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Bangladesh

Bangladesh Inland Water Transport Authority (BIWTA)

The World Bank



MONTHLY PROGRESS REPORT

FEBRUARY 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**



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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 February, dredging commenced on Routes 13, 21, and 16, with samples collected from four locations on routes 12, 13, and 13a of Lot-3. Air and noise quality remained within standard limits throughout all monitoring locations. The highest noise level recorded was 68.34 dBA near Chandpur Boro station on Route-12 due to local vehicle movements. A fisheries survey along River Routes 12, 13, and 13a identified ten fish species and two crustacean species, with no observed fish mortality or sightings of Ganges River Dolphins or freshwater turtles.

In February 2024, monthly environmental monitoring was conducted along Route-9 in the Bancharampur-Salimganj area and in the Khodadila area of Narshingdi (Routes 7 & 8). The monitoring results indicated that particulate concentrations and the quality measurements were within standard limits. Dredging activities took place in Birgaon village, Narsingdi (Routes 7 & 8), as well as in Baherchar and Barail villages in Brahmanbaria on Route 9. Fisheries surveys were also carried out on these routes.

The surveys recorded eleven fish species and two crustacean species in Routes 7 & 8. In contrast, fishing activities in Route 9 were not observed, attributed to a significant reduction in water levels. Furthermore, there were no sightings of freshwater turtles in the vicinity of the dredging areas, embankments, or adjacent localities. Conversations with locals and fishermen along Routes 7 & 8 and 9 also confirmed the absence of turtle sightings in the river or surrounding areas in recent months.

Traffic-related issues were absent, and safety measures, including well-maintained fire extinguishers and first aid boxes, were in place. No grievances were reported, indicating a positive work environment. New employee safety procedures were implemented during the reporting month. Overall, no significant environmental impacts were detected.

In February 2024, Lot-2 contractor dredged 2.2 km on Route 9 (Class III, length 80km, Titas River) and 1.1 km on Route 7 & 8 (Class III, Length 30 km, Upper Meghna River). From the beginning, they have cumulatively dredged 7.1 km on Route 9 from March 2023 to January 2024. Moreover, they have mobilized six additional dredgers on Route 9 during this month. The main challenge is failing to provide continuous operation of dredgers due to frequent machinery breakdown, pipeline shortages and low manpower. Besides, the Lot-2 contractor has done environmental quality control surveys on route 7 & 8 and 9.

The Lot-3 contractor carried out 550 m of emergency dredging on Route 21, 570 m of dredging on Route 16 and 446 m of dredging on Route 13 in this reporting period. Besides, they have done Hydrographic Baseline Survey on Route 13 and 16.

The Consultants activities during the Reporting Period

Throughout this month, the field team diligently visited both Lot-2 and Lot-3 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, several 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.

Table of Contents

EXECUTIVE SUMMARY	2
Background	2
Table of Contents	3
List of Figures	4
List of Tables	4
Abbreviation	5
CHAPTER 01:	6
PROJECT DESCRIPTION IN A BRIEF	6
CHAPTER 02:	7
SALIENT FEATURES & MONTHLY PROGRESS	7
2.1 PROGRESS OF BRWTP-S1A:	7
2.1.1: Development and Maintenance Dredging Works:	7
2.1.2: Environmental Quality Assessment:	7
2.1.3: Social and Resettlement Aspects:	8
2.1.6: Progress and Coordination Meetings of S1A Consultant:	9
2.1.4 Grievance Redressal Mechanism (GRM):	11
2.1.5 ESHS, Worker Employment and OHS Status:	11
2.2 PROGRESS OF LOT-2 (GULF COBLA-KARNAFULY JV) CONTRACTOR:	12
2.2.1 Development and Maintenance Dredging Works:	12
2.2.2 Environmental Quality Assessment of Lot-2 Site:	12
2.2.3 Social and Resettlement Aspects at Lot-2 Site:	14
2.3 PROGRESS OF LOT-3, (DHARTI-BANGA JV) CONTRACTOR:	16
2.3.1 Development and Maintenance Dredging Works:	16
2.3.2 Environmental Quality Assessment of Lot-3 Site:	16
2.3.3 Social and Resettlement Aspects at Lot-3 Site:	19
CHAPTER 03:	20
ACHIEVEMENT OF LAST MONTH PLAN AND NEXT MONTH PLAN	20
.....	20
3.1 ACHIEVEMENT OF LAST MONTH:	20
S1A	20
Lot-2	20
Lot-3	20
3.2 NEXT MONTH PLAN:	20
S1A	20
Lot-2	20
Lot-3	20
CHAPTER 04: CONCLUSION AND/OR RECOMMENDATIONS	21
CHAPTER 05: ANNEXURE	22
ANNEX-I: Project location and River Boundary	22

ANNEX -II: Photos: January Activities in Pictures	24
ANNEX III: Laboratory Test Results, January 2024	24
ANNEX IV: Checklists	34
ANNEX V: Location of Environmental Sample Collection	34
ANNEX VI: Application to the LG representative for seeking support.....	50

List of Figures

Figure 1: Water Boundary of All Routes under Lot-2.....	22
Figure 2: Water Boundary of All Routes under Lot-2.....	22
Figure 3: Water Boundary of All Routes under Lot-3.....	23
Figure 4: Route 21 Water Boundary.....	23
Figure 5: Route 21 Water Boundary.....	23

List of Tables

Table 1: Consultation with Local Stakeholders, Lot-2 site, February 2024	8
Table 4: Field Activity of BRWTP-S1A at Lot-3 Site	9
Table 2: Interaction with Client/Contractors and other stakeholder (February, 2024)	10
Table 3: ESHS Status at a Glance in February 2024	11
Table 7: Environmental Quality Assessment for February 2024 for Lot-2	12
Table 5: Compliance Status for February 2024 for Lot-2	13
Table 6: Good Faith Agreements (GFA), Lot 2, Route-09, (District: Brahmanbaria, Narsingdi and Cumilla).	14
Table 7: Environmental Quality Assessment for February 2024 for Lot-3	16
Table 8: Compliance Status for February 2024 for Lot-3	17
Table 9: Good Faith Agreements (GFA), Lot-03, Route-21, Route-16, Route-13 (District: Bhola, Barisal and Shoriotpur).	19

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	:	21 st December, 2022; Duration of 66 months
Date of Commencement	:	6 th 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

2.1 PROGRESS OF BRWTP-S1A:

2.1.1: Development and Maintenance Dredging Works:

Lot-2:

In February 2024, Lot-2 contractor dredged 2.2 km on Route 9 (Class III, length 80km, Titas River) and 1.1 km on Route 7 & 8 (Class III, Length 30 km, Upper Meghna River). From the beginning, they have cumulatively dredged 7.1 km on Route 9 from March 2023 to January 2024. Moreover, they have mobilized six additional dredgers on Route 9 during this month. The main challenge is failing to provide continuous operation of dredgers due to frequent machinery breakdown, pipeline shortages and low manpower. Besides, the Lot-2 contractor has done environmental quality control surveys on Routes 7 & 8 and 9.

Lot-3:

The Lot-3 contractor carried out 550 m of emergency dredging on Route 21, 570 m of dredging on Route 16 and 446 m of dredging on Route 13 in this reporting period. Besides, they have done Hydrographic Baseline Survey on Route 13 and 16. Moreover, they did environmental quality control surveys on Route 16, Route 13 and 21.

Update information on Navigational Aids in February 2023:

In this reporting month S1A team visited PC poles manufacturing yard. The PC pole making process as observed. Dimensions of various components to make P.C. poles were recorded. Required instructions given to both Contractors for Lot-02 & Lot-03 Advised to take special precautionary measures in order to avoid any endanger during manufacturing process of P.C poles as Aids to Navigation.

