity
3	14.01.2024	1. Discussion meeting for identifying channel and boundary marking electric cable with Banga contractor and Rural Electricity Board's representative at Patarhat launch ghat area. 2. Dyke Construction for increasing boundary height supervision work	Route 16 (Patarhat- Bheduria)	Site visit &Survey work
4	15.01.2024	Land papers collection and FGD with local people	Route 21 (Laharhat- Bheduria)	Social activity
5	21.01.2024	Discussion/Meeting and site visit with local People for finding new disposal area for dredging work at Alurbazzar launch ghat area	Route 13 (Alurbazar ghat- horina, chandpur)	Social activity
6	22.01.2024	1. Discussion/Meeting with local People collecting information for dyke no.1 and Dyke no.2 2. Finding new disposal area for dredging work at alurbazzar launch ghat area	Route 13 (Alurbazar ghat- horina, chandpur)	Social activity
7	24.01.2024	Implementation of Navigation aid for route 21, 16, 13 & 12 and supporting issues. A meeting on Naviagational aid issues held with join director department of naval operation and maintenance BIWTA south zone, Barishal together with Banga contractor and S1A consultant.	BIWTA Office, south zone, BarishalSador (Route 21, 16, 13 & 12)	Meeting or Discussion only
8	30.01.2024	1. About dredging implementation and disposal management of lot_3 issues a Meeting or submission of a letters to DC/UNO office Shariotpur sadar and Bhedorganj upazilla, Shariotpur. 2. Land papers collection and FGD with local people	Route 13 (Alurbazar ghat- horina, chandpur)	Social activity
9	31.01.2024	About dredging implementation and disposal management of lot_3 issues a Meeting or submission of a letters to DC/UNO office Chandpur sadar and Chandpur sadar upazilla, Chandpur. 2. Land papers collection and FGD with local people	Route 13 (Alurbazar ghat- horina, chandpur)	Social activity

2.1.6: Progress and Coordination Meetings of S1A Consultant:

Table 3: Interaction with Client/Contractors and other stakeholder (January, 2024)

SN	Date	Venue	Meeting Agenda	Participants
1	15.01.2024	S1A Consultant office Meeting Room, Motijheel, Dhaka	Coordination meeting on Dredging work with Lot2 and Lot3 contractor	S1A, Lot2 and Lot3 contractor's representatives.

SN	Date	Venue	Meeting Agenda	Participants
2	17.01. 2024	WB Office, Agargaon, Dhaka	Progress meeting on Dredging work with Lot2 and Lot3 contractor	WB, PIU, S1A, Lot2 and Lot3 contractor's representatives.
3	18.01. 2024	BIWTA Office, Motijheel, Dhaka.	Coordination meeting on Dredging work of Route 21.	BIWTA, PIU, S1A, and Lot3 contractors representatives.
4	21.01.2024	S1A Consultant office Meeting Room, Motijheel, Dhaka	Coordination meeting on social issues of Lot-2 contractor	S1A and Lot2 contractor's representatives.
5	22.01.2024	PIU Office, Motijheel, Dhaka	Coordination and Progress meeting on Dredging work	PIU, S1A, Lot2 and Lot3 contractors representatives.
6	24.01.2024	S1A Consultant office Meeting Room, Motijheel, Dhaka	Progress meeting on Environmental Issues Lot2 and Lot3 contractor	S1A, Lot2 and Lot3 contractor's representatives.
7	29.01. 2024	PIU Office, Motijheel, Dhaka	Coordination meeting on Dredging work of Route 09 and Route 07&08	S1A and Lot2 contractor's representatives.

2.1.4 Grievance Redressal Mechanism (GRM):

Two Grievance Redress Committees (GRC) have been developed in Lot-2 project area and another 02 (Two) GRCs have been developed in Lot-3 project area. Site/Local level GRC is structured for only land related issues and Contractor level GRC is structured for only Gender-Based Violence (GBV) issues in order to effectively resolve their feedback, concern, grievance, complaints and suggestions to the contractors by submitting their grievance through the proposed mechanism. Regular consultations are being conducted by the contractors with the supporting of S1A to inform local peoples about reporting mechanisms of grievance or suggestions if any. Grievance box have been installed in Lot-2 and Lot-3 at project office, dredging sites so that project affected people (PAPs), workers could drop their grievance letters. A signboard has also been set up near the project office providing a hotline number so that people could immediately contact if they have any grievance or suggestions. However, during the reporting period, no grievance has been recorded.

2.1.4.1 GBV/SEA/SH by workers and enforcement of the CoC

The local people have reported that the dredging workers/ laborers have no congenial or illicit sexual relationship with the local inhabitants. No data have found about the violence against women. Everybody reported that no sexual exploitation, sexual violence, or gender-based violence happened in work sites.

2.1.5 ESHS, Worker Employment and OHS Status:

The S1A team assessed the ESHS situation, Worker Employment, and Working condition, Occupational Health and Safety (OHS) status during the reporting period. Considering safety of workers and the public during the dredging process data has been collected through field observation. Collected data has been illustrated in the table below.

Table 4: ESHS Status at a Glance in December 2023

ESHS Issues	Parameters	Lot-2	Lot-3
Occupational Health and Safety (OHS)	Set up a first aid clinic room, equipped with a medical treatment registration card for each employee.	First aid facilities available at project sites.	First aid facilities available at project sites.
	Kitchen sanitation and cleanness and Food Quality	Satisfactory	Satisfactory
	Sewage and wastewater discharge and Solid Waste Management	Good arrangement kept in House boat	Good arrangement kept in House boat
	Gas cylinder storage and maintenance	Maintained	Maintained
	Fire Extinguisher	Available	Available
	Safe Drinking Water	Accessible. Freshwater is collecting daily from tube well of nearby villages	Accessible. Freshwater is collecting daily from tube well of nearby villages
	Toilet facilities	Good	Good
Workers Condition and Employment situation	Total Employment (person)	36	58
	Male Female Ratio	All employees are Male	No Female Employee
	Wage Status	Good arrangement kept in House boat	Good arrangement kept in House boat
	Force Labor/ Child Labor	Not Applicable in this month	Not Applicable in this month

Personal Protection Equipment (PPE) for all staff/workers working in the site.	Wearing of appropriate PPE like helmets, safety goggles, hand and arm protection, elbow protection gloves, safety shoes, life jacket/vests for protection while working in the river, use of hearing protection in case of loud noise for all officers/employees and laborers engaged in project work.	Safety helmet, Safety vest, safety shoes, Hand gloves etc. observed at site.	Available in site level but need awareness for using PPE
Traffic management	Provision for preventing accident including night time.	Contractors ESHS team visiting site and concerning all the Manpower	Contractors ESHS team visiting site and concerning all the Manpower
	Dredging sites clearly demarcated and protected to ensure community safety.	Demarcated and Processing for installation required Aids to navigation	Demarcated and Processing for installation required Aids to navigation

2.2 PROGRESS OF LOT-2 (GULF COBLA-KARNAFULY JV) CONTRACTOR:

2.2.1 Development and Maintenance Dredging Works:

In January 2024, Lot-2 contractor dredged 480 m on Route 9 (Class III, length 80km, Titas River) and 633 m on Route 7 & 8 (Class III, Length 30 km, Upper Meghna River). From the month of March 2023 till January 2024, they have cumulatively dredged 4.95 km on Route 9. Moreover, they have mobilized one dredger on Route 7 & 8 and dredged 938 m since 13th December till January 2024. The progress on Route 9 is moving ahead. The main challenge is failing to provide continuous operation of dredgers due to frequent machinery breakdown and lower draft on the river. Besides, in this reporting month Lot-2 contractor has done environmental quality control surveys on route 7 & 8 and 9 at several sample points. On the month of January 2024, the S1A consultant and PIU have visited Route 9 and route 7 & 8 in order to expedite the dredging work, to speed up the dyke selection and dyke preparation process and to observe the environmental quality assessment method as well as to communicate with local people for monitoring social activities of the project area.

Serial No.	Dredger Name	Time Period	Route No.	Place	Cutting Length	Cutting Volume
01.	Karnafuly -07	01 to 31 January	9	Bishnurampur	390 m	22,279.050 m^3
02.	Karnafuly -05	01 to 31 January	9	Barailchar	206 m	12,235.125 m^3
03.	Karnafuly -03	01 to 31 January	9	Barailchar	0.00 m	000.000 m^3
04.	Kafela -01	01 to 31 January	7&8	Bahar Nagar	633 m	27327.800 m^3

2.2.2 Environmental Quality Assessment of Lot-2 Site:

Table 5: Environmental Quality Assessment for January 2024 for Lot-2

Sl No.	Item	Parameters	Baseline Data of Route 09	Present Data of Route 09	Baseline Data of Route 07	Present Data of Route 07&08	S1A Remarks[1] January 2024
			January 2023	January 2024	January 2023	January 2024	
1	**Air Quality**	SPM	140.34	158.52	153.67	163.13	*WAL
		PM10	58.34	76.06	75.42	73.21	WAL
		PM2.5	31.43	61.47	51.33	60.03	WAL
		SO2	15.29	27.79	27.46	29.13	WAL
		NO2	12.75	34.97	15.21	36.03	WAL
		CO	1.3	0.7	1.4	0.7	WAL
2	**Noise Level**	LEQ day	61.6	59.4	69.8	60.5	WAL
		L_{max}	76	69.2	74.3	56.8	WAL
		L_{min}	42.8	45.8	40.4	47.1	WAL

[1] Detail remarks are in Chapter 2

3	**Surface Water Quality**	Temperature	22.1	34.1	22.1	32.7	WAL
		EC	170	151	610	144	WAL
		pH	7.20	7.76	7.25	7.64	WAL
		TDS	160	311	320	301	WAL
		DO	4.5	5.7	5.2	5.5	WAL
		BOD5	10	5.3	2.2	4.7	WAL
		TSS	83	193	87	188	WAL
4	**Riverbed Sediment**	Lead (Pb)	9.79	-	12.15	15.07	WAL
		Cadmium (Cd)	0.054	-	0.023	0.091	WAL
		Chromium (Cr)	15.94	-	17.37	15.47	WAL
		Zinc (Zn)	26.32	-	26.84	23.09	WAL
		Arsenic (As)	1.96	-	2.54	1.9	WAL
5	**Dredged Material**	Lead (Pb)	-	15.08	-	14.89	WAL
		Cadmium (Cd)	-	0.07	-	0.05	WAL
		Chromium (Cr)	-	15.01	-	17.01	WAL
		Zinc (Zn)	-	23.11	-	22.56	WAL
		Arsenic (As)	-	1.2	-	1.3	WAL

*WAL=Within Approved Limit; - = Sample was not collected; 1 Detail remarks are in Chapter 2

Table 6: Compliance Status for January 2024 for Lot-2

Visual Monitoring Compliance								
Potential Aspects	**Description**	**EMP Measures as Proposed in the EIA**	**Measures Already Implemented**	**Compliance Status**			**Remarks/ Recommendation**	**Recommended deadline for implementing the corrective measures**
				C	**P**	**N**		
Aquatic Flora and Fauna including Plankton, Benthos, fish, dolphin	Fishing activities were observed near Satpara and Khodadila village (approx 1.2km away from the dredging site) in Route 07 & 08. Moreover, fishing activities were not observed in Route 09 due to a significant decrease in water level. Total of twelve (12) species of fish and two (02) crustaceans were observed during the fisheries survey. From the observed species, Blue Perch (*Badis badis*) and Climbing Perch (*Anabas testudineus*) have been categorized as Near Threatened (NT) and rest of the species are categorized as Least Concern (LC) according to the IUCN Red list of Bangladesh (2015). The team did not observe any visible fish mortality within and around the dredging site location. The study team did not observe any Ganges River dolphins during the monthly visit in January 2024. No direct observation of freshwater turtles in the dredging site, dike area and adjacent local area. In addition, the study team did not observe any visible sign of turtle species.	Mitigation measures not required	No mitigation measure is required	-	P	-	Common fishes and crustaceans have been recorded; one endangered fish species recorded according to the IUCN Red List-Bangladesh, 2015. No dolphins in a year is quite amazing, maybe the timing of the observation or the amount of time, effort given to observe dolphins is inadequate	Advised regular monitoring of the habitat and intensive, repeated visits to establish an inventory of the floral and faunal species. Check the starting of the distributary and the opening of the distributary at the Meghna side for dolphins.
Sediment	Not measured	-	-	-	-	N	Contractors were	No action taken or data

Visual Monitoring Compliance								
Potential Aspects	**Description**	**EMP Measures as Proposed in the EIA**	**Measures Already Implemented**	**Compliance Status**			**Remarks/ Recommendation**	**Recommended deadline for implementing the corrective measures**
				C	**P**	**N**		
Dispersion							notified to measure sediment plume on 1st March 2023	provided by the contractors yet. Will be reminded again
River Bank Erosion	There were no issues regarding riverbank erosion or flooding.	Dredger stopped and relocated	Dredger stopped and relocated; some protection measures taken	C	-	-	Stop dredging an relocate	Recommended to report to the authority and stop dredging
Hydrological Conditions	Surveyed prior to dredging	x	x	x	P	x	x	x
Drainage Congestion	The dredging work in December 2023 is being carried out at Salimganj Ghat (Route-9) area. During site observation, the outline for water passing from the dredge material was found to be functional.			-	P	-	No reports of any drainage congestion. Regular monitoring	Keep clear all drainage channels. Regular monitoring
River Traffic/Transport	River traffic related sign boards have already been fixed to ensure a safe river traffic movement		No mitigation measure is required		P	-	Install river traffic and navigation-related sign boards	Advised to install aids to navigation as per the contract.
Accidental Spillage	No reports yet	Oil spill emergency plan. 24/7 ready plan	-		P	-	Log book to be maintained, in case of any incident, report to authority	No action taken yet
Sediment leakages from pipes and sediment disposal	No reports on any leakage	Maintain pipes	Pipes regularly checked	-	P	-	Stop dredging, fix the problem prior to resumption; report to authority	
Drinking water & sanitation	Safe drinking water is being supplied	Source to be mentioned	-	-	C	-	-	Source of drinking water to be mentioned
Safety of workers	Occupational safety		PPEs provided	-	-	P	Monitor use of PPEs	Regular monitor, Punitive measures for using PPEs
Waste management	Waste bins have been placed on the houseboat as well as in dredger and maintained		-	-	C	-	Colored collection bins for organic and non-organic solid wastes; no wastes in the river	Mention later stages, what happens after collection from waste bins
Cultural and archeological Sites	Preservation of such sites		x	-	x	x	Stop dredging, report to the authorities	-
Waste water			-	-	-	P	-	-

2.2.3 Social and Resettlement Aspects at Lot-2 Site:

Lot-02

At present **48** agreements are on process. Most of the places people have willingly agreed to allow using their lands. General people of the project sites can get the news of river dredging, dredged materials dumping and good faith agreements through several consultation meetings with local people in local Bazars, Union Council, villages and the local Schools. Progress of Dykes and Good Faith Agreements during this reporting period of Lot-02 is illustrated in the following tables:

Table 7: Good Faith Agreements (GFA), Lot 2, Route-09, (District: Brahmanbaria, Narsingdi and Cumilla).

