

WATER TESTING REPORT

ANALYSIS OF WATER SAMPLE IN CONNECTION WITH THE “PROJECT FOR PLANNING CAPACITY ENHANCEMENT AND ESTABLISHMENT OF A TECHNOLOGY ADAPTATION CYCLE ON COMPREHENSIVE NODI (RIVER) MANAGEMENT”

LOCATION

1. ARICHA, JAMUNA BRIDGE, SARIAKANDI, BALASHI FERRY GHAT, PACHIGHAT, MAGRIR CHAR, DELDARGANJ BAZAR, VASHA CHAR, PURATON VASHA CHAR, AND SUNAMGANJ BAZAR OF JAMUNA RIVER
2. BIDYANANDO GOV. PRIMARY SCHOOL OF TEESTA RIVER
3. DHARLA BRIDGE OF DHARLA RIVER



DHAKA LABORATORY

REPORT NUMBER: DHAKA - 06 (2023-2024) - WATER

RIVER RESEARCH INSTITUTE

DHAKA OFFICE

72, GREEN ROAD, DHAKA-1205

(FOR OFFICIAL USE ONLY)

CONTENTS

Sl. No.	Item	Page No.
1.	Report	1
2.	Results of water analysis (Attachment- I)	2
3.	Sediment Analysis Bill (Appendix-A)	5
4.	List of Research Personnel (Appendix-B)	6
5.	Requisition of the works (Appendix-C)	7

REPORT

1. INTRODUCTION

This report represents the water sample analysis of 65 samples collected from Jamuna River at Aricha, Jamuna Bridge, Sariakandi, Balashi Ferry Ghat, Pachighat, Magrir Char, Deldarganj Bazar, Vasha Char, Puraton Vasha Char, and Sunamganj Bazar; 5 samples collected from Teesta River at Bidyanando Govt. Primary School; and 5 samples collected from Dharla Bridge of Dharla River by the Survey and Data Consultant (SDC). The samples were collected in a 1-litre plastic bottle, sealed, and sent to Dhaka Laboratory of River Research Institute (RRI), 72, Green Road, Dhaka-1205, to determine their Suspended Sediment Concentrations and Turbidity.


2. LABORATORY TESTING

2.1 Suspended Sediment Concentration Test: The suspended sediment concentration of each sample was determined by the membrane filtration method. The water samples were filtered by a vacuum filtration unit with a pre-weighted cellulose nitrate filter paper of pore size 0.45 μ m to separate the suspended solids from the water. The filtered papers were placed inside a forced convection laboratory oven at 100°C until all the water evaporated, leaving the sediment in the filter papers. The residual sediments were then weighted with the filter paper in a precision balance. Sediment weights were calculated from the differences between the pre and post-measured weights. The result of the sediment concentrations was then calculated in parts-per-million (ppm) by weight and presented in Attachment-I.


2.2 Turbidity Test: The individual water sample was mixed in a high-energy mixing machine for 5 minutes to homogenize the water with all its contents. The homogenized water samples' turbidity was measured using an automated Turbidity Meter in the Nephelometric Turbidity Unit (NTU). Each sample was tested three times, and the average turbidity of the samples is shown in Attachment-I.

3. APPENDIX

- Bill of this Report no.: Dhaka -06 (2023-2024)-Water.
- List of Research personnel associated with testing works, preparation, and report publication.
- Requisition of the works.


08.10.2023

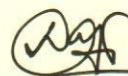
Nayan Chandra Ghosh, M.Phil.
Senior Scientific Officer
Dhaka Laboratory
River Research Institute
Mobile: 01554319232
Email: ncghosh@rri.gov.bd



08.10.2023

Dr. Moniruzzaman Khan Eusufzai
Principal Scientific Officer
Dhaka Laboratory
River Research Institute
Mobile: 01729930396
Email: mkeusufzai@rri.gov.bd