2.1.2: Environmental Quality Assessment:

In February, dredging commenced on routes 13, 21, and 16, with samples collected from four locations on routes 12, 13, and 13a of Lot-3. Lot-2's contractor failed to submit their monthly report, resulting in S1A consultant omitting the environmental assessment for Lot-2's dredging routes.

Air and noise quality remained within standard limits throughout all monitoring locations. The highest noise level recorded was 68.34 dBA near Chadpur Boro station on Route-12 due to local vehicle movements.

A fisheries survey along River Routes 12, 13, and 13a identified ten fish species and two crustacean species, with no observed fish mortality or sightings of Ganges River Dolphins or freshwater turtles.

In February 2024, monthly environmental monitoring was conducted along Route-9 in the Bancharampur-Salimganj area and in the Khodadila area of Narshingdi (Routes 7 & 8). The monitoring results indicated that particulate concentrations and the quality measurements were within standard limits. Dredging activities took place in Birgaon village, Narsingdi (Routes 7 & 8), as well as in Baherchar and Barail villages in Brahmanbaria on Route 9. Fisheries surveys were also carried out on these routes.

The surveys recorded eleven fish species and two crustacean species in Routes 7 & 8. In contrast, fishing activities in Route 9 were not observed, attributed to a significant reduction in water levels. Furthermore, there were no sightings of freshwater turtles in the vicinity of the dredging areas, embankments, or adjacent localities. Conversations with locals and fishermen along Routes 7 & 8 and 9 also confirmed the absence of turtle sightings in the river or surrounding areas in recent months.

2.1.3: Social and Resettlement Aspects:

During this reporting period, 65 disposal sites have been chosen within the Lot-2 and Lot-3 areas. The process of selecting dykes is in progress, with involvement from representatives of local governments and community members. To facilitate smooth execution, the project authority has submitted an application to local government representatives, requesting their support and informing them of the project details. However, progress in February 2024 has been minimal, with no land lease agreements finalized during this time frame.

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 Local Level Consultation of S1A Consultant in February 2024:

Table 1: Consultation with Local Stakeholders, Lot-2 site, February 2024

Sl. No.	Date	Meeting Agenda and Location/Venue	Participants
1	14 February, 2024	Discussion on Dyke selection for Route-10 and Route-11 (Meghna and Gumti River) at Daudkandi, Cumilla.	Land owners, local elites and LG representatives. S1A field Team and Lot-2 Contractors representatives.
2	17 February, 2024	Discussion on the preparation of new dykes and the potential locations for additional dykes along Route-09 near the Titus River in Salimganj, Bancharampur, Brahmanbaria. Also, assess the capability of the dredging equipment and other essential machinery.	PIU representative, S1A field Team and Lot-2 Contractors representatives.
3	20 February, 2024	Discussion on River Cutting Channel of Route No-09 and updating monitoring visit reporting system. At Lot-2 Office, Brahmanbaria.	S1A field Team and Lot-2 Contractors representatives.
4	22 February, 2024	Discussion with Land owners on Dyke selection for Route-10 and Route-11 (Meghna and Gumti River) at Daudkandi, Cumilla.	Land owners Mr. Md. Kader Mia, Mr. Zahurul Islam Gong and Mr. Kalai Mia. for three dykes. S1A and Lot-2 representatives.
5.	24 February, 2024	Progress meeting on dredging work at Lot-2 contractors' office, Salimganj, Brahmanbaria.	Planning ministry consultant team, BIWTA, PIU, S1A Consultant team and Karnafuly contractor (Lot-2) team.
6.	27 February, 2024	Progress meeting on overall dredging work, dyke condition and machinery availability including dredger at Lot-2 contractors' office, Salimganj, Brahmanbaria.	S1A Consultant team and Karnafuly contractor (Lot-2) team.
7.	28 February, 2024	Discussion with Land owners on Dyke selection for Route-10 and Route-11 (Meghna and Gumti River) at Daudkandi, Cumilla.	S1A Field team and Karnafuly contractor (Lot-2) team.

Table 2: Consultation with Local Stakeholders, Lot-3 site, February 2024

Sl. No.	Date	Meeting Agenda and Location/Venue	Participants
1	01 February, 2024	Discussion on Dyke selection for dredging work at Route13 (Alu Baazar Ferighat).	Land owner, S1A Consultant team and contractors Representative (Lot-3).
2	05 February, 2024	Site inspection for dredging works/pipe line estimate survey and discussion/Meeting with Banga contractor representatives at Route 21.	Land owner, S1A Consultant field team and contractors Representative (Lot-3).
3	11 February, 2024	Discussion on Dyke selection and document Collection for selected dyke of Route16 (Bheduria).	Land owner, S1A Consultant field team and contractors Representative (Lot-3).
4	14 February, 2024	FGD on Dyke selection with local people and land owner at Mithuya Village of Patarhat.	Local Government members and Land owner, S1A Consultant team and contractors Representative (Lot-3).
5.	19 February, 2024	For finding out the land of new dykes and Discussion with the land owners at route 13 (Alubazar)	Local Government members and Land owner, S1A Consultant team and contractors Representative (Lot-3).
6.	20 February, 2024	Final Discussion with the land owners for selecting the lands of dykes at route 13 (Alubazar). Decision to begin pipe setting and other activities of dyke preparation.	Local Government members and Land owner, S1A Consultant team and contractors Representative (Lot-3).
7.	21 February, 2024	To visit the pipe setting activities at Dyke no 2 of route 13. And Discussion with other landowners for selecting new dykes at Alubazar area.	S1A Consultant team and contractors Representative (Lot-3)

2.1.3.4 Field Visit of BRWTP-S1A Consultant in February 2024:

Table 3: Field Activity of BRWTP-S1A at Lot-2 Site

Serial No	Date	Activity	Route name & Route number	Remarks
1.	03 February, 2024	To observe BM Fly and Gauge Connection	Route-09, Lot- 02	
2.	10 February, 2024	To visit the selected Dykes near Gumti and Meghna River at Daudkandi	Route-10 & 11, Lot-2	
3.	18 February, 2024	To monitor the Engineering Survey at Narsingdi Northern and southern approach.	Route- 7&8, Lot-02	
4.	20. February, 2024	To Visit and observe the condition of selected Disposal areas.	Route No-09. Lot-02, (Brahmanbaria)	
	27 February, 2024	During the visit, representatives from the Lot 2 contractor reported the following: Currently, 8 dredgers are positioned on Route 09, with 5 actively working in two shifts for an average of 15 hours daily, employing 16 staff split across these shifts. They've just begun full operations. The plan is to increase to 3 shifts, covering 24 hours with 24 workers, aiming for 18 hours of daily dredging from March 5, 2024	Route No-09, Route- 7&8, Lot-02	
5.	28 February, 2024	To Select the Lands for Dykes	Route-10 & 11, Lot-2 (Daudkandi)	

Table 2: Field Activity of BRWTP-S1A at Lot-3 Site

Serial No	Date	Activity	Route name & Route number	Remarks
1.	01 February 2024	Site visit at Laharhat-Bheduria route 21(Lot-3) by international consultant Mr. Klass Ooms, BRWTP-PIU and S1A consultant team.	Lot-3, R-21 (Laharhat -Badhuria)	
		Site visit at Patarhat-Bheduria route 16(Lot-3) by international Hydrographer and Mapping specialist consultant Mr. Klass Ooms, BRWTP-PIU and S1A consultant team.	Lot-3, R-16 (Patarhat-bheduria)	