Dyke No.	Route No	Land Owner		Land			Good Faith Agreement (GFA)
		Name and NID	Address	Description	Quantity (Decimal)	Quality of Land	
35	09	1.Abdul Awal NID: 3746376999 Cel: 01918578062 2.Abul Kalam NID: 8695983695 Mbl:01716592411 3.Abu Ishaq NID: 3712971580 Cel: 01719834733 4.Nasir Uddin NID: 5546582717	Village: Barail Union: Salimganj Upazila:Nabinagar District: Brahman Baria.	Mouza No. Barail Khatian No: 544/163/1560 Plot:1590/3267/3144/3298/3515/1802/1803 JL No:04	113	Agriculture land (One Crop)	Under Process
36	09	1.Abdul Mannan NID: 8248455720 Cel: 01738424077 2.Md. Jalal Mia NID: 4648465153 Cel: 01735786521 3. Tazul Islam NID: 9173793036 Cel: 01735786521	Village: Bahirchar Union: Tezkhali Upazila:Bancharampur District: Brahman Baria.	Mouza No. Bahirchar Khatian No: 549/600/996 Plot:1286/1351/1649/144/1563/127 JL No:41	140	Agriculture land (One Crop)	Under Process
37	09	Md. Swapon Mia NID: 8248495528 Cel: 01753828096	Village: Bahirchar Union: Tezkhali Upazila:Bancharampur, District: Brahman Baria.	Mouza No. Bahirchar Khatian No: 530/616/1464 Plot: 553/552/554 JL No:41	60	Agriculture land (One Crop)	Under Process
38	09	1.Md. Nazim NID: 2421516085 Mbl: 01733123741 2. Apel Mahmud NID: 4201400373 Mbl: 01958705623 3. Aynal Hoque NID: 5554116691 Mbl: 01815237615 4. Abu Musa NID: 6448345691 Mbl: 01712578351 5. Mst. Razia khatun NID: 2848376618 Mbl: 01735892711 6. Marfot Ali NID: 19761210488000018 Mbl: 01928705721 7. Abdul Mannan NID: 7812888217 Mbl: 01789256722	Village: Bahirchar Union: Tezkhali Upazila:Bancharampur District: Brahman Baria.	Mouza No. Bahirchar Khatian No: 751/439/120/889/743/70 Plot: 1282/1284/1285/1283/957/1641/2221/955/1502/985/984 JL No:41	173	Agriculture land (One Crop)	Under Process
39	09	Abu Sayem NID: 6890355958 Mbl: 01712853510	Village: Kadoir Union: Salimganj Upazila:Nabinagar District: Brahman Baria.	Mouza No. Kadoir Khatian No: 591 Plot: 421 JL No:63	50	Agriculture land (One Crop)	Under Process
40	09	Md. Jalu Mia NID: 4155505789 Mbl: 01712892751	Village: Bahirchar Union: Tezkhali Upazila:Bancharampur District: Brahman Baria.	Mouza No. Bahirchar Khatian No: 709 Plot: 440 JL No:41	100	Agriculture land (One Crop)	Under Process

Dyke No.	Route No	Land Owner		Land			Good Faith Agreement (GFA)
		Name and NID	Address	Description	Quantity (Decimal)	Quality of Land	
41	09	1.Md. Kamal Mia NID: 7347275260 Mbl: 01724532687 2.Abdul Karim NID: 2397556354 Mbl: 01716161185	Village: Kadoir Union: Tezkhali Upazila:Bancharampur District: Brahman Baria.	Mouza No. Bahirchar Khatian No: 706 Plot: 486/350/352 JL No:10	111	Agriculture land (One Crop)	Under Process
42	09	1.Mst. Jahanara NID: 1210488096760 Mbl: 01986218781	Village: Nilokhi Union: Salimganj Upazila:Nabinagar District: Brahman Baria	Mouza No. Nilokhi Khatian No: 262 Plot: 1129/1 JL No:05	31	Agriculture land (One Crop)	Under Process
43	09	1.Shakel Ahmed NID: 2. Sazzad Ahmed NID: Mbl: 3. Md. Alomgir NID: 2397009727 4. Rezaul Karim NID: 6455341013 5. Ziaul Karim NID: 5983496109 Mbl: 6. Fazlul Karim NID: 9132487969	Village: Badda Dakkhin Para Union: Salimganj Upazila:Nabinagar District: Brahman Baria.	Mouza No. Char Badda Khatian No: 1154/191/986 Plot: 486/350/352 JL No:14	197	Agriculture land (One Crop)	Under Process
44	09	1. Md. Alomgir NID: 2397009727 2. Rezaul Karim NID: 6455341013 3. Ziaul Karim NID: 5983496109 Mbl: 01713018040 4. Fazlul Karim NID: 9132487969	Village: Badda Dakkhin Para Union: Salimganj Upazila:Nabinagar District: Brahman Baria.	Mouza No. Jolli Khatian No: 175/1453 Plot: 122/233/325/ JL No:16	140	Fallow Pond	Under Process
45	09	1. Md. Alomgir NID: 2397009727	Village: Badda Dakkhin Para Union: Salimganj Upazila:Nabinagar District: Brahman Baria.	Mouza No. Jolli Khatian No: 1657 Plot: 291 JL No:16	22	Agriculture land (One Crop)	Under Process
46	09	Md. Jalu Mia NID: 4155505789 Mbl: 01712892751	Village: Bahirchar Union: Tezkhali Upazila:Bancharampur District: Brahman Baria.	Mouza No. Bahirchar Khatian No: 111 Plot: 222/223/577/496 JL No:41	97	Agriculture land (One Crop)	Under Process

2.3 PROGRESS OF LOT-3, (DHARTI-BANGA JV) CONTRACTOR:

2.3.1 Development and Maintenance Dredging Works:

Location/ Section	Dredger	Month	Cutting Length (m)	Dredged Volume (Cum)
Route 21, Laharhat-Bheduria	Banga Padma and Banga Jamuna	1-Jan-2024 to 31-Jan-2024	525.65	20,728
Route 16, Patarhat-Bheduria	Banga Sitalakhya	1-Jan-2024 to 31-Jan-2024	494.63	58,288.67

2.3.2 Environmental Quality Assessment of Lot-3 Site:

Table 8: Environmental Quality Assessment for January 2024 for Lot-3

Sl No.	Item	Parameters	Baseline Data of Route 16	Route 16 January 2024	Baseline Data of Route 17	Route 17 January 2024	Baseline Data of Route 21	Route 21 January 2024	S1A Remarks[2] January 2024
1	Air Quality	SPM	170.65	71.78	136.76	58.77	165.12	67.43	*WAL
		PM10	81.24	40.54	59.71	32.38	72.15	41.56	WAL
		PM2.5	42.85	19.77	28.13	18.21	47.28	19.60	WAL
		SO2	16.44	13.67	11.73	11.97	13.69	12.33	WAL
		NO2	21.40	17.88	17.83	15.53	22.18	14.67	WAL
		CO	1.1	0.8	0.9	0.6	1.5	0.5	WAL
2	Noise Level	LEQ day	53.5	67.72	68.8	52.90	68.6	58.33	WAL
		L_{max}	75.7	81.23	54.1	69.46	84.4	79.41	WAL
		L_{min}	32.8	41.34	31.6	39.43	37.3	37.64	WAL
3	Surface Water Quality	Temperature	22.0	22.6	22.1	24.5	22.1	23.9	WAL
		EC	280	290	290	270	300	275	WAL
		pH	7.89	7.45	7.67	7.72	7.91	7.84	WAL
		TDS	150	130	140	129	140	135	WAL
		DO	6.2	7.4	6.1	7.9	6.3	8.1	WAL
		BOD5	0.4	1.2	0.7	1.1	0.6	1.3	WAL
		TSS	93	84	17	85	29	87	WAL
4	Riverbed Sediment	Lead (Pb)	-	7.46	-	8.23	-	8.11	WAL
		Cadmium (Cd)	-	0.051	-	0.054	-	0.052	WAL
		Chromium (Cr)	-	9.28	-	8.17	-	8.78	WAL
		Zinc (Zn)	-	17.59	-	18.35	-	19.66	WAL
		Arsenic (As)	-	1.20	-	1.44	-	1.37	WAL

*WAL=Within Approved Limit; 1 Detail remarks are in Chapter 2; Note: No Baseline data on Riverbed sediment

Table 9: Compliance Status for January 2024 for Lot-3

Visual Monitoring Compliance								
Potential Aspects	Description	EMP Measures as Proposed in the EIA	Measures Already Implemented	Compliance Status			Remarks/ Recommendation	Recommended deadline for implementing the corrective measures
				C	P	N		
Aquatic Flora and Fauna including Plankton, Benthos, fish, dolphin	Fishing activities with small mechanized and non-mechanized boats were observed in Route 16 and 21. Ten (10) species of fish and two (02) crustacean species (prawn) were reported to be caught in the river. Commercially important species, Ilish (*Tenualosa ilisha*) was found in this route. There was no visible fish mortality within and around the dredging site location. During the monthly visit of January 2024, the study team did not observe any Ganges	Mitigation measures not required	No mitigation measure is required in the reporting period	-	P	-	Common fishes and crustaceans have been recorded. Mention when and how much time was spent to observe fish, turtles and dolphins.	Advised to give more effort, and to spend more time for regular monitoring of the habitat and biodiversity.

[2] Detal remarks are in Chapter 2

Visual Monitoring Compliance								
Potential Aspects	**Description**	**EMP Measures as Proposed in the EIA**	**Measures Already Implemented**	**Compliance Status**			**Remarks/ Recommendation**	**Recommended deadline for implementing the corrective measures**
				C	**P**	**N**		
	River Dolphin near the dredging site, dredger placement area and adjacent areas Dolphins were not observed near Patarhat launch Terminal, Bheduria Ferry Ghat and adjacent areas due to the frequent movement of launches and speed boats in the area. No direct observation of freshwater turtles at the dredging site, dike area and adjacent local area							
Sediment Dispersion	Not measured	x	No mitigation measure is required in the reporting period	-	-	N	Contractors were notified to measure sediment plume on 1st March 2023. Reminders were given verbally and by email	No action taken or data provided by the contractors yet. Will be reminded again
Riverbank Erosion	Usually mentioned in the report if any erosion is observed	Dredger stopped and relocated	Dredger stopped and relocated; some protection measures taken	x	x	x	Regular monitoring	x
Hydrological Conditions	Surveyed prior to dredging	x	x	x	x	x	x	x
Drainage Congestion	No action taken or data provided by the contractors yet. Will be reminded again				P	-	No reports of any drainage congestion	To be monitored regularly, early mornings and evenings
River Traffic/Transport	No complaints received	Appropriate aids to navigation to be installed	Procurement of aids to navigation under process		P	-	River traffic related sign boards observed	Appropriate aids to navigation to be installed soon, some work under progress
Accidental Spillage	No reports yet	Monitoring and preparedness to handle any accidental spillage	No spills from chemical storage -		P	-	Emergency oil spill management plan	Emergency Plan in place, to be updated if necessary
Sediment leakages from pipes and sediment disposal	No reports on ant leakage	Maintain pipes, regular checking	During this reporting month no leakage was found in the dredge pipe. Pipes regularly checked		P	-	No reports of leakage	Stop dredging, fix the problem prior to resumption; report to authority
Drinking water & sanitation	Safe drinking water is being supplied			-	C	-	-	Drinking water source to be mentioned
Safety of workers	Occupational safety		PPEs provided	-	-	P	Monitor use of PPEs	-
Waste management	Waste bins have been placed on the houseboat as well as in dredger and maintained		-	-	C	-	Colored collection bins for organic and non-organic solid wastes; no wastes in the river	Mention the end process…where does the waste go from the bins?
Cultural and	Preservation of such sites		x	-	x	x	Stop dredging,	-

Visual Monitoring Compliance								
Potential Aspects	**Description**	**EMP Measures as Proposed in the EIA**	**Measures Already Implemented**	**Compliance Status**			**Remarks/ Recommendation**	**Recommended deadline for implementing the corrective measures**
				C	**P**	**N**		
archeological Sites							report to the authorities	
Waste water	From houseboat, dykes, etc.	Treated, release after settling	Not described	-	-	N	To be treated before release	-

2.3.3 Social and Resettlement Aspects at Lot-3 Site:

Lot-03:

At present **17** agreements are on process. Most of the places people have willingly agreed to allow using their lands. General people of the project sites can get the news of river dredging, dredged materials dumping and Good Faith Agreements (GFA) through several consultation meetings with local people in local Bazars, Union Council, villages and the local Schools.

Table 10: Good Faith Agreements (GFA), Lot-03, Route-21, Route-16, Route-13 (District: Bhola, Barisal and Shoriotpur).

Dyke No.	Route No	Land Owner		Land			Good Faith Agreement (GFA)
		Name and NID	Address	Description	Quantity (Decimal)	Quality of Land	
12	21	Harun chairman NID: Under processing Mobile # 01712-404378	Village: Shreipur Union: Mehendiganj Upazila: Mehendiganj District: Barishal	-	73	Agriculture land (Two Crops)	Under Process
13	21	Harun chairman NID: Under processing Mobile # 01712-404378	Village: Shreipur Union: Mehendiganj Upazila: Mehendiganj District: Barishal	-	128	Agriculture land (Two Crops)	Under Process
14	21	Md. Mizanur Rahman Harun NID:6860475422 Mbl: 01712878285	Village: Shampur Union: Kalupur Upazila: Bhola Sadar District: Bhola.	Mouza No. Ghagoria Khatian No: JL No: 56*	1000	Agriculture land (Two Crops)	Under Process
01	13	1.Md. Habib Gazi NID:7759037661 2. Md Ali Hossain Bepari NID:8611428795793 3. Md Siddikur Rahman NID:2858955132	Village: Norshinghopur Union: Balarhat Upazila: Bhadorganj District: Shoriotpur	Mouza No. Norshinghopur Khatian No: 121 JL No: 88*	500	Fallow Pond	Under Process
01 (Old)	16	Md.Amir hossain Jomaddar NID: 8225574485 Mbl # 01718051191	Village: Sadequepur Union: Mehendiganj Upazila: Mehendiganj District: Barishal	-	488	Agriculture land (Two Crops)	Under Process
01 (New)	16	Md.Amir hossain Jomaddar NID: 8225574485 Mbl # 01718051191	Village: Sadequepur Union: Mehendiganj Upazila: Mehendiganj District: Barishal	-	435	Agriculture land (Two Crops)	Under Process
02	16	1.Adv. Md Khorshed NID: 7328539411 and 2.Adv.Md Jakir Hossain NID: 0616213038313 Mbl # 01770198608	Village: Char Mitua Union: Alimabad Upazila: Mehandiganj District: Barishal	-	286	Agriculture land (Two Crops)	Under Process

*Documents are yet to collect

CHAPTER 03:

ACHIEVEMENT OF LAST MONTH PLAN AND NEXT MONTH PLAN

3.1 ACHIEVEMENT OF LAST MONTH:

S1A

a) Submitted Daily Survey and Dredging Monitoring Sheet to PIU.
b) Submitted four weekly reports of survey and dredging progress of both Lot-2 and Lot-3 contractors to PIU.
c) Conducted Supervision and Monitoring of Dredging activities on Route 9, Route 7 & 8 of Lot-2, Route 16 and 21 of Lot-3 on daily basis and related ESHS and GRM activities of Lot-2 and Lot-3.
d) Resolving the exceeded BOQ volume issue of Lot-3 contractor.

Lot-2

a) Completed 4.35 km of dredging of 20 km on Route 9, which is 24.7% dredging progress on Route 9.
b) Completed 305 m of dredging of 2 km on Route 7 & 8, which is 16.17%
c) Related Environmental, Social and GRM Activities have been conducted.

Lot-3

a) Conducted Bathymetric Line Survey on all routes.
b) Completed 525.7 m of emergency dredging on Route 21
c) Completed 494.6 m of dredging on Route 16
d) Related Environmental, Social and GRM Activities have been conducted.

3.2 NEXT MONTH PLAN:

S1A

a) Reviewing the Volume data with the submitted data by the contractor.
b) Supervision and Monitoring of Surveying, dredging activities, ESHS and GRM activities of Lot-2 and Lot-3 as mentioned below.
c) Conducting Good Faith Agreement on Route 6, 9, 7 & 8 and 11 under Lot-2 and on Route 13, 16 and 21 under Lot-3.
d) Expediting navigational aid installation work plan from the Lot-2 and Lot-3 contractors.

Lot-2

a) Expediting dredging work on Route 6, 7 &8, 9 and 11 in order to meet 80% of development dredging by March 2024.
b) Dredging Route 6, 7 & 8, 9 and 11.
c) Constructing dyke as per the approved design by the S1A
d) Related Environmental, Social and GRM Activities

Lot-3

a) Dredging work on Route 21, 16 and 13
b) Related Environmental, Social and GRM Activities.
c) Constructing dyke as per the approved design by the S1A

CHAPTER 04:
CONCLUSION AND/OR RECOMMENDATIONS

The Lot-2 contractors dredging activities is falling far behind the schedule. Out of 6 routes they are working on Route 9 and 7 & 8. They have finished doing hydrographic and topographic survey. They have completed Baseline Hydrographic survey on all the routes. The Phase-I (First 18 months) will end on May 5, 2024. The Lot-2 contractor need to expedite their dredging work despite of the problem of narrow river and the dredger sometime cannot be moved by the effect of high tide and low tide, in order to meet the 1st Phase deadline.

Both the Lot-2 and Lot-3 contractors need to expedite the installation of navigational aids so that they complete the work by the end of Phase-I (May 5, 2024).

Lastly, the S1A consultant is working on justifying the classification of Route 21 as Class I, considering the dredging volume after each monsoon under development dredging in Phase 1 and reviewing the revised BOQ volume along with Lot-3 contractor.