Water Testing Report

Sl. No.	Sampling Location	Water Level (mMSL)	Total Depth (m)	Sampling Depth (m)	Sample ID	Suspended Sediment Concentration (mg L ⁻¹)	Turbidity (NTU)
1	Jamuna River at Aricha E- 780634 N- 2637279 Date: 23/08/2023 Transect ID: 3km-1		14.00	2.80	D1	294	131.0
2				5.60	D2	502	115.7
3				8.40	D3	334	123.3
4				11.20	D4	1752	248.3
5				14.00	D5	1930	196.0
6	Jamuna River at Aricha E- 782141 N- 2637788 Date: 23/08/2023 Transect ID: 3 km-2		10.00	2.00	D1	1844	350.0
7				4.00	D2	1198	362.0
8				6.00	D3	709	381.3
9				8.00	D4	2929	385.0
10				10.00	D5	2924	435.0
11	Jamuna River at Jamuna Bridge E- 783051 N- 2701233 Date: 05/09/2023 Transect ID: 67 km-1		6.31	1.26	D1	724	261.0
12				2.52	D2	514	273.3
13				3.79	D3	1224	453.0
14				5.05	D4	1119	450.3
15				6.31	D5	7129	532.7
16	Jamuna River at Jamuna Bridge E- 780463 N- 2700859 Date: 05/09/2023 Transect ID: 67 km-2		7.63	1.53	D1	853	231.3
17				3.05	D2	924	229.0
18				4.58	D3	729	226.7
19				6.10	D4	795	245.0
20				7.63	D5	2074	257.0
21	Jamuna River at Sariakandi E- 765423 N- 2750665 Date: 27/08/2023 Transect ID: 120 km-1		11.29	2.26	D1	1184	254.7
22				4.52	D2	930	272.0
23				6.77	D3	1884	313.7
24				9.03	D4	2234	308.3
25				11.29	D5	2484	337.0



08.10.2023


08.10.2023

Sl. No.	Sampling Location	Water Level (mMSL)	Total Depth (m)	Sampling Depth (m)	Sample ID	Suspended Sediment Concentration (mg L ⁻¹)	Turbidity (NTU)
26	Jamuna River at Sariakandi E- 761944 N- 2750310 Date: 27/08/2023 Transect ID: 120 km-2		8.12	1.62	D1	1334	301.0
27				3.25	D2	1476	342.3
28				4.87	D3	1604	367.3
29				6.50	D4	1929	396.7
30				8.12	D5	7344	497.7
31	Jamuna River at Balashi Ferry Ghat Gaibandha E- 771688 N- 2801361 Date: 29/08/2023 Transect ID: 172km-1		7.94	1.59	D1	741	246.0
32				3.18	D2	809	262.7
33				4.76	D3	894	279.3
34				6.35	D4	4924	298.3
35				7.94	D5	6704	324.0
36	Jamuna River at Pchighat E- 768420 N- 2801827 Date: 29/08/2023 Transect ID: 172km-2		6.21	1.24	D1	1599	269.3
37				2.48	D2	749	280.0
38				3.73	D3	732	292.0
39				4.97	D4	674	285.7
40				6.21	D5	2534	308.3
41	Jamuna River at Magrir Char E- 763942 N- 2802002 Date: 29/08/2023 Transect ID: 172km-3		3.74	0.75	D1	1227	335.3
42				1.5	D2	584	325.3
43				2.24	D3	774	315.0
44				2.99	D4	874	325.0
45				3.74	D5	1904	375.7
46	Jamuna River at Deldarganj Bazar E- 773419 N- 2747960 Date: 02/09/2023 Transect ID: 218km-1		13.48	2.70	D1	444	184.3
47				5.39	D2	484	162.3
48				8.09	D3	464	196.7
49				10.78	D4	574	182.7
50				13.48	D5	664	208.7
51	Jamuna River at Vasha Char E- 775486 N-2846932 Date: 02/09/2023 Transect ID: 218km-2		12.23	2.45	D1	914	355.0
52				4.89	D2	772	362.7
53				7.34	D3	1104	368.3
54				9.78	D4	1314	375.3
55				12.23	D5	1324	387.7


08.10.2023

3


08.10.2023

Sl. No.	Sampling Location	Water Level (mMSL)	Total Depth (m)	Sampling Depth (m)	Sample ID	Suspended Sediment Concentration (mg L ⁻¹)	Turbidity (NTU)
56	Jamuna River at Puraton Vasha Char E- 777244 N- 2846291 Date: 02/09/2023 Transect ID: 218km-3		9.53	1.91	D1	1644	351.0
57				3.81	D2	544	349.0
58				5.72	D3	1244	370.7
59				7.62	D4	2204	344.3
60				9.53	D5	3874	370.3
61	Jamuna River at Sunamganj Bazar E- 781013 N- 2844782 Date: 02/09/2023 Transect ID: 218km-4		7.21	1.44	D1	1624	354.7
62				2.88	D2	1424	353.7
63				4.33	D3	1064	341.7
64				5.77	D4	894	334.3
65				7.21	D5	574	336.3
66	Teesta River at Bidyanondo Govt. Primary School E- 753261 N- 2848300 Date: 31/08/2023 Transect ID: Teesta-1		3.31	0.66	D1	474	149.3
67				1.32	D2	494	130.0
68				1.99	D3	384	138.0
69				2.65	D4	374	132.7
70				3.31	D5	454	122.3
71	Dharla River at Dharla Bridge E-767810 N- 2858365 Date: 01/09/2023 Transect ID: Dharla-1		6.03	1.21	D1	344	87.7
72				2.41	D2	254	104.7
73				3.62	D3	354	112.7
74				4.82	D4	324	120.0
75				6.03	D5	524	162.3