Serial No	Date	Activity	Route name & Route number	Remarks
		To visit Route 13 dredging work near Alubazar Ferighat and visited the selected dykes.	Lot-3, R-16 (Alu Bazar)	
2.	02 February 2024	Hydrographic detail survey ongoing at Bheduria jointly S1A consultant and Banga contractor representatives.	Route: 21, Lot-3 (Bheduria)	
3.	03 February 2024	Hydrographic detail survey today finished at Bheduria by jointly S1A consultant and Banga contractor representatives.	Route: 21, Lot-3,	
4.	05 February 2024	Site inspection for dredging works/pipe line estimate survey and discussion/Meeting with Banga contractor representatives	Route 21 (Laharhat- bheduria)	
5.	06 February 2024	Site inspection for dredging cutting works at alur bazar launch ghat area	Route 13 (Alurbazar ghat-horina, chandpur)	
6.	08 February 2024	Dredging work inspection and emergency dyke broken part repairing supervision work at Patarhat route 16 (Dyke no.1)	Route 16 (Patarhat- Bheduria)	
7.	13 February 2024	Engineering survey & site inspection at Bheduria jointly S1A consultant and Banga contractor representatives.	Route: 21, Lot-3.	
8.	14 February 2024	Engineering survey & site inspection at Patarhat (route 16) jointly S1A consultant and Banga contractor representatives.	Route: 16, Lot-3.	
9.	19 February 2024	To visit the area near Rout 16 for finding new dykes.	Route: 16, Lot-13	
10.	21 February 2024,	Visit at Patarhat with Bheduria route 16 and route 21 with WB , BIWTA representatives along with other participants such as PIU, S1A Consultant team & Banga contractor team.	Lot_3, Site	
11.	26 February 2024	To monitor sample collection for Environmental test of route 12, 13 & 13a	Lot_3, Route: 12, 13 & 13a	

2.1.3.4: Progress and Coordination Meetings of S1A Consultant:

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

SN	Date	Venue	Meeting Agenda	Participants
1	14 February, 2024	Conference Room, PIU at Motijheel, Dhaka	Coordination and progress meeting on Dredging work with Lot2 and Lot3 contractor.	PIU, S1A, Lot2 and Lot3 contractor's representatives.
2	20 February, 2024	WB Office, Agargaon, Dhaka	Progress meeting on Dredging work with Lot2 and Lot3 contractor	WB, PIU, S1A, Lot2 and Lot3 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 February 2024

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 February 2024, Lot-2 contractor dredged 2.2 km on Route 9 (Class III, length 80km, Titas River) and 1.1 km on Route 7 & 8 (Class III, Length 30 km, Upper Meghna River). From the beginning, they have cumulatively dredged 7.1 km on Route 9 from March 2023 to January 2024. Moreover, they have mobilized six additional dredgers on Route 9 during this month. The main challenge is failing to provide continuous operation of dredgers due to frequent machinery breakdown, pipeline shortages and low manpower. Besides, the Lot-2 contractor has done environmental quality control surveys on route 7 & 8 and 9. On the month of February 2024, the SIA 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.	Cutting Length(m)	Cutting Volume (m ³)
01.	Karnafuly -05	01 to 29 February	9	394	22441
02.	Karnafuly -07	01 to 29 February	9	242	12761
03.	Pranto-01	01 to 29 February	9	455	24153
04.	MCD-01	01 to 29 February	9	568	29874
05.	REVE-03	01 to 29 February	9	570	25856
06.	Kafela -01	01 to 29 February	7&8	1136	62329

2.2.2 Environmental Quality Assessment of Lot-2 Sites:

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

SI No.	Item	Parameters	Baseline Data of Route 09	Present Data of Route 09	Baseline Data of Route 07	Present Data of Route 07&08	SIA Remarks ¹ February 2024
			January 2023	February 2024	January 2023	February 2024	
1	Air Quality	SPM	140.34	172.93	153.67	161.46	*WAL
		PM10	58.34	82.19	75.42	77.85	WAL
		PM2.5	31.43	60.88	51.33	59.62	WAL
		SO2	15.29	31.94	27.46	29.26	WAL
		NO2	12.75	40.31	15.21	35.48	WAL
		CO	1.3	0.8	1.4	0.7	WAL
2	Noise Level	LEQ day	61.6	64.4	69.8	55.6	WAL
		L _{max}	76	70.3	74.3	63.7	WAL
		L _{min}	42.8	48.9	40.4	42.8	WAL
3	Surface Water Quality	Temperature	22.1	30.7	22.1	31.2	WAL
		EC	170	148	610	158	WAL
		pH	7.20	7.62	7.25	7.72	WAL
		TDS	160	312	320	326	WAL
		DO	4.5	6.0	5.2	5.3	WAL
		BOD5	10	4.6	2.2	5.4	WAL
		TSS	83	187	87	198	WAL
4	Riverbed Sediment	Lead (Pb)	9.79		12.15		WAL
		Cadmium (Cd)	0.054		0.023		WAL
		Chromium (Cr)	15.94		17.37		WAL
		Zinc (Zn)	26.32		26.84		WAL
		Arsenic (As)	1.96		2.54		WAL
5	Dredged Material	Lead (Pb)	-		-		WAL
		Cadmium (Cd)	-		-		WAL
		Chromium (Cr)	-		-		WAL
		Zinc (Zn)	-		-		WAL
		Arsenic (As)	-		-		WAL

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

¹ Detal remarks are in Chapter 2

Table 6: Compliance Status for February 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 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 were observed . During field visit no fish mortality visible.	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 fauna species. Check the starting of the distributary and the opening of the distributary at the Meghna side for dolphins.
Sediment Dispersion	Not measured	-	-	-	-	N	Contractors were notified to measure sediment plume on 1 st March 2023	No action taken or data 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		-	-	C	-	Colored collection bins for organic and non-organic solid	Mention later stages, what happens after collection from waste

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		
	maintained						wastes; no wastes in the river	bins
Cultural and archeological Sites	Preservation of such sites		x	-	x	x	Stop dredging, report to the authorities	-
Waste water			-	-	-	P	-	-

Note: The table was prepared based on observations from the field visit.

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:1590/3267/3144/32 98/3515/1802/1803 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:1286/1351/1649/14 4/1563/127 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

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

Dyke No.	Route No	Land Owner		Land			Good Faith Agreement (GFA)
		Name and NID	Address	Description	Quantity (Decimal)	Quality of Land	
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
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

Dyke No.	Route No	Land Owner		Land			Good Faith Agreement (GFA)
		Name and NID	Address	Description	Quantity (Decimal)	Quality of Land	
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:

The Lot-3 contractor carried out 550 m of emergency dredging on Route 21, 570 m of dredging on Route 16 and 446 m of dredging on Route 13 in this reporting period. Besides, they have done Hydrographic Baseline Survey on Route 13 and 16. Moreover, they did environmental quality control surveys on Route 16, Route 13 and 21.

Location/ Section	Dredger	Month	Cutting Length (m)	Dredged Volume (Cum)
Route 21, Laharhat-Bheduria	Banga Jamuna	1-Feb-2024 to 29-Feb-2024	550	78,341
Route 16, Patarhat-Bheduria	Banga Sitalakhya	1-Feb-2024 to 29-Feb-2024	570	72,49
Route 13, Alu Bazar Launch Ghat to Horina	Banga Padma	1-Feb-2024 to 29-Feb-2024	446	47,362

2.3.2 Environmental Quality Assessment of Lot-3 Site:

The Lot-3 team did not submit the results for the riverbed sediment and dredged material samples during this reporting period, preventing the S1A team from assessing them.