LOT-2:

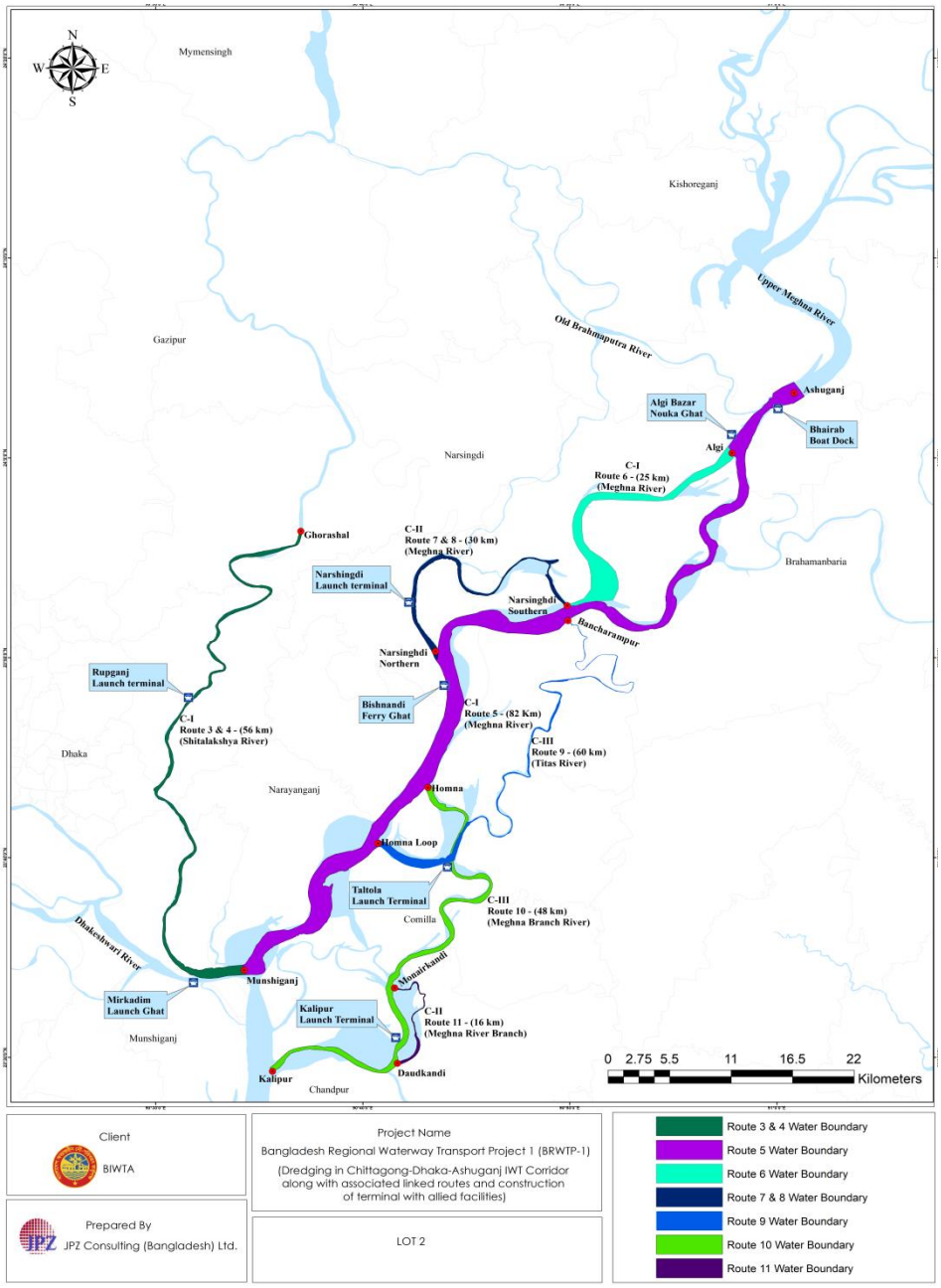


Figure 7: Water Boundary of All Routes under Lot-2

LOT-3:

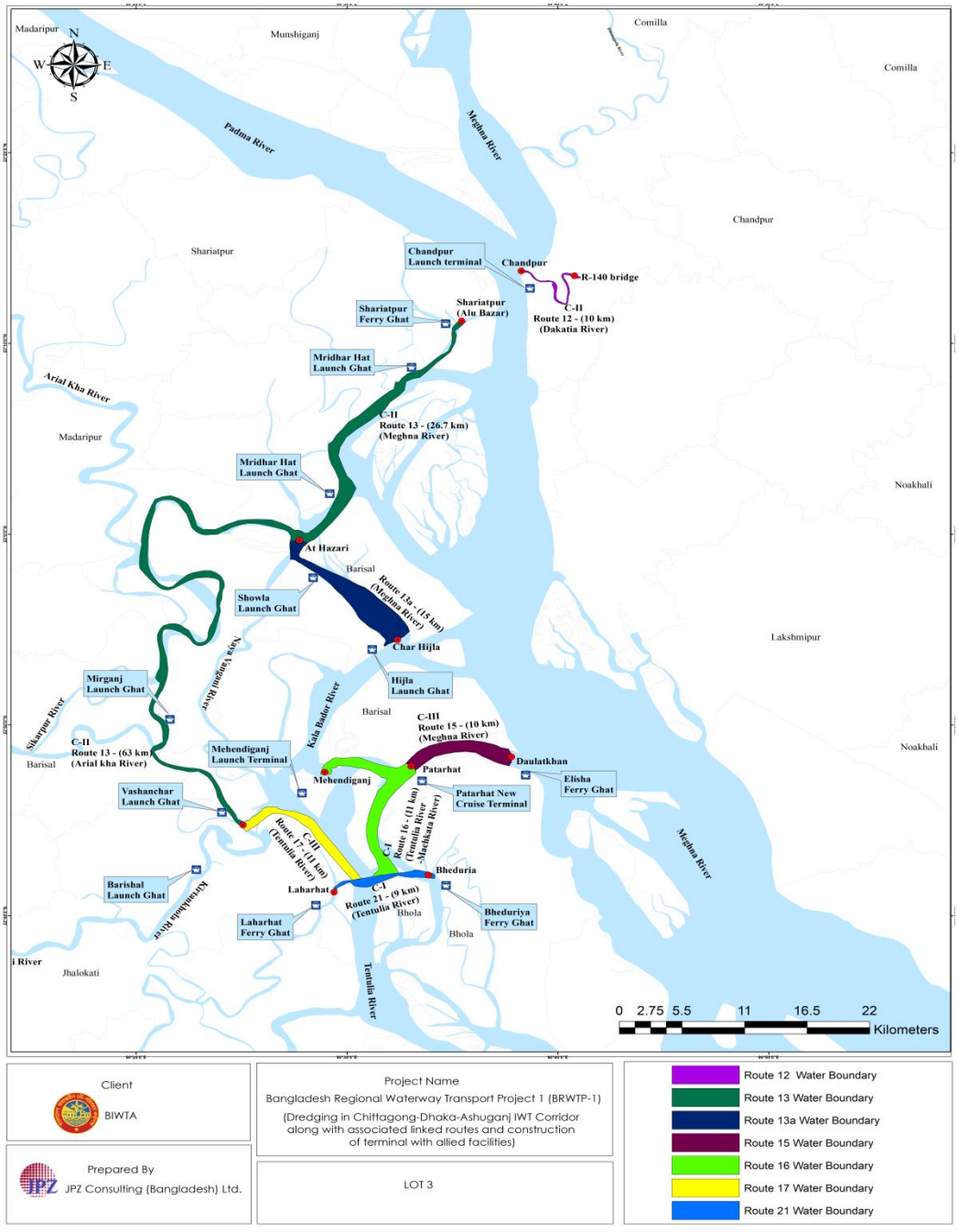


Figure 8: Water Boundary of All Routes under Lot-2

ANNEX -II: Photos: January Activities in Pictures

Figure 10: Photos of Dredger Placement, Meetings with Local Communities, LG representatives, PIU, WB and Dyke Preparation of Lot-2 &Lot-3 site

Figure 11: Photos of Sample Collection for environmental quality assessment in Lot-2 & Lot-3 Sites

Lot-3

Ref: ELRC/Air Quality/ AQMM2024-01

Project Name	:	BIWTP -1, LOT-3: OPBC Works of Development Dredging with maintenance and Aids to Navigation with installation along inland waterway Routes- 12,13,13a, 15 &16, 17 and 21
Monitoring Activity	:	Ambient Air Quality
Monitoring Date	:	23.01.2024 – 24.01.2024
Monitoring Location	:	Route 16; (AQ-1)- 22°47'55.58"N 90°31'36.70"E Route 16; (AQ-2)- 22°48'5.50"N 90°31'5.92"E Route 17; (AQ-3)- 22°42'15.44"N 90°29'41.98"E Route 21; (AQ-4)- 22°41'59.71"N 90°33'1.17"E

Description of Analysis:

Code	GPS Location	Ambient Air Pollutants' Concentration in µg/m³					CO mg/m3
		SPM	PM_{10}	$PM_{2.5}$	SO_2	NO_2	
AQ1	22°47'55.58"N 90°31'36.70"E	71.78	40.54	19.77	13.67	17.88	0.8
AQ2	22°48'5.50"N 90°31'5.92"E	66.59	39.50	17.35	10.15	13.88	0.5
AQ3	22°42'15.44"N 90°29'41.98"E	58.77	32.38	18.21	11.97	15.53	0.6
AQ4	22°41'59.71"N 90°33'1.17"E	67.43	41.56	19.60	12.33	14.67	0.5
Air Pollution (control) rules, 2022*		-	**150**	**65**	**80**	**80**	**5**
Method of Analysis Instrument Use: Haz-Scanner TM (HIM, 6000)		Particulates Sensor Light Scattering Nephelometer			High Sensitivity Electrochemical		

*Note: * Air Pollution (Control) Rules, 2022*
Legend: *PM_{10}-Particulate Matter of a diameter of 10 microns or less. $PM_{2.5}$-Particulate Matter of a diameter of 2.5 microns or less, SO_2 –Sulphur Dioxide; NO_2 –Nitrogen-Dioxide; CO –Carbon Monoxide*

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Figure 12: Air Quality, Lot-3

Ref: ELRC/Noise Level/ NLMM2024-01

Project Name	:	BIWTP -1, LOT-3: OPBC Works of Development Dredging with maintenance and Aids to Navigation with installation along inland waterway Routes- 12,13,13a, 15 &16, 17 and 21
Monitoring Activity	:	Noise Level
Location	:	**NL1** 22°47'56.05"N 90°31'35.14"E, **(Route-16)** **NL2** 22°48'6.76"N 90°31'2.97"E, **(Route-16)** **NL3** 22°42'10.13"N 90°29'42.62"E, **(Route-17)** **NL4** 22°42'0.09"N 90°32'55.80"E, **(Route-21)**
Monitoring Date	:	23.01.2024 – 24.01.2024

Ref: ELRC/ Underwater Noise Level/ UWNL2024-01

Project Name	:	BIWTP -1, LOT-3: OPBC Works of Development Dredging with maintenance and Aids to Navigation with installation along inland waterway Routes- 12,13,13a, 15 &16, 17 and 21
Monitoring Activity	:	Underwater Noise Level
Location	:	**UWNL1** 22°47'52.84"N 90°31'34.85"E, **Route-16** **UWNL2** 22°48'2.53"N 90°31'7.06"E, **Route-16** **UWNL3** 22°42'10.08"N 90°29'49.26"E, **Route-17** **UWNL4** 22°42'2.93"N 90°32'53.89"E, **Route-21**
Monitoring Date	:	23.01.2024 – 24.01.2024

Description of Analysis:

Code	Location	L_{Avg} [dB (A)]	*Standard [dB (A)]
UWNL1	Route 16	63.4	**No standard of International/ GoB**
UWNL2	Route 16	57.8	
UWNL3	Route 17	52.7	
UWNL4	Route 21	58.2	

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Figure 13: Noise Level, Lot-3

Figure 14: Under water Noise level, Lot-3

ELRC

Ref: ELRC/Surface Water Quality/ SWMM2024-01

Project Name	:	BIWTP -1, LOT-3: OPBC Works of Development Dredging with maintenance and Aids to Navigation with installation along inland waterway Routes- 12,13,13a, 15 &16, 17 and 21
Description of Sample	:	Surface Water
Location	:	Route-21
		SW1 - 22°47'42.42"N 90°32'5.20"E, Route 16
		SW2 - 22°48'3.06"N 90°30'51.91"E, Route 16
		SW3 - 22°42'29.72"N 90°29'40.86"E, Route 17
		SW4 - 22°42'4.03"N 90°33'5.94"E, Route 21
Sampling Date	:	23.01.2024 – 24.01.2024

Description of Analysis:

Parameters	Unit	Concentration Present (Route -16,17, & 21)				Bangladesh Standard
		SW1	SW2	SW3	SW4	
Temperature	°C	22.6	23.1	24.5	23.9	-
EC	µS/cm	290	285	270	275	-
Turbidity	NTU	6.8	6.9	6.3	5.9	-
pH	-	7.45	7.55	7.72	7.84	6 - 9
TDS	ppm	130	137	129	135	1000
DO	mg/L	7.4	7.5	7.9	8.1	5 or more
Potassium	mg/L	8.8	8.9	8.3	8.6	-
Calcium	mg/L	<0.01	<0.01	<0.01	<0.01	-
Magnesium	mg/L	14	18	16	19	-
Phosphate	mg/L	<0.01	<0.01	<0.01	<0.01	0.05
Chloride	mg/L	6.3	6.7	6.9	6.6	-
Fluoride	ppm	0.7	0.8	0.7	0.9	-
Nitrate	mg/L	0.9	0.6	0.6	0.8	7.0
BOD5 (at 20°C)	mg/L	1.2	1.4	1.1	1.3	6 or less
Sulfate	mg/L	16	17	17	18	-
TSS	mg/L	84	81	85	87	-

*Note: * Bangladesh Environment Conservation Rules-2023, Schedule 2(Ka) (Water Usable for Fisheries). DO: Dissolved Oxygen; BOD: Biological Oxygen Demand; EC: Electric Conductivity, TDS: Total Dissolved Solids; TSS: Total Suspended Solids*

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Figure 15: Surface water quality, Lot-3

ELRC

Ref: ELRC/ Riverbed sediment / SDMM2024-01

Project Name	:	BIWTP -1, LOT-3: OPBC Works of Development Dredging with maintenance and Aids to Navigation with installation along inland waterway Routes- 12,13,13a, 15 &16, 17 and 21
Description of Sample	:	Riverbed sediment – Lot 3
Sampling Date	:	23.01.2024 – 24.01.2024

Location Details:

Code	Route No.	GPS Location
SedQ1	Route 16	22°47'49.19"N 90°31'41.63"E
SedQ2	Route 16	22°48'6.07"N 90°30'57.87"E
SedQ3	Route 17	22°42'23.15"N 90°29'41.49"E
SedQ4	Route 21	22°42'2.39"N 90°33'2.56"E

Description of Analysis:

Parameter	Unit	Riverbed sediment – Lot 3				Methodology	Dutch Environmental standard (mg/kg)
		SedQ1	SedQ2	SedQ3	SedQ4		
Lead	mg/kg	7.46	7.49	8.23	8.11	ICPMS	**85**
Cadmium	mg/kg	0.051	0.050	0.054	0.052	ICPMS	**0.8**
Chromium	mg/kg	9.28	9.02	8.17	8.78	ICPMS	**100**
Zinc	mg/kg	17.59	17.06	18.35	19.66	ICPMS	**140**
Arsenic	mg/kg	1.20	1.54	1.44	1.37	ICPMS	**29**

Note: ICPMS - Inductively coupled plasma mass spectrometry

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Figure 16: River Material quality, Lot-3

ELRC

Ref: ELRC/ Dredge Material / SDMM2024-01

Project Name	:	BIWTP -1, LOT-3: OPBC Works of Development Dredging with maintenance and Aids to Navigation with installation along inland waterway Routes- 12,13,13a, 15 &16, 17 and 21
Description of Sample	:	Dredge Material – Lot 3
Sampling Date	:	23.01.2024 – 24.01.2024

Location Details:

Code	Route No.	GPS Location
DM12a	Route 16	22°47'57.64"N 90°31'37.67"E
DM12b	Route 16	22°47'56.31"N 90°31'40.24"E
DM13a	Route 17	22°41'34.96"N 90°32'59.37"E
DM13b	Route 21	22°41'34.13"N 90°33'0.79"E

Description of Analysis:

Parameter	Unit	Dredge Material Route 16 and 21				Methodology	Dutch Environmental standard (mg/kg)
		DM12a	DM12b	DM13a	DM13b		
Lead	mg/kg	8.86	8.11	7.19	9.45	ICPMS	**85**
Cadmium	mg/kg	0.059	0.056	0.051	0.055	ICPMS	**0.8**
Chromium	mg/kg	12.59	11.08	10.11	12.57	ICPMS	**100**
Zinc	mg/kg	20.17	19.44	17.61	22.20	ICPMS	**140**
Arsenic	mg/kg	1.95	1.71	1.52	1.74	ICPMS	**29**

Note: ICPMS - Inductively coupled plasma mass spectrometry

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Figure 17: Dredged Material Quality, Lot-3

Table 11: Checklist of Dredging Activity, Lot-3, January 2023

Checklist Items			Dredging Activity			Comments/Compliance
			Daily	Monthly	When and As Required	
1	Gauge reading & Water level (WL)		○	○	√	
2	Connectivity with BM & TBM		○	○	√	
3	Study Hydrographic Chart		○	○	√	
4	Fixing Cutting Depth respect to existing WL as per design depth		○	○	√	
5	Checking Dredging Alignment		○	○	√	
6	Checking Dredged Activities as below;					Dredged Activities for the month of January, 2024
	a	Dredging Hours	○	√	○	Total Dredging Hours 179.55 hrs
	b	Cutting Length	○	√	○	Total length 1020.65m
	c	Cutting Depth	○	√	○	Cutting Depth 2.00m(avg)for route 21 and 3.00m(avg) for route 16
	d	Cutting Width	○	√	○	Cutting Width 38m
	e	Dredged Volume	○	√	○	Total Dredged Volume 79,016.67 cum
7	Supervising Dredged Material Disposal Area whether the Dykes are designed as per Design		○	√	○	Supervised together with dredging experts during the new dyke construction and it is observed that Dykes are maintained as per Design
8	Supervising Dredged Material Disposal Area whether the Dykes are capable to resist the pressure of disposed materials		○	√	○	Its observed that new dyke boundary wall maintained proper design thickness, slope, layer of compaction, 20m/30m safe distance from river bank.
9	Checking outlet of the compartment		○	√	○	Using 4nrs of outlet of this compartment
10	Check whether the dykes are being constructed at safe distance from river bank		○	√	○	640m, 670m and 1100m safe distance from the river bank
11	Check construction of the pipe line whether there is any leakage in the Joints of Floating Pipe/Shore pipe lines		○	√	○	No leakage observed in the Joints of Floating Pipe/Shore pipe lines
12	Check whether dredging work exacting Keeping Safety distance of River side installations like Road/houses/building.		○	√	○	It is observed that contractor maintained 100m from safe distance from Road/Houses/building and 20m-30m safe distance maintained from river Bank
13	Check Survey Activities		○	√	○	Hydrographic Pre details survey work done on dated from 31.01.2024 for lot 3 Route number 12(Chandpur-R140 bridge)