08.10.2023

Nayan Chandra Ghosh, M.Phil.
Senior Scientific Officer
Dhaka Laboratory
River Research Institute
72, Green Road, Dhaka-1205



08.10.2023

Dr. Moniruzzaman Khan Eusufzai
Principal Scientific Officer
Dhaka Laboratory
River Research Institute
72, Green Road, Dhaka-1205



Water Analysis Bill

DHAKA LABORATORY
River Research Institute
72, Green Road, Dhaka-1205

Client: Chief Executive Officer (CEO)

Survey and Data Consultant (SDC)

House# 16, Road# 03, Block# E, Section# 6

Mirpur, Dhaka-1216

Bill No.: DHAKA - 06 (2023-2024)-WATER

Date: 08/10/2023

Name of the River: Jamuna; Teesta; and Dharla.

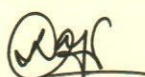
Name of the Locations: Aricha, Jamuna Bridge, Sariakandi, Balashi Ferry Ghat, Pachighat, Magrir Char, Deldarganj Bazar, Vasha Char, Puraton Vasha Char, and Sunamganj Bazar; Bidyanando Govt. Primary School; and Dharla Bridge respectively.


Duration of Sample Collection: August-September 2023

Report No.: DHAKA - 06 (2023-2024)-WATER

Sl . No.	Name of Sediment Tests	Rate Per Sample in Taka	No. of Sample Tested	Cost in Taka	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
1	Sediment Concentration	825.00	75	61875.00	
2	Turbidity	375.00	75	28125.00	
Total				90000.00	
<i>(In words: Taka Ninty Thousand Only)</i>					

*Rate includes 10% of Printing and Binding Cost, 10% of Testing and Consultancy Fee and 15% of VAT.


 08.10.2023
Nayan Chandra Ghosh, M.Phil.
 Senior Scientific Officer
 Dhaka Laboratory
 River Research Institute
 72, Green Road, Dhaka-1205
 Mobile: 01554319232
 Email: ncghosh@rri.gov.bd


 08.10.2023
Dr. Moniruzzaman Khan Eusufzai
 Principal Scientific Officer
 Dhaka Laboratory
 River Research Institute
 72, Green Road, Dhaka-1205
 Mobile: 01729930396
 Email: mkeusufzai@rri.gov.bd

Contact:

Head Office: Harukandi, Faridpur-7800. Phone: +8802478803007, Fax: +8802478863065

Dhaka Office: 4th Floor, WARPO Bhaban, 72, Green Road, Dhaka-1205. Phone: +8802-58155538

Email: dg@rri.gov.bd, dhakalab@rri.gov.bd; Website: rri.gov.bd

List of research personnel associated with testing works, preparation and publication of the report:

Sl. No.	Name	Designation
1.	Dr. Engr. Moniruzzaman Khan Eusufzai	Principal Scientific Officer
2.	Physicist Nayan Chandra Ghosh, M.Phil.	Senior Scientific Officer
3.	Engr. Sajia Afrin	Senior Scientific Officer
4.	Khandaker Mostafizur Rahman	Soil Technician-C
5.	Md. Moustofa	Soil Technician-C
6.	Md. Abdul Malek Miah	Model Technician-C
7.	Md. Shah Alam	Soil Technician-B
8.	Md. Shamsul Haque	Soil Technician-B
9.	Abu Fattah Mohammad Rakibuzzaman	Computer Operator



Survey & Data Consultant (SDC)

House # 16, Road # 03, Block - E, Section -6, Mirpur, Dhaka- 1216
Phone: +880 670 972299, +880 1817 521914

89

Memo No.: SDC/20230910/Lab/250

Date: September 10, 2023.

To : The Director General
River Research Institute
Dhaka Liaison Office
72, Green Road, Dhaka.

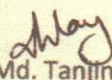
Subject : Regarding Water sample (20 nos. bottle) submission of Jamuna River for Lab test.

Dear Sir,

With due respect, please be informed that our organization "Survey & Data Consultant" working with JICA Consultants PACIFIC CONSULTANTS CO., LTD. (PCKK) for monitoring survey in the Jamuna River under the **Project for Planning Capacity Enhancement and Establishment of a Technology Adaptation Cycle on Comprehensive Nodi (River) Management**. In the survey part we collect some water samples in the Jamuna River for **Suspended Sediment concentration and Turbidity measurement**. Herewith we are submitting **75** nos. (1.0 liter capacity **75** Bottles) samples for **Sediments & Turbidity** measurement in your lab.

With best regards.

Your's faithfully,


(Md. Tanjim Mamun Niloy)
CEO
Survey & Data Consultant.

Enclose: Water sample bottle **75** nos.