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

SI No.	Item	Parameters	Baseline Data of Route 12	Route 12	Baseline Data of Route 13	Route 13	Baseline Data of Route 13a	Route 13a	S1A Remarks ² February 2024
				February 2024		February 2024		February 2024	
1	Air Quality	SPM	189.34	127.64	181.92	65.76	152.09	53.23	*WAL
		PM10	104.36	81.89	92.79	37.30	69.31	29.48	WAL
		PM2.5	58.93	35.52	51.34	37.30	31.76	18.89	WAL
		SO2	28.51	19.36	24.66	37.30	14.27	12.66	WAL
		NO2	39.60	24.85	32.92	37.30	24.31	15.20	WAL

² Detal remarks are in Chapter 2

		CO	1.6	0.7	1.2	0.5	0.8	0.5	WAL
2	Noise Level	LEQ day	51.3	68.34	62.3	62.12	63.7	59.67	WAL
		L _{max}	86.4	88.51	84.0	79.66	80.1	77.79	Mixed Area. Within baseline.
		L _{min}	30.9	40.54	35.2	37.40	36.8	36.71	WAL
3	Surface Water Quality	Temperature	22.3	24.6	22.4	24.1	22.3	24.6	WAL
		EC	290	190	280	235	280	225	WAL
		pH	7.82	8.66	7.57	8.91	6.67	8.10	WAL
		TDS	140	85	140	110	150	105	WAL
		DO	6.6	8.0	6.3	8.8	4.4	8.3	WAL
		BOD5	0.5	0.7	0.5	1.1	2.1	1.4	WAL
		TSS	26	33	30	41	39	42	WAL

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

Table 9: Compliance Status for February 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	About ten (10) species of fish and two (2) species of crustaceans were recorded from the survey. Along those surveys, some fisherman employed Current Jal (Gill Net) to fish in the riverbank region. The team did not witness any apparent fish mortality within and surrounding the dredging site and dredging material disposal area. The Ganges River Dolphin (Platanista gangetica) was not sighted. But Dolphin has been occasionally spotted in Isanbala ghat of Chandpur district, according to the discussion with local fishermen and people of Isanbala ghat area. Freshwater turtles were not directly observed in the dike area, dredging site, dredger placement location, or nearby local region. Local people of this region stated that, they did not observe turtle species past two years.	Mitigation measures not required	No mitigation measure is required in the reporting period	-	P	-		Advised to give more effort, and to spend more time for regular monitoring of the habitat and biodiversity.
Sediment Dispersion	Not measured	x	No mitigation measure is required in the reporting period	-	-	N	Contractors were notified to measure sediment plume on 1 st 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	No reports of riverbank erosion or flooding occurred during the reporting month.			-	P	-		Regular monitoring
Hydrological	Surveyed prior to dredging	x	x	x	x	x	x	x

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		
Conditions								
Drainage Congestion	No drainage congestion was observed during this month.				P	-	No reports of any drainage congestion	To be monitored regularly, early mornings and evenings
River Traffic/Transport	No traffic-related problems were identified	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 archeological Sites	Preservation of such sites		x	-	x	x	Stop dredging, 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: Mehendiganj 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 under Lot-2, Route 16 and 21 of Lot-3 on daily basis and related ESHS and GRM activities of Lot-2 and Lot-3.

Lot-2

- a) Completed 7.1 km of dredging of 20 km on Route 9, which is 36.4% dredging progress on Route 9 and 2.03 km of dredging of 5.8 km on Route 7 & 8, which is 35%
- b) Completed 46.5% of the 12,09,059 cubic meter (Revised BOQ Volume) and completed 58.1% of the 967,247 m³ (80% of the Revised BOQ Volume).
- c) Related Environmental, Social and GRM Activities have been conducted.

Lot-3

- a) Completed 550 m of emergency dredging on Route 21
- b) Completed 570 m of dredging on Route 16
- c) Completed 446m of dredging on Route 13
- 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) Need to dredge 17,520 m³ per day in order to meet 80% of the development dredging by the end of March 2024.
- c) Related Environmental, Social and GRM Activities

Lot-3

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

CHAPTER 05: ANNEXURE
ANNEX-I: Project location and River Boundary

LOT-2:

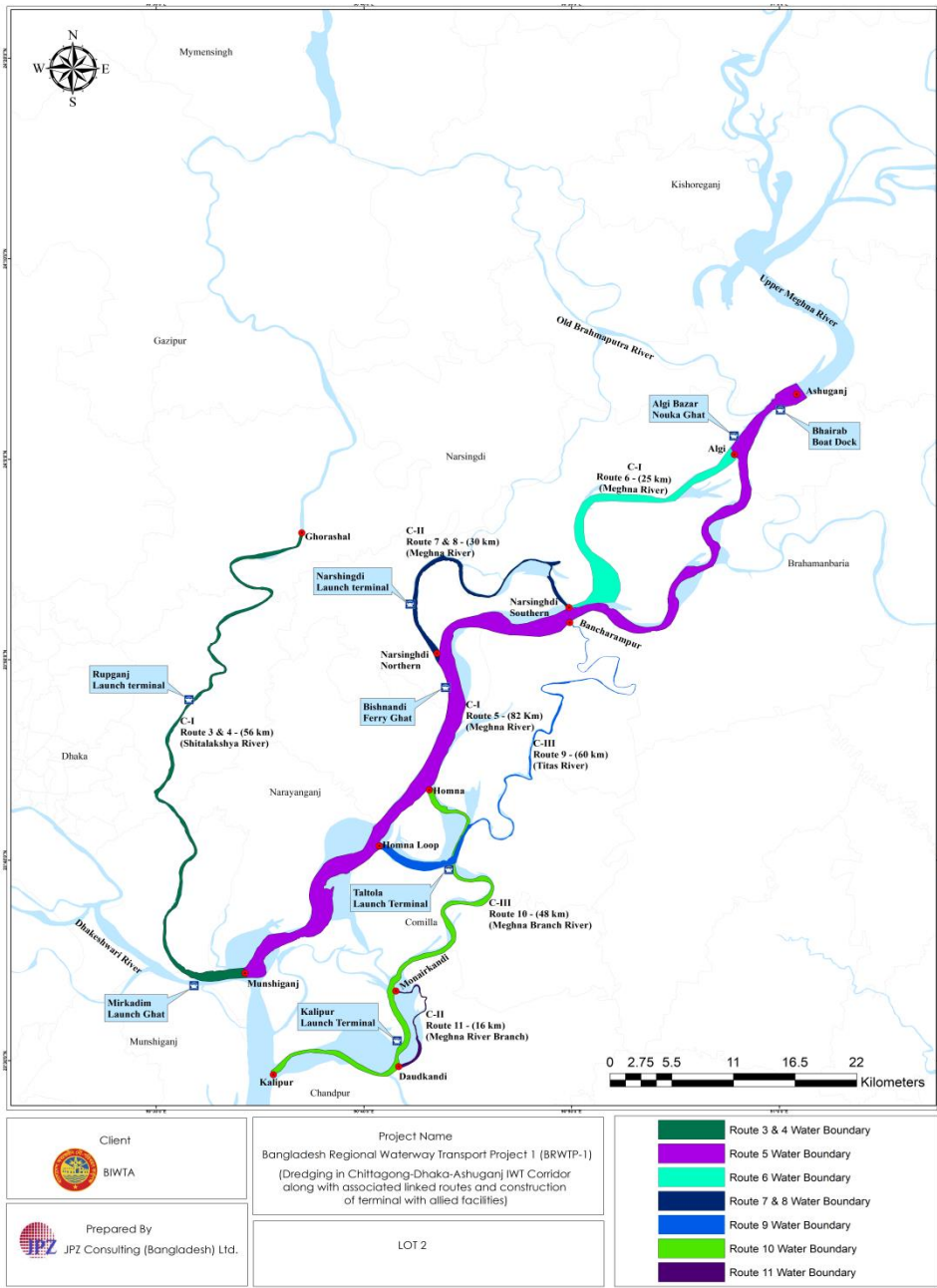


Figure 1: Water Boundary of All Routes under Lot-2

Figure 2: Water Boundary of All Routes under Lot-2
Figure 3: Water Boundary of All Routes under Lot-2

LOT-3:

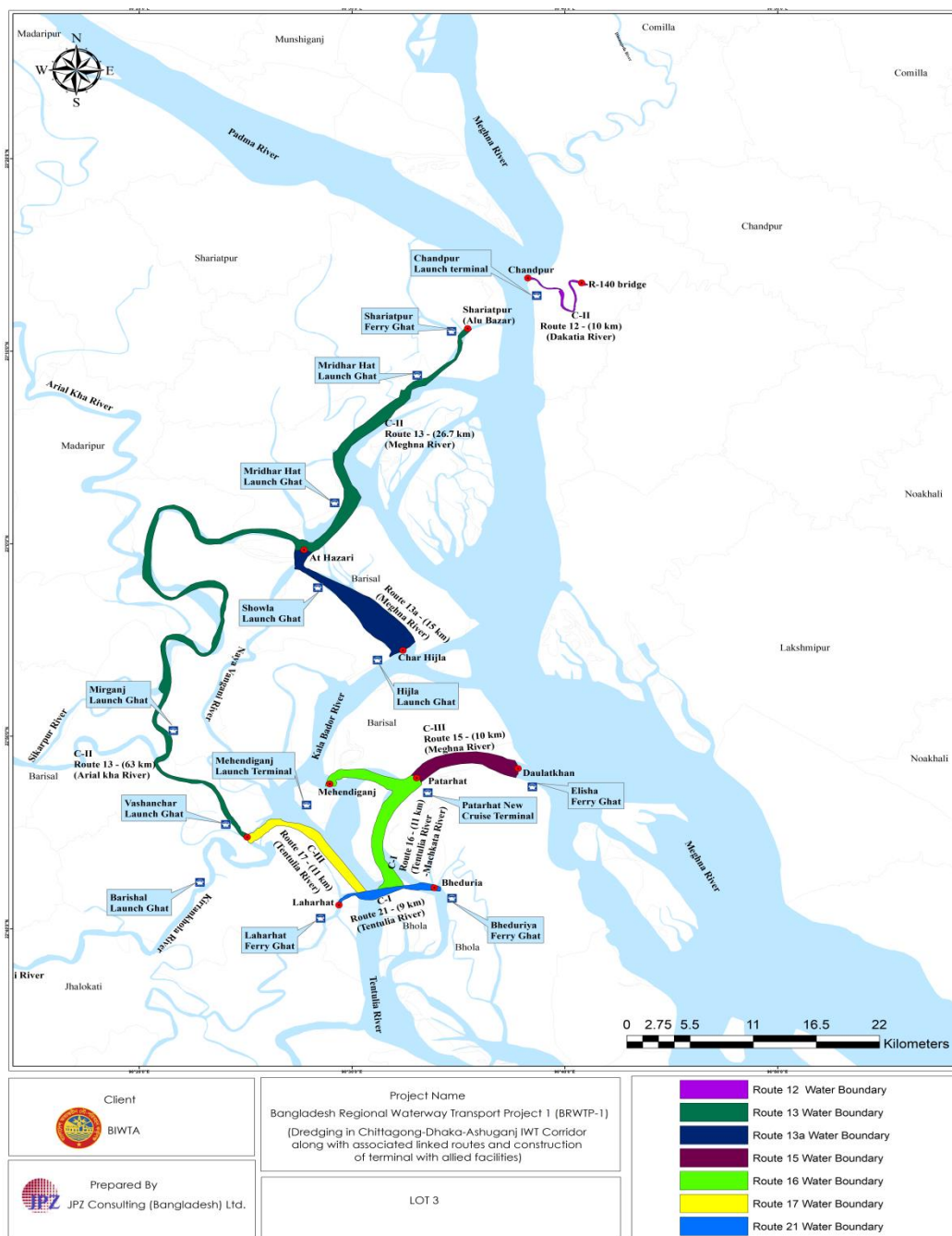


Figure 4: Water Boundary of All Routes under Lot-3

Figure 5: Route 21 Water BoundaryFigure 6: Water Boundary of All Routes under Lot-3

ANNEX -II: Photos: February Activities in Pictures

Environmental Sample Collection



Dykes



ANNEX III: Laboratory Test Results, February 2024




In order to conduct monthly and quarterly monitoring of the project, ELRC has engaged the services of "EQMS Laboratory" for testing and monitoring purposes of "BRWTP-1, LOT-2: OPBC Works of Development Dredging with Maintenance and Aids to Navigation with Installation along inland waterway Routes-3, 4, 5, 6, 7 & 8, 9, and 11" project. EQMS Laboratory holds accreditation from BAB and is entrusted with conducting tests for all environmental and ecological parameters. Furthermore, all results here are provided by the EQMS Laboratory.

Enclosure:

1. Lab Results in ELRC Format
2. BAB Accreditation Certificate of EQMS Laboratory
3. Lab Reports Provided by EQMS




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Ref: ELRC/Air Quality/2024308034

Project Name	:	BRWTP-1, LOT-2: OPBC Works of Development Dredging with maintenance and Aids to Navigation with installation along inland waterway Routes- 3 & 4, 5, 6, 7 & 8, 9,10, and 11
Monitoring Activity	:	Ambient Air Quality
Location	:	AQ 1: 23°52'55.15"N 90°49'30.70"E; Char Land beside of Meghna River (Route- 7&8)
	:	AQ 2: 23°52'52.43"N 90°49'23.57"E; Near Local Community beside Char Land (Route- 7&8)
	:	AQ 3: 23°50'5.97"N 90°51'21.59"E; Near Barail South Para (Route-9)
	:	AQ 4: 23°50'51.76"N 90°50'38.44"E; Near Salimganj Bridge (Route-9)
Monitoring Date	:	(06-07).02.2024
Reporting Date	:	01.03.2024

Description of Analysis:

Location	Sampling Date	Ambient Air Pollutants' Concentration in µg/m3					CO mg/m3
		SPM	PM10	PM2.5	SO2	NO2	
AQ1	06/02/24	168.87	80.49	61.47	30.58	38.29	0.7
AQ 2	06/02/24	161.46	77.85	59.62	29.26	35.48	0.7
AQ 3	07/02/24	172.93	82.19	60.88	31.94	40.31	0.8
AQ 4	07/02/24	173.68	85.71	61.95	34.83	42.45	0.8
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: PM₁₀ -Particulate Matter of a diameter of 10 microns or less. PM_{2.5} -Particulate Matter of a diameter of 2.5 microns or less, SO₂ -Sulphur Dioxide; NO₂ -Nitrogen-Dioxide; CO -Carbon Monoxide



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Ref: ELRC/Noise Level/2024308035

Project Name	:	BRWTP-1, LOT-2: OPBC Works of Development Dredging with maintenance and Aids to Navigation with installation along inland waterway Routes- 3 & 4, 5, 6, 7 & 8, 9,10, and 11.
Monitoring Activity	:	Noise Level
Location	:	NL1: 23°52'55.15"N 90°49'30.70"E; Char Land beside of Meghna River (Route- 7&8)
	:	NL2: 23°52'52.43"N 90°49'23.57"E; Near Local Community beside Char Land (Route- 7&8)
	:	NL3: 23°50'5.97"N 90°51'21.59"E; Near Barail South Para (Route-9)
	:	NL4: 23°50'51.76"N 90°50'38.44"E; Near Salimganj Bridge (Route-9)
Monitoring Date	:	(06-07).02.2024
Reporting Date	:	01.03.2024

Description of Analysis:

Location	Noise level (dB(A))			Bangladesh Standard (dB(A)) *	IFC EHS Guideline (2007)	Location setting
	Leq _{day}	L _{max}	L _{min}	Day	Day	
NL1	61.2	68.4	44.4	60	70	Mixed area
NL2	55.6	63.7	42.8	60	70	
NL3	64.4	70.3	48.9	60	70	
NL4	62.8	69.7	43.6	60	70	

Note:

*Ministry of Environment, Forest, and Climate Change. (2006). Noise Pollution (Control) Rules, 2006 (S.R.O. No. 212-Law/2006). The People's Republic of Bangladesh.