Table 12: Checklist of ESHS, Lot-3, January 2023

Checklist Items		Dredging Activity			Comments/Compliance
		Daily	Monthly	Quarterly	
1	EIA and Environmental Permits	○	○	√	
2	Explanation to the Local Stakeholders	○	○	√	
3	Signboards, Notice Boards	○	○	√	Not found/observed at site for all route in lot_3
4	Air Quality	○	√	○	Test done for Route no.21, 16 & 17
5	Surface Water Quality	○	√	○	Test done for Route no.21, 16 & 17
6	Solid Wastes	○	√	○	Test done for Route no.21, 16 & 17
7	Liquid Wastes	○	√	○	Test done for Route no.21, 16 & 17

Checklist Items		Dredging Activity			Comments/Compliance
8	Soil Contamination	○	√	○	Test done for Route no.21, 16 & 17
9	Noise and Vibration	○	√	○	Test done for Route no.21, 16 & 17
10	Underwater Noise	○	√	○	Test done for Route no.21, 16 & 17
11	Odor	○	√	○	Test done for Route no.21, 16 & 17
12	Riverbed Sediment	○	√	○	Test done for Route no.21 & 16
13	Groundwater	○	√	○	Test done for Route no.21, 16 & 17
14	Protected Areas	○	√	○	Test done for Route no.21, 16 & 17
15	Habitat Type	○	√	○	Test done for Route no.21, 16 & 17
16	Hydrology	○	√	○	Test done for Route no.21, 16 & 17
17	Topography and Geology	○	√	○	Test done for Route no.21, 16 & 17
18	Dolphin Observation	○	√	○	Test done for Route no.21, 16 & 17
19	Fish Catch Examination	○	√	○	Test done for Route no.21, 16 & 17
18	Flora (Aquatic & Terrestrial)	○	√	○	Test done for Route no.21, 16 & 17
19	Benthos (Micro & Macro)	○	√	○	Test done for Route no.21, 16 & 17
20	Phyto- & Zoo-planktons	○	√	○	Test done for Route no.21, 16 & 17
21	Resettlement	○	○	√	
22	Living and Livelihood	○	○	√	
23	Heritage	○	○	√	
24	Landscape	○	○	√	
25	Ethnic Minorities and Indigenous Peoples	○	○	√	
26	Work Permit/Contract	○	○	√	
27	Daily Toolbox Meeting - OHS	○	○	√	
28	Working Conditions	○	√	○	Fair
29	Impact/Precaution during Dredging	○	○	√	Not any major issue observed
30	Accident Prevention Measures	○	√	○	Not regular contractors ESHS team visit the site
31	Working Condition	√	○	○	Fair
32	Accommodation	√	○	○	House Boat
33	Personal Protection Equipment	√	○	○	Safety helmet, Safety vest, safety shoes, Hand gloves etc. observed at site but do not uses or wearing in site
34	Drinking Water	√	○	○	Freshwater daily collect from tube well of nearby village
35	Sanitary Condition	√	○	○	Good arrangement kept in House boat
36	Agreement with Land Owner	○	○	√	Process on going
37	Land Use Type	○	√	○	Once or twice cultivated land in a year and also some non-cultivated fellow land
38	Dyke Design Approval	○	√	○	Dike no.R21-D12, R21-D13 for route 21 and Dyke No. R16-D01, R16-D02 for route 16 used in this month of January
	Dyke Setback Distance	○	√	○	640m, 670m and 1006m distance from the river bank
39	Disposal Area Dyke Height	○	√	○	2.5m (avg) for Route no.21 and 7.5m for Route no.16
40	Dyke Strengthened/Material Used*	○	○	√	When required then used
41	Carbon Emission	○	○	√	Not found/observed at site for all routes in Lot-3
42	Leakage	○	○	√	
43	Oil Spill	○	○	√	

Checklist Items		Dredging Activity			Comments/Compliance
44	Onboard Waste Management	○	○	√	
45	Noise and Vibration	○	○	√	

Table 13: ESHS_Environmental Checklist, Lot-3

Environmental Item	Main Check Items	Yes: Y No: N
(1) EIA and Environmental Permits	(a) Have EIA reports been already prepared in official process?	Y
	(b) Have EIA reports been approved by authorities of the host country's government?	Y
	(c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied?	Y
	(d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	Y
(2) Explanation to the Local Stakeholders	(a) Have contents of the project and the potential impacts been adequately explained to the Local stakeholders based on appropriate procedures, including information disclosure? Is understanding obtained from the Local stakeholders?	Y
(3) Examination of Alternatives	(a) Have alternative plans of the project been examined with social and environmental considerations?	Y
(1) Air Quality	(a) Do air pollutants, such as sulfur oxides (SOx), nitrogen oxides (NOx), soot and dust emitted from the ships, vehicles and the facilities like docs comply with the country's emission standards? Are any mitigating measures taken?	Y
(2) Water Quality	(a) Do pollutants, such as Suspended Soils (SS), oils/fats and other toxicants contained in effluents comply with the country's effluent standards (BOD, COD, ph, etc)? Is there a possibility that the effluents from the project will cause areas not to comply with the country's ambient water quality standards?	Y
	(b) Are adequate measures taken to prevent contamination of surface water, groundwater and soil by the effluents from storage areas, including raw materials, chemicals, and wastes?	N
(3) Wastes	(a) Are wastes (including hazardous wastes and other industrial wastes) generated from the project facilities properly treated and disposed of in accordance with the country's regulations?	N
	(b) Are adequate measures taken to prevent contamination of soil and groundwater by leachates from the waste storage/disposal sites?	N
(4) Noise and Vibration	(a) Do noise and vibrations comply with the country's standards?	Y
(5) Subsidence	(a) In the case of extraction of a large volume of groundwater, is there a possibility that the extraction of groundwater will cause subsidence?	N
(6) Odor	(a) Are there any odor sources? Are adequate odor control measures taken?	N
(7) Riverbed Sediment	(a) Sediment collection in presence of S1A team members/staff?	Y
	(b) Samples sent to the laboratory within 12 hours?	Y
	(c) If sample results showed presence of heavy metal, treatment measures like separate compartment for disposal of dredged material taken by the Contractor	N
(8) Groundwater	Samples collected and analyzed	N
(1) Protected Areas	(a) Is the project site located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?	N
(2) Ecosystem/Habitat Type	(a) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., Char land, reedland, mangroves, or tidal flats)?	N
	(b) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions?	N
	(c) If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impacts on the ecosystem?	N

Environmental Item	Main Check Items	Yes: Y No: N
	(d) Is there a possibility that the amount of water (e.g., surface water, groundwater) used by the project will adversely affect aquatic environments?	N
	(e) Are adequate measures taken to reduce the impacts on aquatic environments, such as aquatic organisms?	N
(3) Topography and Geology	(a) Is the stability of the existing topographic conditions adequately considered for alteration of topographic features, such as cut and fill operations?	N
	(b) Is there a possibility that soil runoffs will result from cut and fill areas, waste soil disposal sites, and borrow sites?	N
	(c) Are adequate mitigation measures taken to prevent soil runoffs?	N
	(d) Is there any possibility that the project will erode natural river bank, foreshore area, beaches?	N
(4) Dolphin Observation	(a) Exclusive time spent for observing dolphins?	Y
(5) Fish Catch Examination	(a) Fishermen upstream and downstream of dredging site interviewed and catch examined? Types of gears used?	Y
(6) Flora (Aquatic & Terrestrial)	(a) Flora surveyed around the dredging and dredged material disposal sites	N
(7) Benthos (Micro and Macro)	(a) Sampling done and analyzed, report submitted	Y
(8) Phyto- & Zoo-Planktons	(a) Sampling done and analyzed, report submitted	Y
(1) Resettlement	(a) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement?	N
	(b) Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement?	N
	(c) Is the resettlement plan, including compensation with full replacement costs, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement?	N
	(d) Are the compensations going to be paid prior to the resettlement?	N
	(e) Are the compensation policies prepared in document?	N
	(f) Does the resettlement plan pay particular attention to vulnerable groups or people, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples?	N
	(g) Are agreements with the affected people obtained prior to resettlement?	N
	(h) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan?	N
	(i) Are any plans developed to monitor the impacts of resettlement?	N
	(j) Is the grievance redress mechanism established?	N
(2) Living and Livelihood	(a) Is there a possibility that the project will adversely affect the living conditions of inhabitants? Are adequate measures considered to reduce the impacts, if necessary?	N
	(b) Is sufficient infrastructure (e.g., hospitals, schools, and roads) available for the project implementation? If the existing infrastructure is insufficient, are any plans developed to construct new infrastructure or improve the existing infrastructure?	N
	(c) Is there a possibility that large vehicles traffic for transportation of materials, such as raw materials and products will have impacts on traffic in the surrounding areas, impede the movement of inhabitants, and cause any risks to pedestrians?	N
	(d) Is there a possibility that diseases, including infectious diseases, such as HIV, will be brought due to the immigration of workers associated with the project? Are adequate considerations given to public health, if necessary?	N
(3) Heritage	(a) Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage sites? Are adequate measures considered to protect these sites in accordance with the country's laws?	N

Environmental Item	Main Check Items	Yes: Y No: N
(4) Landscape	(a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?	N
(5) Ethnic Minorities and Indigenous Peoples	(a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples?	N
	(b) Are all of the rights of ethnic minorities and indigenous peoples in relation to land and resources respected?	N
(6) Working Conditions	(a) Is the project proponent not violating any laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project?	N
	(b) Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials?	N
	(c) Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public sanitation) for workers etc.?	N
	(d) Are appropriate measures being taken to ensure that security guards involved in the project do not violate safety of other individuals involved, or local residents?	N
(1) Impacts during dredging/construction	(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)?	N
	(b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce the impacts?	N
(2) Accident Prevention Measures	(a) Does the project have any accident prevention equipment and scheme to store, emit and transport toxic and hazardous materials?	N
(3) Monitoring	(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts?	N
	(b) What are the items, methods and frequencies of the monitoring program?	N
	(c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)?	N
	(d) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?	N

Table 14: Checklist of GRM and Social issues, Lot-3, January 2023

Checklist Items		Dredging Activity				Comments/Compliance
		Daily	Weekly	Monthly	Quarterly	
1	The contractors communicate to all the stakeholders regarding GRM processing and lodging complaints.	O	O	O	√	
2	Contact details for lodging grievance easily accessible.	O	O	O	√	
3	Consultations have been conducted with local communities, dredging contractors to collect their input on the GRM design.	O	O	O	√	
4	The preferences of social customs and cultural sensitivities of the project affected communities taken into consideration.	O	O	O	√	
5	FGD on GRM with the Project Affected Persons (PAPs)	O	O	O	√	

Checklist Items		Dredging Activity				Comments/Compliance
6	The multiple accessible channels available for the stakeholders to submit their grievances. (e.g., toll-free hotline, online platform, drop box, post, landline/mobile phone and e-mail).	O	O	O	√	
7	Dyke/Land selection survey.	O	O	√	O	Route no.21 & 16
8	Opinion meeting with land owner along with inform to the contractor and S1A team for justifying land as dyke.	O	O	√	O	
9	GFA documentation collection.	O	O	√	O	
10	GFA will be submitted to S1A.	O	O	√	O	
11	FGD on GFA with the Locals	O	O	O	√	
12	Preparation of GRM Committee Constituion by the Contractors.	O	O	O	√	
13	Nos. of Feedback, concerned, suggestions and complain letters.	O	O	√	O	Not found/observed at site for all route in lot_3
14	The size (5/15) of Bill board will according the BOQ	O	O	√	O	Not found/observed at site for all route in lot_3
	Name, Mobile number and email of the focal person will be included in the Bill board.	O	O	√	O	Not found/observed at site for all route in lot_3
15	Local level GRC [In a five (5) members committee meeting Three (3) members participation will be the quorum]	O	O	O	√	Local level GRC committee formed by Banga contractor on dated 14th October,2023
16	Contractor level GRC [In a five (3) members committee meeting Three (3) members participation will be the quorum]	O	O	O	√	Local level GRC committee formed by Banga contractor on dated 14th October,2023
17	Project level GRC [In a five (3) members committee meeting Three (3) members participation will be the quorum]	O	O	O	√	Local level GRC committee formed by Banga contractor on dated 14th October,2023
18	Project staffs and local institutions have received training on the GRM and its operation.	O	O	O	√	
19	The Leaflet/ Brochure will be published for dissemination to all the stakeholders.	O	O	O	√	
20	The regular reports generated to document the number, nature, and resolution of grievances (Registration Book, Resolution book or Decision book & Closing book)	O	O	√	O	Route no.21, 16 & 13
21	Local Community	O	O	√	O	Route no.21, 16 & 13
22	Land Owner	O	O	√	O	Route no.21, 16 & 13
23	Local Government Authority	O	O	O	√	no
24	Sex Violence by an intimate partner	O	O	O	√	None of these has been found/observed for the month of January, 2024
25	Sexual violence by a non-peer	O	O	O	√	
26	Child sexual abuse& forced marriage	O	O	O	√	
27	Sexual exploitation & abuse	O	O	O	√	
28	Sexual harassment	O	O	O	√	
29	In case of emergency, the local level GRC will address the matter within 4 -12 hours.	O	O	O	√	When required

Table 15: Checklist of Dredging Activity, Lot-2, January 2024

Checklist Items	Dredging Activity	Comments/Compliance

			Daily	Monthly	When and As Required	
1	Gauge reading & Water level (WL)		○ ☑ □	○	○	Average water level is 0.914 m
2	Connectivity with BM & TBM		○	○	○ ☑ □	
3	Study Hydrographic Chart		○	○	○ ☑ □	Chart is prepared for route 09, route 7 &8 and Route 11
4	Fixing Cutting Depth respect to existing WL as per design depth		○ ☑ □	○	○	Average cutting depth is 2.388 m
5	Checking Dredging Alignment		○	○	○ ☑ □	
6	Checking Dredged Activities as below;					
	a	Dredging Hours	○	○ ☑ □	○	
	b	Cutting Length	○	○ ☑ □	○	Total cutting length 4760 m
	c	Cutting Depth	○	○ ☑ □	○	Average cutting depth is 2.388 m
	d	Cutting Width	○	○ ☑ □	○	25 m
	e	Dredged Volume	○	○ ☑ □	○	Total volume 223036.491 m3
7	Supervising Dredged Material Disposal Area whether the Dykes are designed as per Design		○	○	○ ☑ □	
8	Supervising Dredged Material Disposal Area whether the Dykes are capable to resist the pressure of disposed materials		○	○ ☑ □	○	
9	Checking outlet of the compartment		○	○ ☑ □	○	
10	Check whether the dykes are being constructed at safe distance from river bank		○	☑ □	○	
11	Check construction of the pipe line whether there is any leakage in the Joints of Floating Pipe/Shore pipe lines		○ ☑ □	○	○	
12	Check whether dredging work exacting Keeping Safety distance of River side installations like Road/houses/buiding.		○ ☑ □	○	○	
13	Check Survey Activities		○	○	○ ☑ □	

Table 16: Environmental Checklist Lot-2, January 2024

Factors	Checklist Items		Dredging Activity			Comments/Compliance
			Daily	Monthly	Quarterly	
1. Permits and Explanation	1	EIA and Environmental Permits	○	○	○ ☑ □	
	2	Explanation to the Local Stakeholders	○	○	○ ☑ □	
	3	Signboards, Notice Boards	○	○	○ ☑ □	
2. Physical Environmental Parameters Monitoring	1	Air Quality	○	○ ☑ □	○	Supervised in 23 January at Norshingdi site and 24 and 25 January at solimgonj site.
	2	Surface Water Quality	○	○ ☑ □	○	Supervised in 23 January at Norshingdi site and 24 and 25 January at solimgonj site.

Factors	Checklist Items		Dredging Activity			Comments/Compliance
	3	Solid Wastes	○	○ ☑ ☐	○	Supervised in 23 January at Norshingdi site and 24 and 25 January at solimgonj site.
	4	Liquid Wastes	○	○ ☑ ☐	○	Supervised in 23 January at Norshingdi site and 24 and 25 January at solimgonj site.
	5	Soil Contamination	○	○ ☑ ☐	○	Supervised in 23 January at Norshingdi site and 24 and 25 January at solimgonj site.
	6	Noise and Vibration	○	○ ☑ ☐	○	Supervised in 23 January at Norshingdi site and 24 and 25 January at solimgonj site.
	7	Underwater Noise	○	○ ☑ ☐	○	Supervised in 23 January at Norshingdi site and 24 and 25 January at solimgonj site.
	8	Odor	○	○ ☑ ☐	○	Supervised in 23 January at Norshingdi site and 24 and 25 January at solimgonj site.
	9	Riverbed Sediment	○	○ ☑ ☐	○	Supervised in 23 January at Norshingdi site and 24 and 25 January at solimgonj site.
	10	Groundwater	○	○ ☑ ☐	○	Supervised in 23 January at Norshingdi site and 24 and 25 January at solimgonj site.
3. Natural Environment	1	Protected Areas	○	○ ☑ ☐	○	Route no. 07&08 and 09
	2	Habitat Type	○	○ ☑ ☐	○	Route no. 07&08 and 09
	3	Hydrology	○	○ ☑ ☐	○	Route no. 07&08 and 09
	4	Topography and Geology	○	○ ☑ ☐	○	Route no. 07&08 and 09
	5	Dolphin Observation	○	○ ☑ ☐	○	Route no. 07&08 and 09
	6	Fish Catch Examination	○	○ ☑ ☐	○	Route no. 07&08 and 09
	7	Flora (Aquatic & Terrestrial)	○	○ ☑ ☐	○	Route no. 07&08 and 09
	8	Benthos (Micro & Macro)	○	○ ☑ ☐	○	Route no. 07&08 and 09
	9	Phyto- & Zoo-planktons	○	○ ☑ ☐	○	Route no. 07&08 and 09
4. Social Environment	1	Resettlement	○	○	○ ☑ ☐	
	2	Living and Livelihood	○	○	○ ☑ ☐	
	3	Heritage	○	○	○ ☑ ☐	
	4	Landscape	○	○	○ ☑ ☐	
	5	Ethnic Minorities and Indigenous Peoples	○	○	○ ☑ ☐	
5. Occupational Health Safety	1	Work Permit/Contract	○	○	○ ☑ ☐	
	2	Daily Toolbox Meeting - OHS	○	○	○ ☑ ☐	
	3	Working Conditions		☑ ☐		Fair
	4	Impact/Precaution during Dredging	○	○	○ ☑ ☐	Not any major issue observed
	5	Accident Prevention Measures	○	○ ☑ ☐	○	Contractors ESHS team visiting site and concerning all the Manpower
	6	Working Condition	○ ☑ ☐	○	○	Fair

Factors	Checklist Items		Dredging Activity			Comments/Compliance
	7	Accommodation	○ ☑ □	○	○	House Boat
	8	Personal Protection Equipment	○ ☑ □	○	○	Safety helmet, Safety vest, safety shoes, Hand gloves etc. observed at site.
	9	Drinking Water	○ ☑ □	○	○	Freshwater daily collect from tube well
	10	Sanitary Condition	○ ☑ □	○	○	Good arrangement kept in House boat
6. Dredged Material Disposal Area	1	Agreement with Land Owner	○	○	○ ☑ □	
	2	Land Use Type	○	○ ☑ □	○	
	3	Dyke Design Approval	○	○ ☑ □	○	
	4	Dyke Setback Distance	○	○ ☑ □	○	
	5	Disposal Area Dyke Height	○	○ ☑ □	○	
	6	Dyke Strengthened/Material Used*	○	○	○ ☑ □	When required then used.
7. Dredger	1	Carbon Emission	○	○	○ ☑ □	Not found/observed at site for all route in lot-2
	2	Leakage	○	○	○ ☑ □	
	3	Oil Spill	○	○	○ ☑ □	
	4	Onboard Waste Management	○	○	○ ☑ □	
	5	Noise and Vibration	○	○	☑ □	

Table 17: Checklist of ESHS_ Environmental, Lot-2, January 2023

Category	Environmental Item	Main Check Items	Yes: Y No: N
1. Permits and Explanation	(1) EIA and Environmental Permits	(a) Have EIA reports been already prepared in official process?	Y
		(b) Have EIA reports been approved by authorities of the host country's government?	Y
		(c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied?	Y
		(d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	Y
	(2) Explanation to the Local Stakeholders	(a) Have contents of the project and the potential impacts been adequately explained to the Local stakeholders based on appropriate procedures, including information disclosure? Is understanding obtained from the Local stakeholders?	Y
	(3) Examination of Alternatives	(a) Have alternative plans of the project been examined with social and environmental considerations?	Y
2. Physical Environmental Parameters Monitoring	(1) Air Quality	(a) Do air pollutants, such as sulfur oxides (SOx), nitrogen oxides (NOx), soot and dust emitted from the ships, vehicles and the facilities like docs comply with the country's emission standards? Are any mitigating measures taken?	Y

Category	Environmental Item	Main Check Items	Yes: Y No: N
	(2) Water Quality	(a) Do pollutants, such as Suspended Soils (SS), oils/fats and other toxicants contained in effluents comply with the country's effluent standards (BOD, COD, ph, etc)? Is there a possibility that the effluents from the project will cause areas not to comply with the country's ambient water quality standards?	Y
		(b) Are adequate measures taken to prevent contamination of surface water, groundwater and soil by the effluents from storage areas, including raw materials, chemicals, and wastes?	N
	(3) Wastes	(a) Are wastes (including hazardous wastes and other industrial wastes) generated from the project facilities properly treated and disposed of in accordance with the country's regulations?	N
		(b) Are adequate measures taken to prevent contamination of soil and groundwater by leachates from the waste storage/disposal sites?	N
	(4) Noise and Vibration	(a) Do noise and vibrations comply with the country's standards?	N
	(5) Subsidence	(a) In the case of extraction of a large volume of groundwater, is there a possibility that the extraction of groundwater will cause subsidence?	N
	(6) Odor	(a) Are there any odor sources? Are adequate odor control measures taken?	N
	(7) Riverbed Sediment	(a) Sediment collection in presence of S1A team members/staff?	Y
		(b) Samples sent to the laboratory within 12 hours?	Y
		(c) If sample results showed presence of heavy metal, treatment measures like separate compartment for disposal of dredged material taken by the Contractor	N
	(8) Groundwater	Samples collected and analyzed	N
3. Natural Environment	(1) Protected Areas	(a) Is the project site located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?	N
	(2) Ecosystem/Habitat Type	(a) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., Char land, reedland, mangroves, or tidal flats)?	N
		(b) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions?	N
		(c) If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impacts on the ecosystem?	N
		(d) Is there a possibility that the amount of water (e.g., surface water, groundwater) used by the project will adversely affect aquatic environments?	N
		(e) Are adequate measures taken to reduce the impacts on aquatic environments, such as aquatic organisms?	N
	(3) Topography and Geology	(a) Is the stability of the existing topographic conditions adequately considered for alteration of topographic features, such as cut and fill operations?	N
		(b) Is there a possibility that soil runoffs will result from cut and fill areas, waste soil disposal sites, and borrow sites?	N

Category	Environmental Item	Main Check Items	Yes: Y No: N
		(c) Are adequate mitigation measures taken to prevent soil runoffs?	N
		(d) Is there any possibility that the project will erode natural river bank, forshore area, beaches?	N
	(4) Dolphin Observation	(a) Exclusive time spent for observing dolphins?	N
	(5) Fish Catch Examination	(a) Fishermen upstream and downstream of dredging site interviewed and catch examined? Types of gears used?	Y
	(6) Flora (Aquatic & Terrestrial)	(a) Flora surveyed around the dredging and dredged material disposal sites	N
	(7) Benthos (Micro and Macro)	(a) Sampling done and analyzed, report submitted	Y
	(8) Phyto- & Zoo-Planktons	(a) Sampling done and analyzed, report submitted	Y
4. Social Environment	(1) Resettlement	(a) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement?	N
		(b) Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement?	N
		(c) Is the resettlement plan, including compensation with full replacement costs, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement?	N
		(d) Are the compensations going to be paid prior to the resettlement?	N
		(e) Are the compensation policies prepared in document?	N
		(f) Does the resettlement plan pay particular attention to vulnerable groups or people, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples?	N
		(g) Are agreements with the affected people obtained prior to resettlement?	N
		(h) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan?	N
		(i) Are any plans developed to monitor the impacts of resettlement?	N
		(j) Is the grievance redress mechanism established?	N
	(2) Living and Livelihood	(a) Is there a possibility that the project will adversely affect the living conditions of inhabitants? Are adequate measures considered to reduce the impacts, if necessary?	N
		(b) Is sufficient infrastructure (e.g., hospitals, schools, and roads) available for the project implementation? If the existing infrastructure is insufficient, are any plans developed to construct new infrastructure or improve the existing infrastructure?	N
		(c) Is there a possibility that large vehicles traffic for transportation of materials, such as raw materials and products will have impacts on traffic in the surrounding areas, impede the movement of inhabitants, and cause any risks to pedestrians?	N

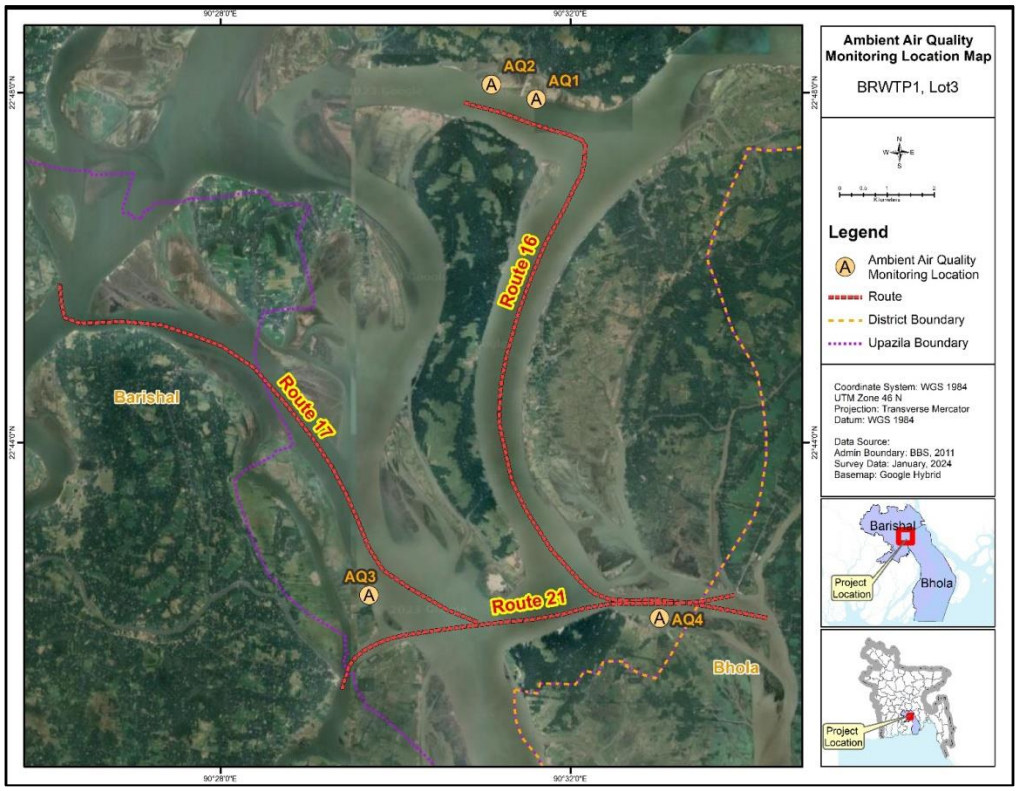
Category	Environmental Item	Main Check Items	Yes: Y No: N
		(d) Is there a possibility that diseases, including infectious diseases, such as HIV, will be brought due to the immigration of workers associated with the project? Are adequate considerations given to public health, if necessary?	N
	(3) Heritage	(a) Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage sites? Are adequate measures considered to protect these sites in accordance with the country's laws?	N
	(4) Landscape	(a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?	N
	(5) Ethnic Minorities and Indigenous Peoples	(a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples?	N
		(b) Are all of the rights of ethnic minorities and indigenous peoples in relation to land and resources respected?	N
	(6) Working Conditions	(a) Is the project proponent not violating any laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project?	N
		(b) Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials?	N
		(c) Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public sanitation) for workers etc.?	N
		(d) Are appropriate measures being taken to ensure that security guards involved in the project do not violate safety of other individuals involved, or local residents?	N
5. Others	(1) Impacts during dredging/construction	(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)?	N
		(b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce the impacts?	N
	(2) Accident Prevention Measures	(a) Does the project have any accident prevention equipment and scheme to store, emit and transport toxic and hazardous materials?	N
	(3) Monitoring	(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts?	N
		(b) What are the items, methods and frequencies of the monitoring program?	N
		(c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)?	N
		(d) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?	N

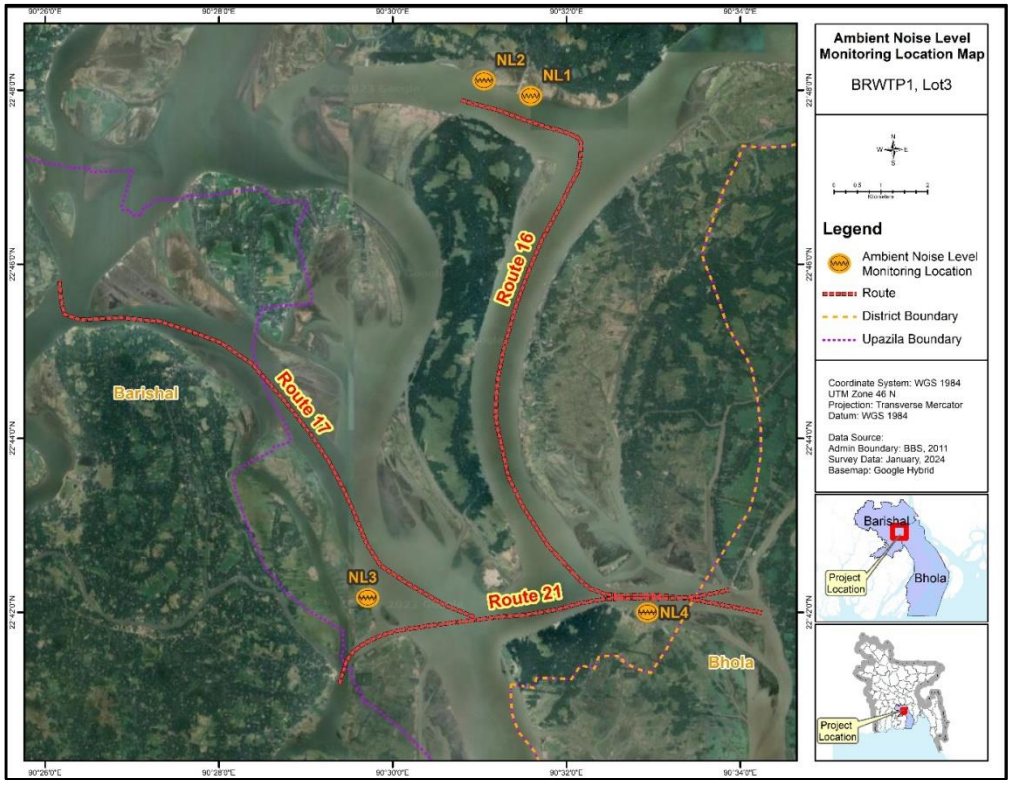
Table 18: Grievance Redressal Mechanism (GRM) Checklist, BRWTP-S1ALot-2