A-weighted decibel, abbreviated dB(A), is an expression of the relative loudness of sounds in air as perceived by the human ear. In the A-weighted system, the decibel values of sounds at low frequencies are reduced, as the ear is less sensitive to low audio frequencies, especially below 1000 Hz, than to high audio frequencies.



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Ref: ELRC/ Dredge Material /2024308038

Project Name	:	BRWTP-1, LOT-2: OPBC Works of Development Dredging with maintenance and Aids to Navigation with installation along inland waterway Routes- 3 & 4, 5, 6, 7 & 8, 9,10, and 11.
Description of Sample	:	Dredge Material – Lot 2
Location	:	DM1 - 23°52'40.92"N 90°49'33.54"E - Near Nodi Ghat Narsingdi (Route-7&8)
	:	DM2 - 23°49'52.20"N 90°51'8.61"E - Near Bishnurampur Nouka Ghat (Route-9)
	:	DM3 - 23°49'45.44"N 90°51'4.31"E - Near Bishnurampur Nouka Ghat (Route-9)
Sampling Date	:	(06-07).02.2024
Reporting Date	:	01.03.2024

Description of Analysis:

Parameter	Unit	Dredge Material – Lot 2			Methodology	Dutch Environmental Standard (mg/kg)
		DM1	DM2	DM3		
Lead	mg/kg	13.36	16.73	17.49	ICPMS	85
Cadmium	mg/kg	0.07	0.08	0.08	ICPMS	0.8
Chromium	mg/kg	15.73	13.28	14.56	ICPMS	100
Zinc	mg/kg	20.17	22.88	24.48	ICPMS	140
Arsenic	mg/kg	1.2	1.6	1.8	ICPMS	29

Note: ICPMS - Inductively coupled plasma mass spectrometry



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Ref: ELRC/Underwater Noise Level/2024308036

Project Name	:	BRWTP-1, LOT-2: OPBC Works of Development Dredging with maintenance and Aids to Navigation with installation along inland waterway Routes- 3 & 4, 5, 6, 7 & 8, 9,10, and 11.
Monitoring Activity	:	Noise Level
Location	:	UWNL1: 23°53'0.61"N 90°49'30.09"E; Near Nodi Ghat Narsingdi (Route-7&8)
	:	UWNL2: 23°50'2.49"N 90°51'18.58"E; Near Barail Gudaraghat (Route-9)
Monitoring Date	:	(06-07).02.2024
Reporting Date	:	01.03.2024

Description of Analysis:

Code	Location	L _{Avg} [dB (A)]	*Standard
UWNL1	Near Nodi Ghat Narsingdi (Route-7&8)	61.4	No International/ GoB Standard
UWNL2	Near Barail Gudaraghat (Route-9)	60.8	



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Ref: ELRC/Noise Level/ NLMM2024-02

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 23°13'50.83"N 90°38'24.76"E, (Route-12) NL2 23°10'39.56"N 90°34'58.01"E, (Route-13) NL3 23° 8'47.29"N 90°33'39.72"E, (Route-13) NL4 22°59'29.94"N 90°28'35.68"E, (Route-13a)
Monitoring Date	:	25.02.2024 – 27.02.2024

Description of Analysis:

Location	Noise level (dB(A)) ¹			Bangladesh Standard (dB(A)) ²	IFC EHS Guideline (2007) ³	Location setting
	Leq _{day}	L _{max}	L _{min}	Day	Day	
NL1	68.34	88.51	40.54	60	70	Mixed area
NL2	62.12	79.66	37.40	-	-	-
NL3	57.78	75.57	38.32	-	-	-
NL4	59.67	77.79	36.71	-	-	-

Note:

¹Ministry of Environment, Forest, and Climate Change. (2006). Noise Pollution (Control) Rules, 2006 (S.R.O. No. 212-Law/2006). The People's Republic of Bangladesh.

A-weighted decibel, abbreviated dB(A), is an expression of the relative loudness of sounds in air as perceived by the human ear. In the A-weighted system, the decibel values of sounds at low frequencies are reduced, as the ear is less sensitive to low audio frequencies, especially below 1000 Hz, than to high audio frequencies.

¹ A-weighted decibel, abbreviated dB(A), is an expression of the relative loudness of sounds in air as perceived by the human ear. In the A-weighted system, the decibel values of sounds at low frequencies are reduced, as the ear is less sensitive to low audio frequencies, especially below 1000 Hz, than to high audio frequencies.

²Ministry of Environment, Forest, and Climate Change. (2006). Noise Pollution (Control) Rules, 2006 (S.R.O. No. 212-Law/2006). The People's Republic of Bangladesh.

³ Guidelines values are for noise levels measured out of doors. Source: Guidelines for Community Noise, World Health Organization (WHO), 1999

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Ref: ELRC/Air Quality/ AQMM2024-02

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	: 25.02.2024 – 27.02.2024
Monitoring Location	: Route 12; (AQ-1)- 23°13'51.23"N 90°38'28.47"E Route 13; (AQ-2)- 23°10'44.73"N 90°34'58.42"E Route 13; (AQ-3)- 23° 9'4.74"N 90°33'59.94"E Route 13a; (AQ-4)- 22°59'33.47"N 90°28'15.91"E

Description of Analysis:

Location	Sampling Date	Ambient Air Pollutants' Concentration in µg/m ³					CO mg/m3
		SPM	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	
AQ-1 Route 12	25/02/2024	127.64	81.89	35.52	19.36	24.85	0.7
AQ-2 Route 13	26/02/2024	65.76	37.30	22.13	15.43	16.87	0.5
AQ-3 Route 13	26/02/2024	57.34	31.44	19.67	13.80	17.35	0.6
AQ-4 Route 13a	26/02/2024	53.23	29.48	18.89	12.66	15.20	0.5
Air Pollution (control) rules, 2022*		-	150	65	80	80	5
Method of Analysis		Particulates Sensor			High Sensitivity		
Instrument Use:		Light Scattering Nephelometer			Electrochemical		
Haz-Scanner TM (HIM, 6000)							

Note: * Air Pollution (Control) Rules, 2022

Legend: PM₁₀-Particulate Matter of a diameter of 10 microns or less. PM_{2.5}-Particulate Matter of a diameter of 2.5 microns or less, SO₂-Sulphur Dioxide; NO₂-Nitrogen-Dioxide; CO -Carbon Monoxide

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Ref: ELRC/ Underwater Noise Level/ UWNL2024-02

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 23°13'23.54"N 90°38'54.08"E, Route-12 UWNL2 23°10'41.81"N 90°34'59.47"E, Route-13 UWNL3 23° 8'54.51"N 90°33'55.46"E, Route-13 UWNL4 22°59'58.58"N 90°28'35.09"E, Route-13a
Monitoring Date	:	25.02.2024 – 27.02.2024

Description of Analysis:

Code	Location	L _{Avg} [dB (A)]	*Standard
		[dB (A)]	
UWNL1	Route 12	78.2	No standard of International/ GoB
UWNL2	Route 13	67.9	
UWNL3	Route 13	61.3	
UWNL4	Route 13a	68.2	

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Ref: ELRC/Surface Water Quality/ SWMM2024-02

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-12, 13, and 13a.
		SW1 - 23°13'20.18"N 90°38'57.90"E, Route 12
		SW2 - 23°10'51.78"N 90°35'3.37"E, Route 13
		SW3 - 23° 8'37.43"N 90°33'36.59"E, Route 13
		SW4 - 22°59'44.64"N 90°28'20.86"E, Route 13a
Sampling Date	:	25.02.2024 – 27.02.2024

Description of Analysis:

Parameters	Unit	Concentration Present (Route -12,13, & 13a)				Bangladesh Standard
		SW1	SW2	SW3	SW4	
Temperature	°C	24.6	24.1	24.2	24.6	-
EC	µS/cm	190	235	235	225	-
Turbidity	NTU	13.2	12.3	12.2	14.2	-
pH	-	8.66	8.91	8.65	8.10	6 - 9
TDS	ppm	85	110	110	105	1000
DO	mg/L	8.0	8.8	8.7	8.3	5 or more
Potassium	mg/L	8.8	8.9	8.3	8.6	-
Calcium	mg/L	30	39	38	39	-
Magnesium	mg/L	13	12.2	12.4	11.9	-
Phosphate	mg/L	0.3	0.5	0.4	0.3	0.05
Chloride	mg/L	6.1	5.8	5.4	8.9	-
Fluoride	ppm	0.14	0.11	0.13	0.15	-
Nitrate	mg/L	0.04	0.02	0.02	0.03	7.0
BOD5 (at 20°C)	mg/L	0.7	1.1	1.2	1.4	6 or less
Sulfate	mg/L	10	8	9	7	-
TSS	mg/L	33	41	39	42	-

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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Lot-2

Factors	Checklist Items		Dredging Activity			Comments/Compliance
			Daily	Monthly	Quarterly	
1. Permits and Explanation	1	EIA and Environmental Permits	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
	2	Explanation to the Local Stakeholders	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
	3	Signboards, Notice Boards	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
2. Physical Environmental Parameters Monitoring	1	Air Quality	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Supervised in 6 February at Norshingdi site and 7 and 8 February at solimgonj site.
	2	Surface Water Quality	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Supervised in 6 February at Norshingdi site and 7 and 8 February at solimgonj site.
	3	Solid Wastes	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Supervised in 6 February at Norshingdi site and 7 and 8 February at solimgonj site.
	4	Liquid Wastes	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Supervised in 6 February at Norshingdi site and 7 and 8 February at solimgonj site.
	5	Soil Contamination	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Supervised in 6 February at Norshingdi site and 7 and 8 February at solimgonj site.
	6	Noise and Vibration	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Supervised in 6 February at Norshingdi site and 7 and 8 February at solimgonj site.
	7	Underwater Noise	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Supervised in 6 February at Norshingdi site and 7 and 8 February at solimgonj site.
	8	Odor	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Supervised in 6 February at Norshingdi site and 7 and 8 February at solimgonj site.
	9	Riverbed Sediment	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Supervised in 6 February at Norshingdi site and 7 and 8 February at solimgonj site.
	10	Groundwater	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Supervised in 6 February at Norshingdi site and 7 and 8 February at solimgonj site.
3. Natural Environment	1	Protected Areas	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Route no. 07&08 and 09
	2	Habitat Type	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Route no. 07&08 and 09
	3	Hydrology	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Route no. 07&08 and 09
	4	Topography and Geology	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Route no. 07&08 and 09
	5	Dolphin Observation	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Route no. 07&08 and 09
	6	Fish Catch Examination	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Route no. 07&08 and 09
	7	Flora (Aquatic & Terrestrial)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Route no. 07&08 and 09
	8	Benthos (Micro & Macro)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Route no. 07&08 and 09
	9	Phyto- & Zoo-planktons	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Route no. 07&08 and 09
4. Social Environment	1	Resettlement	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
	2	Living and Livelihood	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
	3	Heritage	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
	4	Landscape	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	

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

	5	Ethnic Minorities and Indigenous Peoples	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
5. Occupational Health Safety	1	Work Permit/Contract	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
	2	Daily Toolbox Meeting - OHS	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
	3	Working Conditions		<input checked="" type="checkbox"/>		Fair
	4	Impact/Precaution during Dredging	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Not any major issue observed
	5	Accident Prevention Measures	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Contractors ESHS team visiting site and concerning all the Manpower
	6	Working Condition	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Fair
	7	Accommodation	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	House Boat
	8	Personal Protection Equipment	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Safety helmet, Safety vest, safety shoes, Hand gloves etc observed at site.
	9	Drinking Water	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Freshwater daily collect from tube well
	10	Sanitary Condition	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Good arrangement kept in House boat
6. Dredged Material Disposal Area	1	Agreement with Land Owner	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
	2	Land Use Type	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
	3	Dyke Design Approval	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
	4	Dyke Setback Distance	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
	5	Disposal Area Dyke Height	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
	6	Dyke Strengthened/Material Used*	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	When required then used.
7. Dredger	1	Carbon Emission	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Not found/observed at site for all route in lot-2
	2	Leakage	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
	3	Oil Spill	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
	4	Onboard Waste Management	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
	5	Noise and Vibration	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>	

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

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

	(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 docks comply with the country's emission standards? Are any mitigating measures taken?	Y
	(2) Water Quality	(a) Do pollutants, such as Suspended Solids (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
		(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

		(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

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

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

Checklist Items		Dredging Activity			Comments/Compliance
		Daily	Monthly	When and As Required	
1	Gauge reading & Water level (WL)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Average water level is 0.914 m
2	Connectivity with BM & TBM	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
3	Study Hydrographic Chart	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Chart is prepared for route 09, route 7 & 8 and route 11
4	Fixing Cutting Depth respect to existing WL as per design depth	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Average cutting depth is 2.388 m
5	Checking Dredging Alignment	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
6	Checking Dredged Activities as below;				
a	Dredging Hours	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
b	Cutting Length	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Total cutting length 4760 m
c	Cutting Depth	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Average cutting depth is 2.388 m
d	Cutting Width	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	25 m

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

	e	Dredged Volume	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Total volume 223036.491 m3
7		Supervising Dredged Material Disposal Area whether the Dykes are designed as per Design	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
8		Supervising Dredged Material Disposal Area whether the Dykes are capable to resist the pressure of disposed materials	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
9		Checking outlet of the compartment	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
10		Check whether the dykes are being constructed at safe distance from river bank	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
11		Check construction of the pipe line whether there is any leakage in the Joints of Floating Pipe/Shore pipe lines	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
12		Check whether dredging work exacting Keeping Safety distance of River side installations like Road/houses/buiding.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
13		Check Survey Activities	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	

GRM

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.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	There are a GRM committee with 5 persons here.
		2 Contact details for lodging grievance easily accessible.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
2	Community Engagement	1 Consultations/ FGD have been conducted with local communities, dredging contractors to collect their input on the GRM design.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
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).	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
4	Processing of GFA (Good Faith Agreement)	1 Dyke/Land selection survey.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Survey in every week.
		2 Opinion meeting with land owner along with inform to the contractor and S1A team for justifying land as dyke.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Survey in 15 days a month.
		3 GFA documentation collection.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Collection the document 15 days a month.
		4 GFA will be submitted to S1A.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
		5 FGD on GFA with the Locals	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
5	Constitution of GRM Protocol	1 Preparation of GRM Protocol and Greivance Redres Committee (GRC) will be Constituted by the Contractors.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
6	Establish a Complaint Box	1 For receive feedback, suggestions and complain letters.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	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.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	There is a signboard in front of office.
8	3 (three) tyers of the GRM Comittee will be	1 Local level GRC (Committee members 05, quorum fullfill at least 03) -Project related issues.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	

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

	formed	2	Contractor level GRC (Committee members 03, quorum fulfill at least 03)- GBV, CoC, Contractors workers occurrence etc. related issues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
		3	Project level GRC (Committee members 03, quorum fulfill at least 03)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
9	Capacity Building	1	Project staffs and local institutions have received training on the GRM, GBV related issues and its operation.	<input type="radio"/>	ON/A	<input type="radio"/>	<input type="radio"/>	
10	Leaflet/ Brochure	1	The Leaflet/ Brochure will be published for dissemination to all the stakeholders.	<input type="radio"/>	ON/A	<input type="radio"/>	<input type="radio"/>	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)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
12	Social Consultation	1	Local Community	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
		2	Land Owner	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
		3	Local Government Authority	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
13	Gender-Based Violence (GBV)	1	Sex Violence by an intimate partner	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
		2	Sexual violence by a non-peer	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
		3	Child sexual abuse & forced marriage	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
		4	Sexual exploitation & abuse	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
		5	Sexual harassment	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
		6	In case of emergency, the local level GRC will address the matter within 04 -12 hours.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Lot-3