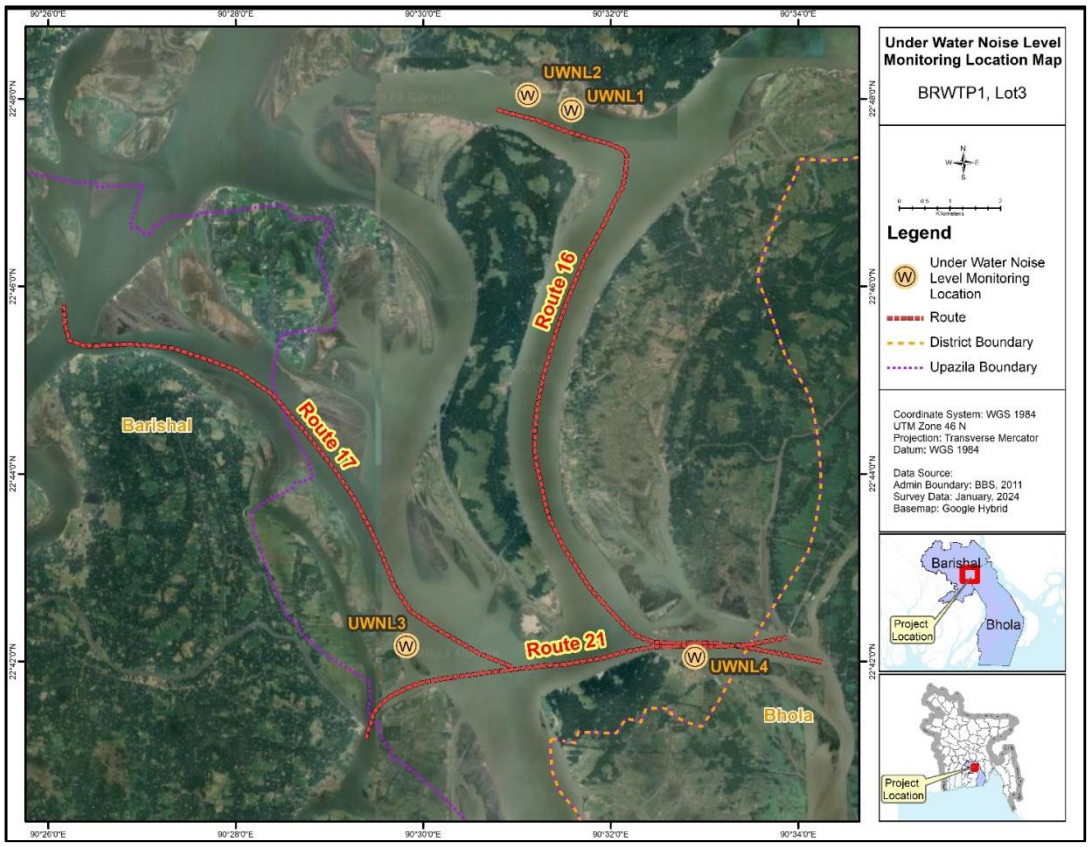
Sl no.	Factors	Checklist Items		Dredging Activity				Comments/ Compliance
				Daily	Weekly	Monthly	Quarterly	
1	Legal and Regulatory Compliance	1	The contractors communicate to all the stakeholders regarding GRM processing and lodging complaints.	○	○	○	○ ☑ ☐	There are GRM committees with 5 persons here.
		2	Contact details for lodging grievance easily accessible.	○ ☑ ☐	○	○	○	
2	Community Engagement	1	Consultations/ FGD have been conducted with local communities, dredging contractors to collect their input on the GRM design.	○	○	○	○ ☑ ☐	
3	Grievance Channels	1	The multiple accessible channels available for the stakeholders to submit their grievances. (e.g., toll-free hotline, online platform , drop box, post, landline/mobile phone and e-mail).	○ ☑ ☐	○	○	○	
4	Processing of GFA (Good Faith Agreement)	1	Dyke/Land selection survey.	○	○ ☑ ☐	○	○	Survey in every week.
		2	Opinion meeting with land owner along with inform to the contractor and S1A team for justifying land as dyke.	○	○ ☑ ☐	○	○	Survey in 15 days a month.
		3	GFA documentation collection.	○	○ ☑ ☐	○	○	Collection the document 15 days a month.
		4	GFA will be submitted to S1A.	○	○ ☑ ☐	○	○	
		5	FGD on GFA with the Locals	○	○	○ ☑ ☐	○	
5	Constitution of GRM Protocol	1	Preparation of GRM Protocol and Greivance Redres Committee (GRC) will be Constituted by the Contractors.	○	○ ☑ ☐	○	○	
6	Establish a Complaint Box	1	For receive feedback, suggestions and complain letters.	○	○ ☑ ☐	○	○	There are 3 complain box in site. One box is in office, one box in houseboat and onther is open road site.
7	Establish a Signboard	1	The size of Bill board will be 5/15. The bill board should contain: name, mobile number and email of the focal person.	○	○ ☑ ☐	○	○	There is a signboard in front of office.
8	3 (three) tyers of the GRM Comittee will be formed	1	Local level GRC (Committee members 05, quorum fullfill at least 03) -Project related issues.	○	○ ☑ ☐	○	○	
		2	Contractor level GRC (Committee members 03, quorum fullfill at least 03)- GBV, CoC, Contractors workers occurance etc. related issues.	○	○	○	○ ☑ ☐	

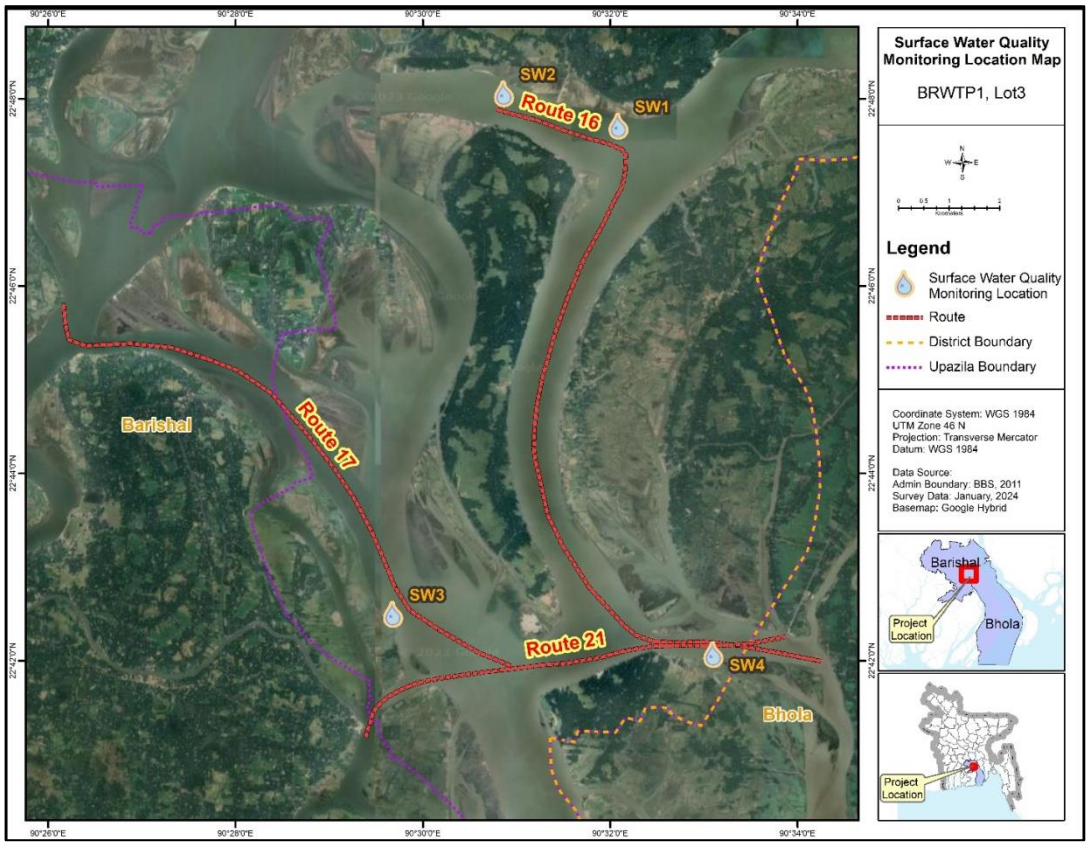
Sl	Factors	Checklist Items		Dredging Activity				Comments/
		3	Project level GRC (Committee members 03, quorum fullfill at least 03)	○	○	○	○ ☑	
9	Capacity Building	1	Project staffs and local institutions have received training on the GRM, GBV related issues and its operation.	○	○N/A	○	○	
10	Leaflet/ Brochure	1	The Leaflet/ Brochure will be published for dissemination to all the stakeholders.	○	○N/A	○	○	There is no liflat in the site.
11	Monitoring, Reporting & documentation	1	The regular reports generated to document the number, nature, and resolution of grievances (Registration Book, Resolution book / Decision book & Closing book)	○	○ ☑	○	○	
12	Social Consultation	1	Local Community	○	○ ☑	○	○	
		2	Land Owner	○	○ ☑	○	○	
		3	Local Government Authority	○	○ ☑	○	○	
13	Gender-Based Violence (GBV)	1	Sex Violence by an intimate partner	○	○	○ ☑	○	
		2	Sexual violence by a non-peer	○	○	○ ☑	○	
		3	Child sexual abuse & forced marriage	○	○	○ ☑	○	
		4	Sexual exploitation & abuse	○	○	○ ☑	○	
		5	Sexual harassment	○ ☑	○	○	○	
		6	In case of emergency, the local level GRC will address the matter within 04 -12 hours.	○ ☑	○	○	○	

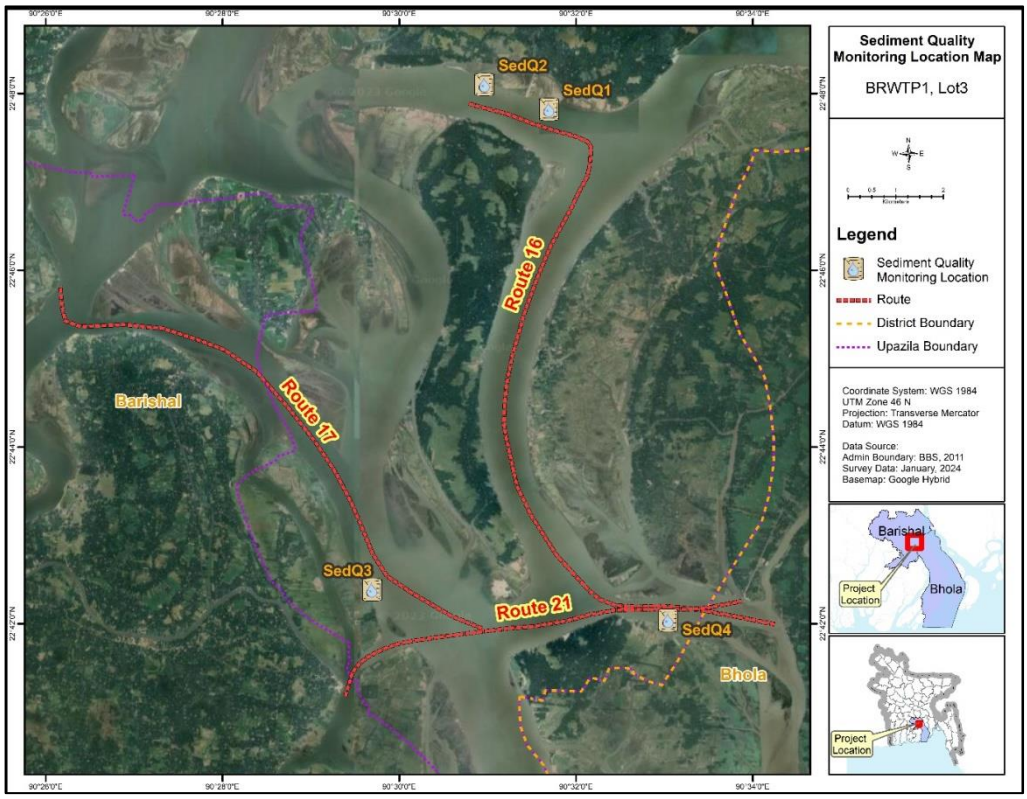
ANNEX V: Location of Environmental Sample Collection

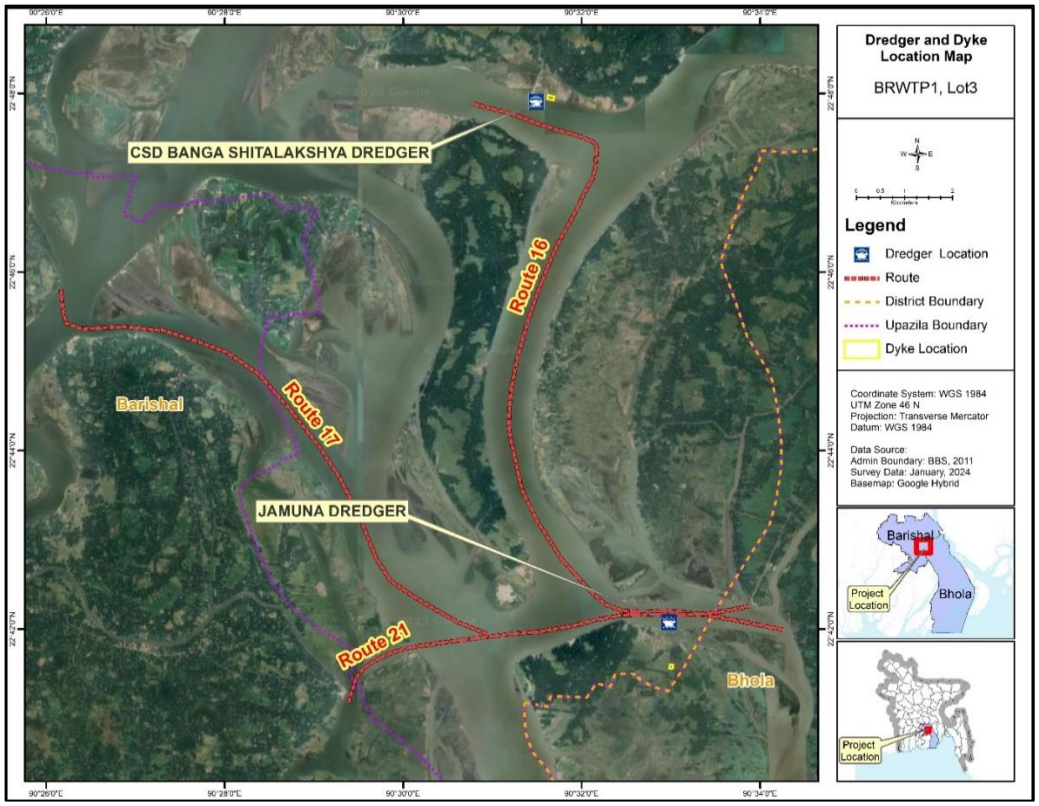


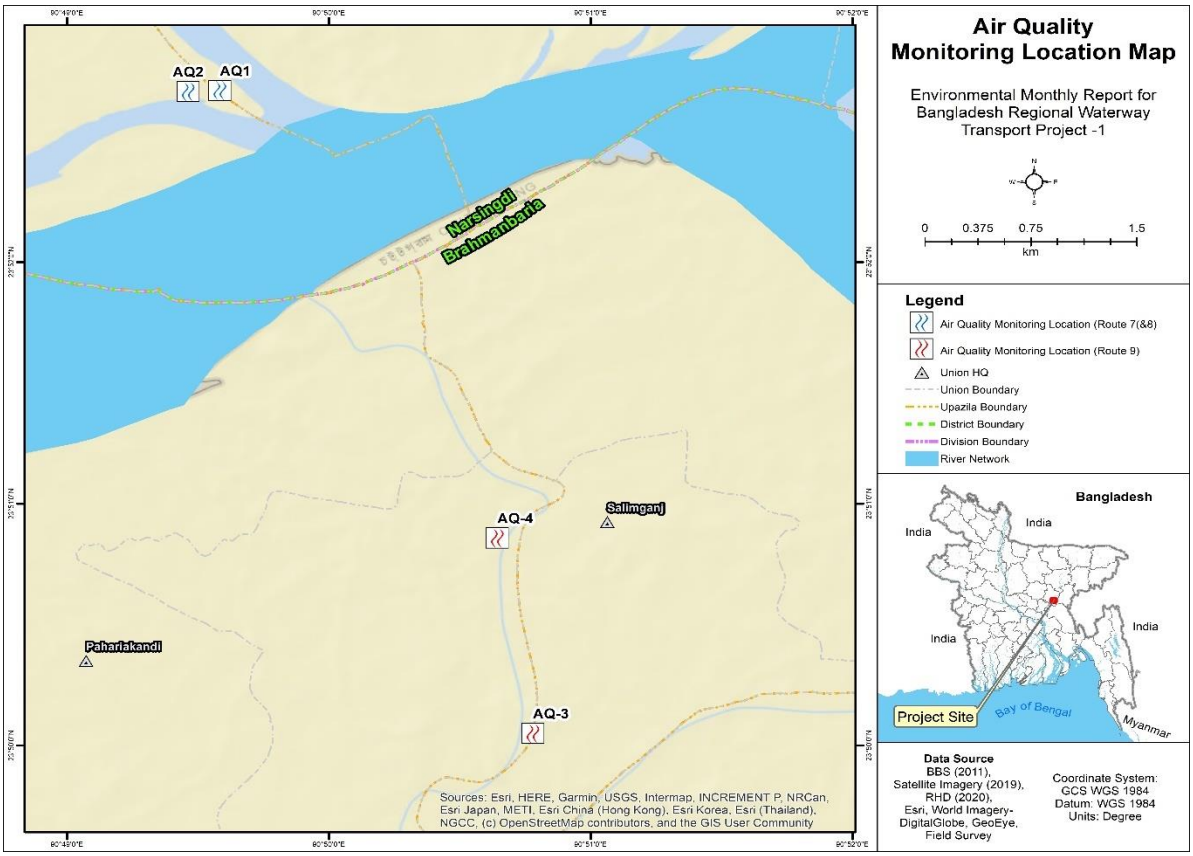


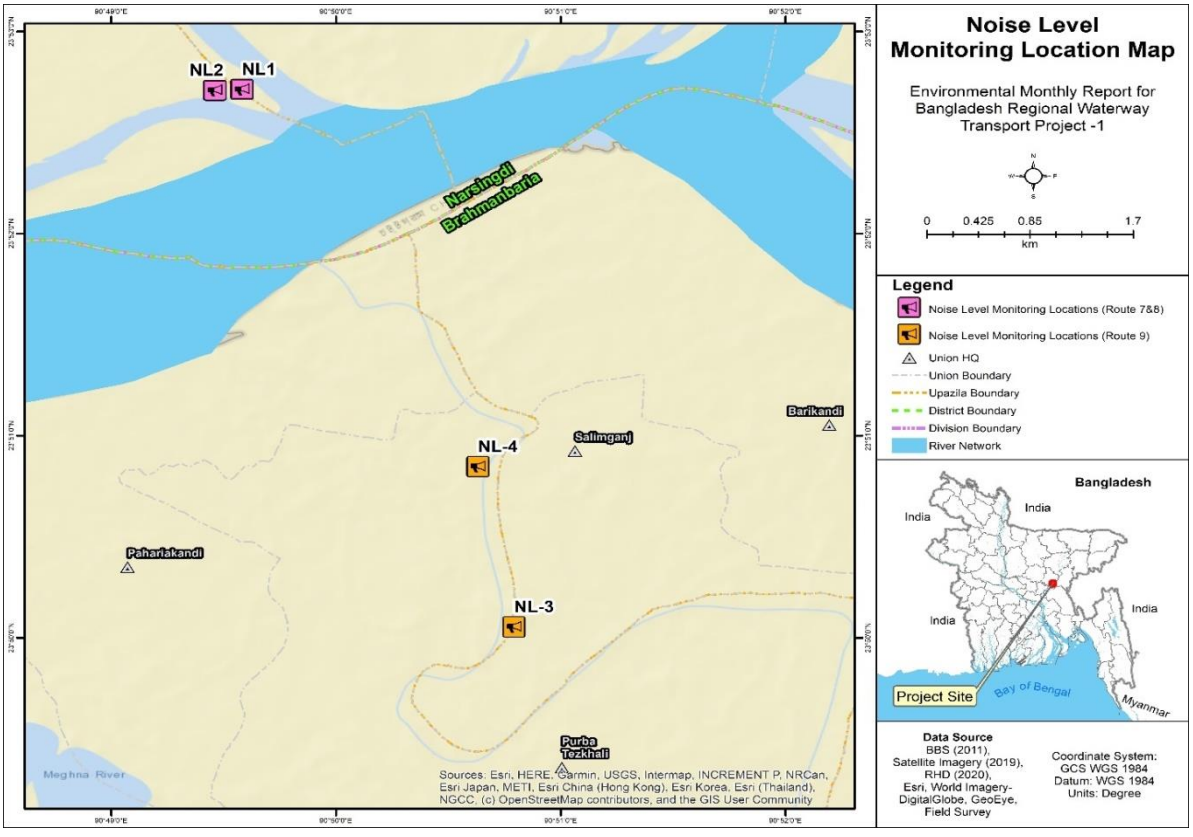

Under Water Noise Level Monitoring Location Map
BRWTP1, Lot3
Legend
Under Water Noise Level Monitoring Location
Route
District Boundary
Upazila Boundary
Coordinate System: WGS 1984
UTM Zone 46 N
Projection: Transverse Mercator
Datum: WGS 1984
Data Source:
Admin Boundary: BBS, 2011
Survey Data: January, 2024
Basemap: Google Hybrid
UWNL1
UWNL2
UWNL3
UWNL4
Route 16
Route 17
Route 21
Barishal
Bhola
Project Location

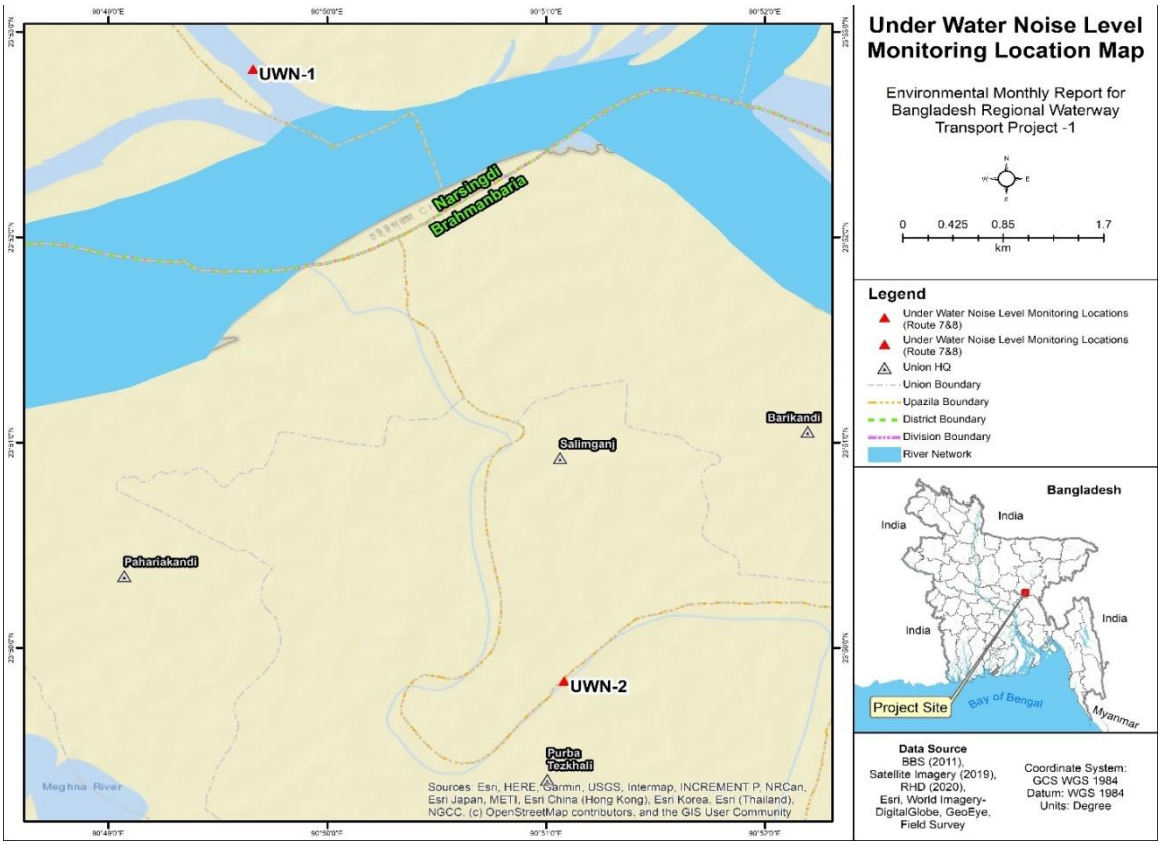

Surface Water Quality Monitoring Location Map
BRWTP1, Lot3
Legend
Surface Water Quality Monitoring Location
Route
District Boundary
Upazila Boundary
Coordinate System: WGS 1984
UTM Zone 46 N
Projection: Transverse Mercator
Datum: WGS 1984
Data Source:
Admin Boundary: BBS, 2011
Survey Data: January, 2024
Basemap: Google Hybrid
SW1
SW2
SW3
SW4
Route 16
Route 17
Route 21
Barishal
Bhola
Project Location

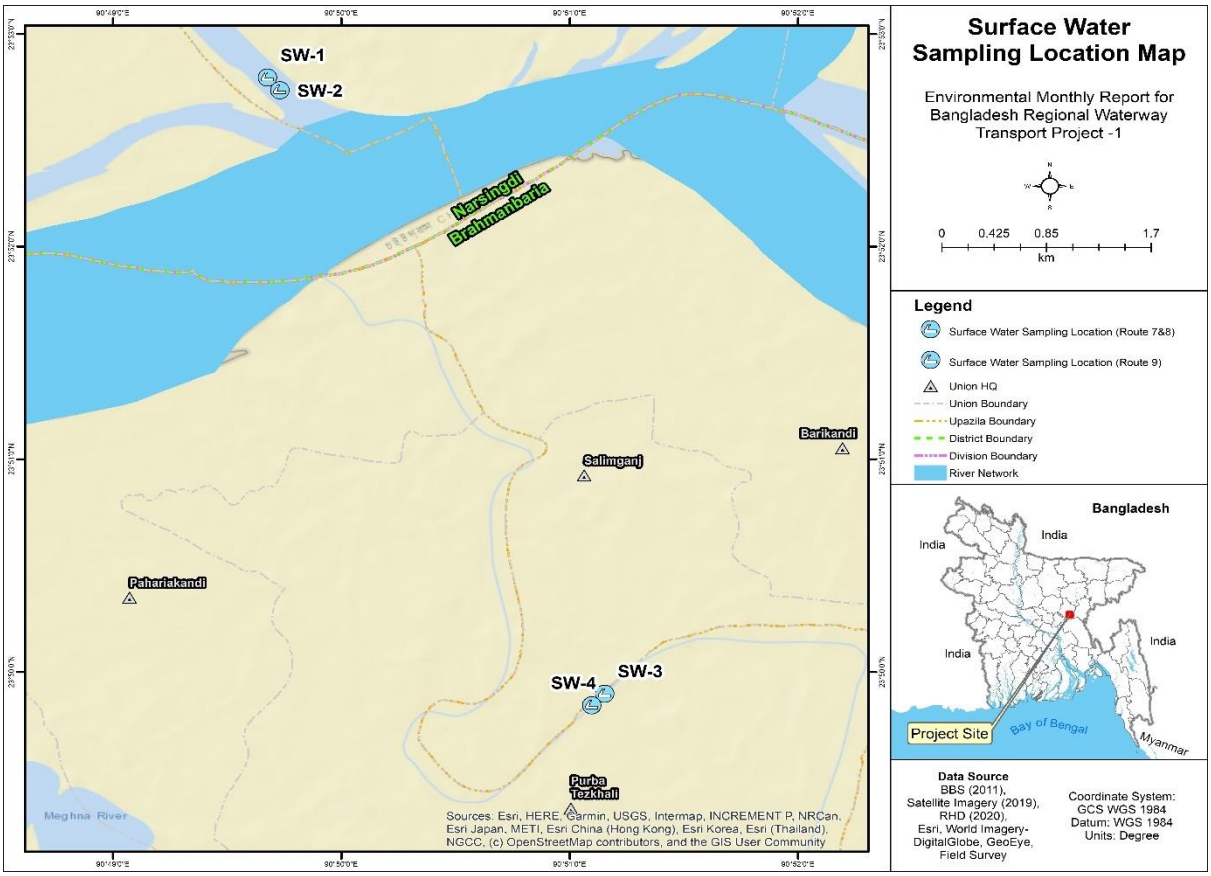

Sediment Quality Monitoring Location Map
BRWTP1, Lot3
SedQ2
SedQ1
Route 16
Route 17
Barishal
SedQ3
Route 21
SedQ4
Bhola
Legend
Sediment Quality Monitoring Location
Route
District Boundary
Upazila Boundary
Coordinate System: WGS 1984
UTM Zone 46 N
Projection: Transverse Mercator
Datum: WGS 1984
Data Source:
Admin Boundary: BBS, 2011
Survey Data: January, 2024
Basemap: Google Hybrid
Project Location

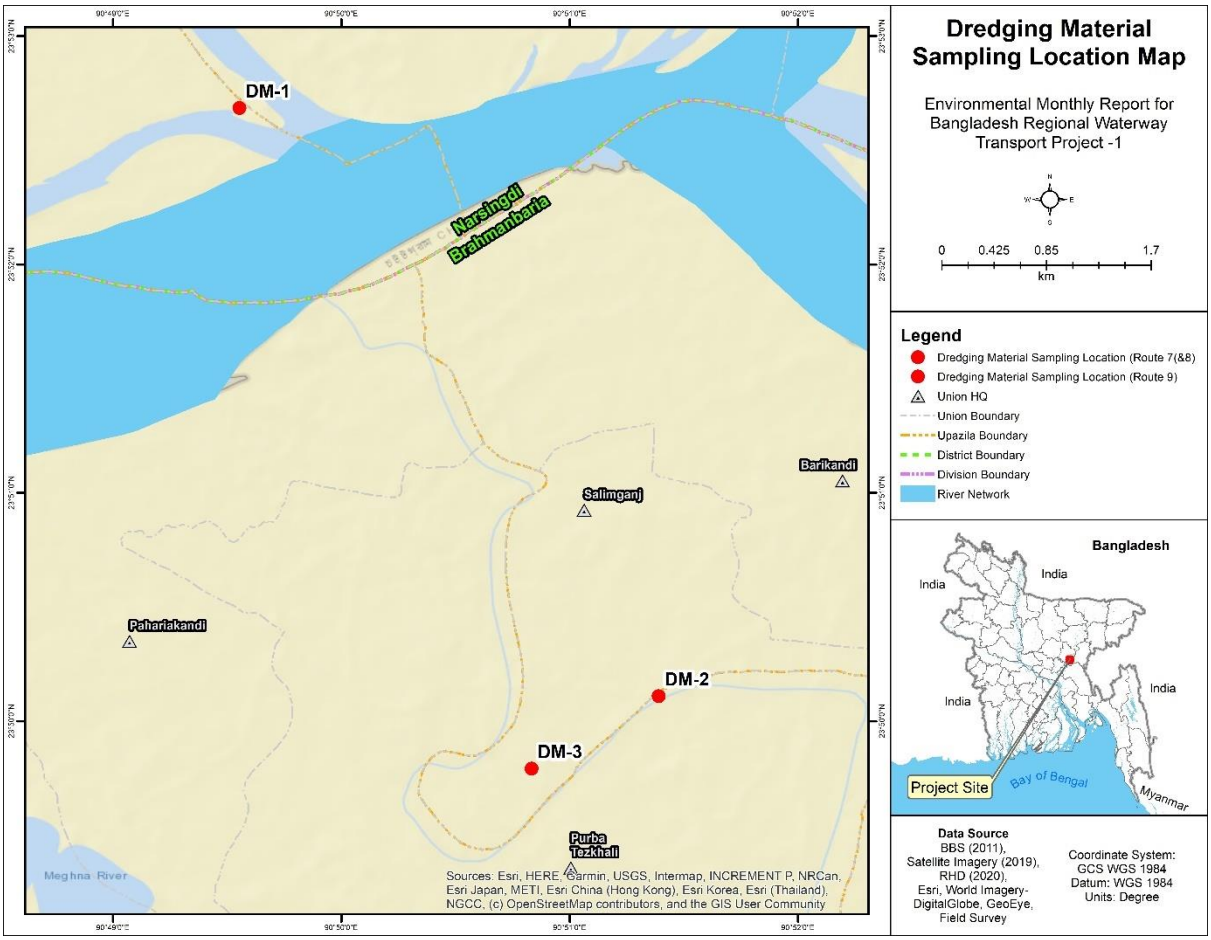

Dredger and Dyke Location Map
BRWTP1, Lot3
CSD BANGA SHITALAKSHYA DREDGER
Route 16
Barishal
Route 17
JAMUNA DREDGER
Route 21
Bhola
Legend
Dredger Location
Route
District Boundary
Upazila Boundary
Dyke Location
Coordinate System: WGS 1984
UTM Zone 46 N
Projection: Transverse Mercator
Datum: WGS 1984
Data Source:
Admin Boundary: BBS, 2011
Survey Data: January, 2024
Basemap: Google Hybrid
Project Location

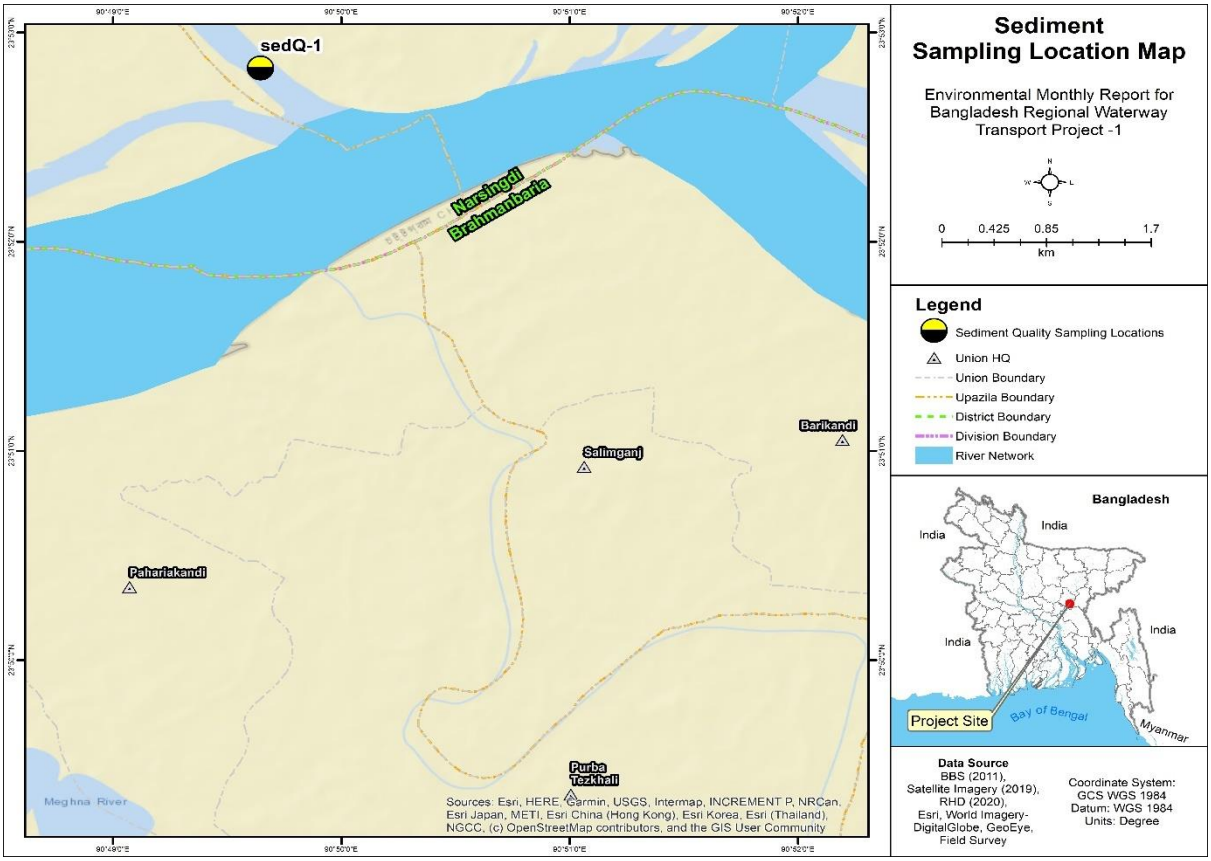

Air Quality Monitoring Location Map
Environmental Monthly Report for Bangladesh Regional Waterway Transport Project -1
0 0.375 0.75 1.5
km
Legend
Air Quality Monitoring Location (Route 7(&8)
Air Quality Monitoring Location (Route 9)
Union HQ
Union Boundary
Upazila Boundary
District Boundary
Division Boundary
River Network
Bangladesh
India
Project Site
Bay of Bengal
Myanmar
Data Source
BBS (2011), Satellite Imagery (2019), RHD (2020), Esri, World Imagery-DigitalGlobe, GeoEye, Field Survey
Coordinate System: GCS WGS 1984
Datum: WGS 1984
Units: Degree
AQ2
AQ1
AQ-4
AQ-3
Narsingdi
Brahmanbaria
Salimganj
Paharlakandi
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community