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 February, 2024
	a Dredging Hours	○	√	○	Total Dredging Hours 597.7 hrs (route 21 is 177hrs, route 16 is 262.9hrs & route 13 is 158hrs)
	b Cutting Length	○	√	○	Total length 3324m (route 21 is 1116m, route 16 is 1316m & route 13 is 892m)
	c Cutting Depth	○	√	○	Cutting Depth for Route 21 is 4.36m, route 16 is 3.8m & route 13 is 1.58m)
	d Cutting Width	○	√	○	Cutting Width Route 21 & 16 is 85m and Route 13 is 80m
	e Dredged Volume	○	√	○	Total Dredged Volume 1,98,196.84 cum (route 21 is 78,341cum, route 16 is 72,493.4cum & route 13 is 47,362.44cum)
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	○	√	○	It is 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 5rs/4nrs of outlet of this compartment
10	Check whether the dykes are being constructed at safe distance from river bank	○	√	○	823m, 853m and 914m 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 Post details survey work done on dated from 01.02.2024 to 03.02.2024 for lot 3 Route number 21(Laharhat-Bheduria)

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
1	Air Quality	○	√	○	Test done for Route no.12, 13 & 13a
2	Surface Water Quality	○	√	○	Test done for Route no.12, 13 & 13a
3	Solid Wastes	○	√	○	Test done for Route no.12, 13 & 13a
4	Liquid Wastes	○	√	○	Test done for Route no.12, 13 & 13a
5	Soil Contamination	○	√	○	Test done for Route no.12, 13 & 13a
6	Noise and Vibration	○	√	○	Test done for Route no.12, 13 & 13a
7	Underwater Noise	○	√	○	Test done for Route no.12, 13 & 13a
8	Odor	○	√	○	Test done for Route no.12, 13 & 13a
9	Riverbed Sediment	○	√	○	Test done for Route no.12, 13 & 13a
10	Groundwater	○	√	○	Test done for Route no.12, 13 & 13a
1	Protected Areas	○	√	○	Test done for Route no.12, 13 & 13a
2	Habitat Type	○	√	○	Test done for Route no.12, 13 & 13a
3	Hydrology	○	√	○	Test done for Route no.12, 13 & 13a
4	Topography and Geology	○	√	○	Test done for Route no.12, 13 & 13a
5	Dolphin Observation	○	√	○	Test done for Route no.12, 13 & 13a
6	Fish Catch Examination	○	√	○	Test done for Route no.12, 13 & 13a
7	Flora (Aquatic & Terrestrial)	○	√	○	Test done for Route no.12, 13 & 13a
8	Benthos (Micro & Macro)	○	√	○	Test done for Route no.12, 13 & 13a
9	Phyto- & Zoo-planktons	○	√	○	Test done for Route no.12, 13 & 13a
1	Resettlement	○	○	√	
2	Living and Livelihood	○	○	√	
3	Heritage	○	○	√	
4	Landscape	○	○	√	
5	Ethnic Minorities and Indigenous Peoples	○	○	√	
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	○	√	○	ESHS team not available or not visit the site specially accidental time
6	Working Condition	√	○	○	Fair
7	Accommodation	√	○	○	House Boat
8	Personal Protection Equipment	√	○	○	Safety helmet, Safety vest, safety shoes, Hand gloves etc observed at site but do not wearing regularly
9	Drinking Water	√	○	○	Freshwater daily collect from tube well of near by village
10	Sanitary Condition	√	○	○	Good arrangement kept in House boat
1	Agreement with Land Owner	○	○	√	Process on going
2	Land Use Type	○	√	○	Once or twice cultivated land in a year and also some non cultivated fellow land

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

3	Dyke Design Approval	○	√	○	Dyke no.R21-14, R21-15 for route 21, Dyke No. R16-01 for route 16 & Dyke No. R13-01, R13-02 for route 13 used in this month of February,2024
4	Dyke Setback Distance	○	√	○	823m, 853m and 914m distance from the river bank
5	Disposal Area Dyke Height	○	√	○	Height 2m (avg) for Route no.21, Height 7.5m for Route no.16 and Height 1.8m for Route no.13
6	Dyke Strengthened/Material Used*	○	○	√	When required then used
1	Carbon Emission	○	○	√	Not found/observed at site for all route in lot_3
2	Leakage	○	○	√	
3	Oil Spill	○	○	√	
4	Onboard Waste Management	○	○	√	
5	Noise and Vibration	○	○	√	

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 docks comply with the country's emission standards? Are any mitigating measures taken?	Y
(2) Water Quality	(a) Do pollutants, such as Suspended Solids (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

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

	(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
	(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, forshore 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

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

	(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
(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

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

Checklist Items		Dredging Activity				Comments/Compliance
		Daily	Weekly	Monthly	Quarterly	
1	The contractors communicate to all the stakeholders regarding GRM processing and lodging complaints.	○	○	○	√	
2	Contact details for lodging grievance easily accessible.	○	○	○	√	
1	Consultations have been conducted with local communities, dredging contractors to collect their input on the GRM design.	○	○	○	√	
2	The preferences of social customs and cultural sensitivities of the project affected communities taken into consideration.	○	○	○	√	
3	FGD on GRM with the Project Affected Persons (PAPs)	○	○	○	√	
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).	○	○	○	√	
1	Dyke/Land selection survey.	○	○	√	○	Route no.21, 16 & 13
2	Opinion meeting with land owner along with inform to the contractor and S1A team for justifying land as dyke.	○	○	√	○	
3	GFA documentation collection.	○	○	√	○	
4	GFA will be submitted to S1A.	○	○	√	○	
5	FGD on GFA with the Locals	○	○	○	√	
1	Preparation of GRM Committee Constituion by the Contractors.	○	○	○	√	
1	Nos. of Feedback, concerned, suggestions and complain letters.	○	○	√	○	Not found/observed at site for all route in lot_3
1	The size (5/15) of Bill board will according the BOQ	○	○	√	○	Not found/observed at site for all route in lot_3
2	Name, Mobile number and email of the focal person will be included in the Bill board.	○	○	√	○	Not found/observed at site for all route in lot_3
1	Local level GRC [In a five (5) members committee meeting Three (3) members participation will be the quorum]	○	○	○	√	Local level GRC committee formed by Banga contractor on dated 14th October,2023
2	Contractor level GRC [In a five (3) members committee meeting Three (3) members participation will be the quorum]	○	○	○	√	Local level GRC committee formed by Banga contractor on dated 14th October,2023
3	Project level GRC [In a five (3) members committee meeting Three (3) members participation will be the quorum]	○	○	○	√	Local level GRC committee formed by Banga contractor on dated 14th October,2023
1	Project staffs and local institutions have received training on the GRM and its operation.	○	○	○	√	
1	The Leaflet/ Brochure will be published for dissemination to all the stakeholders.	○	○	○	√	
1	The regular reports generated to document the number, nature, and resolution of grievances (Registration Book, Resolution book or Decision book & Closing book)	○	○	√	○	Route no.21, 16 & 13
1	Local Community	○	○	√	○	Route no.21, 16 & 13
2	Land Owner	○	○	√	○	Route no.21, 16 & 13
3	Local Government Authority	○	○	○	√	no
1	Sex Violence by an intimate partner	○	○	○	√	None of these has been found/observed for the month of January, 2024
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 4 -12 hours.	○	○	○	√	When required

ANNEX V: Location of Environmental Sample Collection