Noise Level Monitoring Location Map
Environmental Monthly Report for Bangladesh Regional Waterway Transport Project -1
0 0.425 0.85 1.7
km
Legend
Noise Level Monitoring Locations (Route 7&8)
Noise Level Monitoring Locations (Route 9)
Union HQ
Union Boundary
Upazila Boundary
District Boundary
Division Boundary
River Network
Bangladesh
India
Project Site
Bay of Bengal
Myanmar
Data Source
BBS (2011), Satellite Imagery (2019), RHD (2020), Esri, World Imagery-DigitalGlobe, GeoEye, Field Survey
Coordinate System: GCS WGS 1984
Datum: WGS 1984
Units: Degree
NL2
NL1
NL-4
NL-3
Narsingdi
Brahmanbaria
Salimganj
Barikandi
Paharlakandi
Purba Tezkhali
Meghna River
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

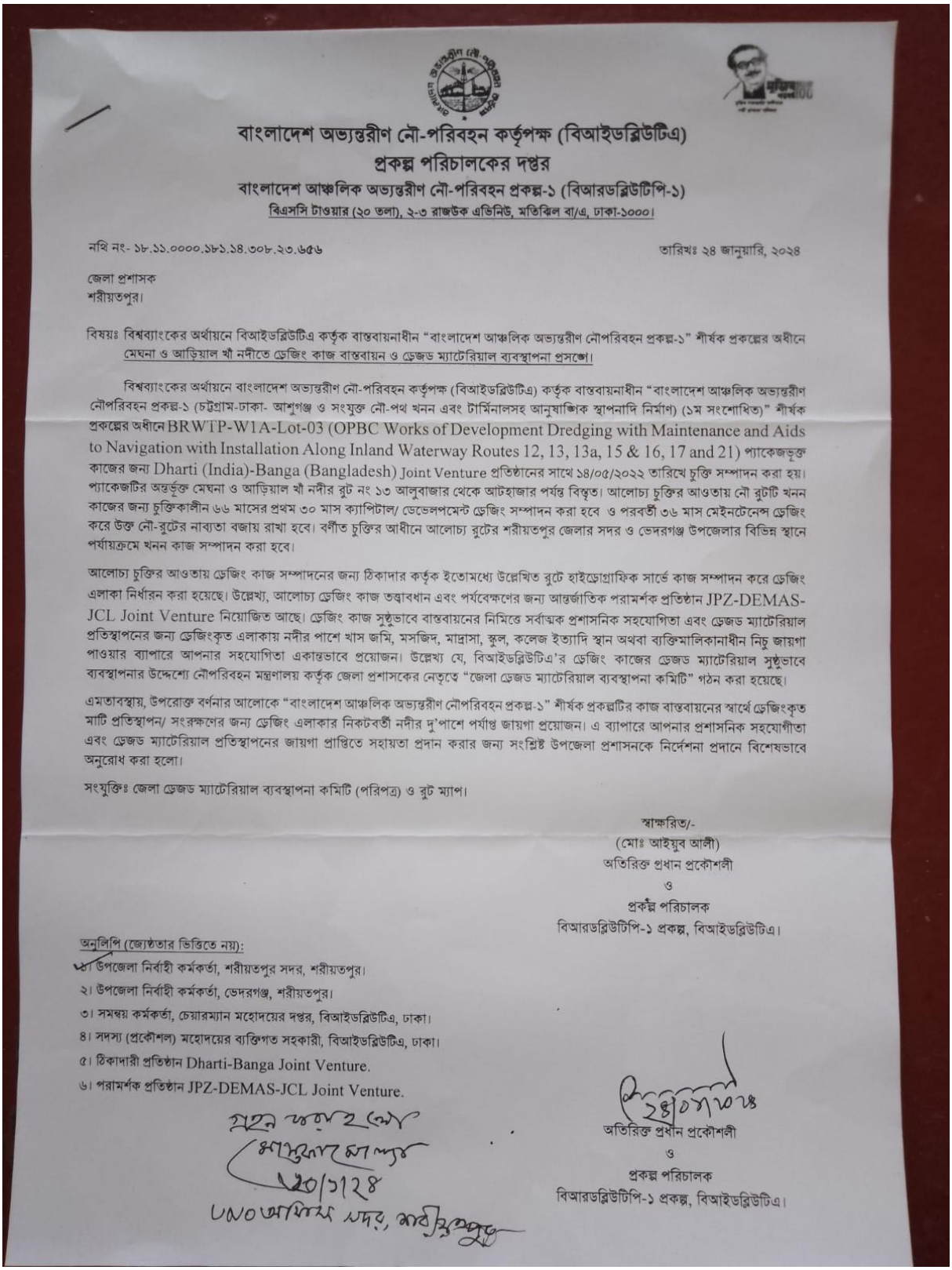

Under Water Noise Level Monitoring Location Map
Environmental Monthly Report for Bangladesh Regional Waterway Transport Project -1
0 0.425 0.85 1.7
km
Legend
Under Water Noise Level Monitoring Locations (Route 7&8)
Under Water Noise Level Monitoring Locations (Route 7&8)
Union HQ
Union Boundary
Upazila Boundary
District Boundary
Division Boundary
River Network
Bangladesh
India
Project Site
Bay of Bengal
Myanmar
UWN-1
UWN-2
Narsingdi
Brahmanbaria
Barikandi
Salimganj
Paharikandi
Purba Tezkhali
Meghna River
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Data Source
BBS (2011), Satellite Imagery (2019), RHD (2020), Esri, World Imagery-DigitalGlobe, GeoEye, Field Survey
Coordinate System: GCS WGS 1984
Datum: WGS 1984
Units: Degree


Surface Water Sampling Location Map
Environmental Monthly Report for Bangladesh Regional Waterway Transport Project -1
0 0.425 0.85 1.7
km
Legend
Surface Water Sampling Location (Route 7&8)
Surface Water Sampling Location (Route 9)
Union HQ
Union Boundary
Upazila Boundary
District Boundary
Division Boundary
River Network
Bangladesh
India
Project Site
Bay of Bengal
Myanmar
SW-1
SW-2
SW-3
SW-4
Narsingdi
Brahmanbaria
Barikandi
Salimganj
Paharikandi
Purba Tezkhali
Meghna River
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Data Source
BBS (2011), Satellite Imagery (2019), RHD (2020), Esri, World Imagery-DigitalGlobe, GeoEye, Field Survey
Coordinate System: GCS WGS 1984
Datum: WGS 1984
Units: Degree


DM-1
DM-2
DM-3
Narsingdi
Brahmanbaria
Barikandi
Salimganj
Pahariakandi
Purba Tezkhali
Meghna River
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Dredging Material Sampling Location Map
Environmental Monthly Report for Bangladesh Regional Waterway Transport Project -1
0 0.425 0.85 1.7
km
Legend
Dredging Material Sampling Location (Route 7(&8)
Dredging Material Sampling Location (Route 9)
Union HQ
Union Boundary
Upazila Boundary
District Boundary
Division Boundary
River Network
Bangladesh
India
Project Site
Bay of Bengal
Myanmar
Data Source
BBS (2011), Satellite Imagery (2019), RHD (2020), Esri, World Imagery-DigitalGlobe, GeoEye, Field Survey
Coordinate System: GCS WGS 1984
Datum: WGS 1984
Units: Degree


sedQ-1
Narsingdi
Brahmanbaria
Barikandi
Salimganj
Pahariakandi
Purba Tezkhali
Meghna River
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Sediment Sampling Location Map
Environmental Monthly Report for Bangladesh Regional Waterway Transport Project -1
0 0.425 0.85 1.7
km
Legend
Sediment Quality Sampling Locations
Union HQ
Union Boundary
Upazila Boundary
District Boundary
Division Boundary
River Network
Bangladesh
India
Project Site
Bay of Bengal
Myanmar
Data Source
BBS (2011), Satellite Imagery (2019), RHD (2020), Esri, World Imagery-DigitalGlobe, GeoEye, Field Survey
Coordinate System: GCS WGS 1984
Datum: WGS 1984
Units: Degree

ANNEX VI: Application to the LG representative for seeking support



বাংলাদেশ অভ্যন্তরীণ নৌ-পরিবহন কর্তৃপক্ষ (বিআইডব্লিউটিএ)
প্রকল্প পরিচালকের দপ্তর
বাংলাদেশ আঞ্চলিক অভ্যন্তরীণ নৌ-পরিবহন প্রকল্প-১ (বিআরডব্লিউটিপি-১)
বিএসসি টাওয়ার (২০ তলা), ২-৩ রাজউক এভিনিউ, মতিঝিল বা/এ, ঢাকা-১০০০।

নথি নং- ১৮.১১.০০০০.১৮১.১৪.৩০৮.২৩.৬৫৬ তারিখঃ ২৪ জানুয়ারি, ২০২৪

জেলা প্রশাসক
শরীয়তপুর।

বিষয়ঃ বিশ্বব্যাংকের অর্থায়নে বিআইডব্লিউটিএ কর্তৃক বাস্তবায়নাধীন "বাংলাদেশ আঞ্চলিক অভ্যন্তরীণ নৌপরিবহন প্রকল্প-১" শীর্ষক প্রকল্পের অধীনে মেঘনা ও আড়িয়াল খাঁ নদীতে ড্রেজিং কাজ বাস্তবায়ন ও ড্রেজড ম্যাটেরিয়াল ব্যবস্থাপনা প্রসঙ্গে।

বিশ্বব্যাংকের অর্থায়নে বাংলাদেশ অভ্যন্তরীণ নৌ-পরিবহন কর্তৃপক্ষ (বিআইডব্লিউটিএ) কর্তৃক বাস্তবায়নাধীন "বাংলাদেশ আঞ্চলিক অভ্যন্তরীণ নৌপরিবহন প্রকল্প-১ (চট্টগ্রাম-ঢাকা- আশুগঞ্জ ও সংযুক্ত নৌ-পথ খনন এবং টার্মিনালসহ আনুষাঙ্গিক স্থাপনাদি নির্মাণ) (১ম সংশোধিত)" শীর্ষক প্রকল্পের অধীনে BRWTP-W1A-Lot-03 (OPBC Works of Development Dredging with Maintenance and Aids to Navigation with Installation Along Inland Waterway Routes 12, 13, 13a, 15 & 16, 17 and 21) প্যাকেজভূক্ত কাজের জন্য Dharti (India)-Banga (Bangladesh) Joint Venture প্রতিষ্ঠানের সাথে ১৪/০৫/২০২২ তারিখে চুক্তি সম্পাদন করা হয়। প্যাকেজটির অন্তর্ভূক্ত মেঘনা ও আড়িয়াল খাঁ নদীর রুট নং ১৩ আলুবাজার থেকে আটহাজার পর্যন্ত বিস্তৃত। আলোচ্য চুক্তির আওতায় নৌ রুটটি খনন কাজের জন্য চুক্তিকালীন ৬৬ মাসের প্রথম ৩০ মাস ক্যাপিটাল/ ডেভেলপমেন্ট ড্রেজিং সম্পাদন করা হবে ও পরবর্তী ৩৬ মাস মেইনটেনেন্স ড্রেজিং করে উক্ত নৌ-রুটের নাব্যতা বজায় রাখা হবে। বর্ণীত চুক্তির আধীনে আলোচ্য রুটের শরীয়তপুর জেলার সদর ও ভেদরগঞ্জ উপজেলার বিভিন্ন স্থানে পর্যায়ক্রমে খনন কাজ সম্পাদন করা হবে।

আলোচ্য চুক্তির আওতায় ড্রেজিং কাজ সম্পাদনের জন্য ঠিকাদার কর্তৃক ইতোমধ্যে উল্লেখিত রুটে হাইড্রোগ্রাফিক সার্ভে কাজ সম্পাদন করে ড্রেজিং এলাকা নির্ধারন করা হয়েছে। উল্লেখ্য, আলোচ্য ড্রেজিং কাজ তত্ত্বাবধান এবং পর্যবেক্ষণের জন্য আন্তর্জাতিক পরামর্শক প্রতিষ্ঠান JPZ-DEMAS-JCL Joint Venture নিয়োজিত আছে। ড্রেজিং কাজ সুষ্ঠুভাবে বাস্তবায়নের নিমিত্তে সর্বাত্মক প্রশাসনিক সহযোগিতা এবং ড্রেজড ম্যাটেরিয়াল প্রতিস্থাপনের জন্য ড্রেজিংকৃত এলাকায় নদীর পাশে খাস জমি, মসজিদ, মাদ্রাসা, স্কুল, কলেজ ইত্যাদি স্থান অথবা ব্যক্তিমালিকানাধীন নিচু জায়গা পাওয়ার ব্যাপারে আপনার সহযোগিতা একান্তভাবে প্রয়োজন। উল্লেখ্য যে, বিআইডব্লিউটিএ'র ড্রেজিং কাজের ড্রেজড ম্যাটেরিয়াল সুষ্ঠুভাবে ব্যবস্থাপনার উদ্দেশ্যে নৌপরিবহন মন্ত্রণালয় কর্তৃক জেলা প্রশাসকের নেতৃত্বে "জেলা ড্রেজড ম্যাটেরিয়াল ব্যবস্থাপনা কমিটি" গঠন করা হয়েছে।

এমতাবস্থায়, উপরোক্ত বর্ণনার আলোকে "বাংলাদেশ আঞ্চলিক অভ্যন্তরীণ নৌপরিবহন প্রকল্প-১" শীর্ষক প্রকল্পটির কাজ বাস্তবায়নের স্বার্থে ড্রেজিংকৃত মাটি প্রতিস্থাপন/ সংরক্ষণের জন্য ড্রেজিং এলাকার নিকটবর্তী নদীর দু'পাশে পর্যাপ্ত জায়গা প্রয়োজন। এ ব্যাপারে আপনার প্রশাসনিক সহযোগীতা এবং ড্রেজড ম্যাটেরিয়াল প্রতিস্থাপনের জায়গা প্রাপ্তিতে সহায়তা প্রদান করার জন্য সংশ্লিষ্ট উপজেলা প্রশাসনকে নির্দেশনা প্রদানে বিশেষভাবে অনুরোধ করা হলো।

সংযুক্তিঃ জেলা ড্রেজড ম্যাটেরিয়াল ব্যবস্থাপনা কমিটি (পরিপত্র) ও রুট ম্যাপ।

স্বাক্ষরিত/-
(মোঃ আইয়ুব আলী)
অতিরিক্ত প্রধান প্রকৌশলী
ও
প্রকল্প পরিচালক
বিআরডব্লিউটিপি-১ প্রকল্প, বিআইডব্লিউটিএ।

অনুলিপি (জ্যেষ্ঠতার ভিত্তিতে নয়):
১। উপজেলা নির্বাহী কর্মকর্তা, শরীয়তপুর সদর, শরীয়তপুর।
২। উপজেলা নির্বাহী কর্মকর্তা, ভেদরগঞ্জ, শরীয়তপুর।
৩। সমন্বয় কর্মকর্তা, চেয়ারম্যান মহোদয়ের দপ্তর, বিআইডব্লিউটিএ, ঢাকা।
৪। সদস্য (প্রকৌশল) মহোদয়ের ব্যক্তিগত সহকারী, বিআইডব্লিউটিএ, ঢাকা।
৫। ঠিকাদারী প্রতিষ্ঠান Dharti-Banga Joint Venture.
৬। পরামর্শক প্রতিষ্ঠান JPZ-DEMAS-JCL Joint Venture.

২৫/১/২৪
UNO অফিস, সদর, শরীয়তপুর

অতিরিক্ত প্রধান প্রকৌশলী
ও
প্রকল্প পরিচালক
বিআরডব্লিউটিপি-১ প্রকল্প, বিআইডব্লিউটিএ।